

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
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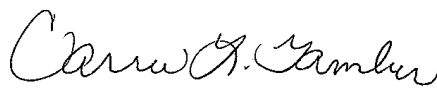
Laboratory Job ID: 180-116605-1

Client Project/Site: Waukegan Generating Station

For:

KPRG and Associates, Inc.
14665 West Lisbon Road,
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Attn: Richard Gnat



Authorized for release by:
3/12/2021 12:58:32 PM

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**Exhibit
1517**

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: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

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Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

CASE NARRATIVE

Client: KPRG and Associates, Inc.

Project: Waukegan Generating Station

Report Number: 180-116605-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 01/28/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.8 C.

The Field Sampler was not listed on the Chain of Custody.

IC

Several samples were diluted due to the abundance of non-target analytes. Elevated reporting limits (RLs) are provided.

Chloride failed the recovery criteria low for the MS of sample C7-0-5 pH 9MS (180-116605-24) in batch 180-347170. Sulfate failed the recovery criteria high. Chloride and Sulfate failed the recovery criteria low for the MSD of sample C7-0-5 pH 9MSD (180-116605-24) in batch 180-347170. Sulfate exceeded the RPD limit.

METALS

Several samples were diluted due to the nature of the sample matrix or to bring the concentration of target analytes to within the instrument's linear range. Elevated reporting limits (RLs) are provided.

The continuing calibration verification (CCV) associated with batch 180-347838 recovered above the upper control limit for Boron. The samples associated with this CCV were non-detects -or- less than the RL for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 180-347838/102).

GENERAL CHEMSITRY

Elevated reporting limits were provided for the following samples due to the limited sample volume provided for TDS analysis: A1-0-5 pH 8 (180-116605-5), (180-116605-A-5-B DU) and BLANK MEDIUM (180-116605-32).

Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD 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.

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	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: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	004375	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids
EPA 6020B	3010A	Solid	Lithium
SM 2510B		Solid	Specific Conductance
SM 2540C		Solid	Total Dissolved Solids
SM 2580B		Solid	Oxidation Reduction Potential

Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-116605-1	A1-0-5 pH 13	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-2	A1-0-5 pH 12	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-3	A1-0-5 pH 10.5	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-5	A1-0-5 pH 8	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-6	A1-0-5 pH 7	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-7	A1-0-5 pH 5.5	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-8	A1-0-5 pH 4	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-9	A1-0-5 pH 2	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-10	A1-0-5 NATURAL	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-11	A9-0-5 pH 13	Solid	01/25/21 10:25	01/28/21 08:30	
180-116605-12	A9-0-5 pH 12	Solid	01/25/21 10:25	01/28/21 08:30	
180-116605-14	A9-0-5 pH 9	Solid	01/25/21 10:25	01/28/21 08:30	
180-116605-15	A9-0-5 pH 8	Solid	01/25/21 10:25	01/28/21 08:30	
180-116605-16	A9-0-5 pH 7	Solid	01/25/21 10:25	01/28/21 08:30	
180-116605-17	A9-0-5 pH 5.5	Solid	01/25/21 10:25	01/28/21 08:30	
180-116605-18	A9-0-5 pH 4	Solid	01/25/21 10:25	01/28/21 08:30	
180-116605-19	A9-0-5 pH 2	Solid	01/25/21 10:25	01/28/21 08:30	
180-116605-20	A9-0-5 pH NATURAL	Solid	01/25/21 10:25	01/28/21 08:30	
180-116605-21	C7-0-5 pH 13	Solid	01/24/21 13:30	01/28/21 08:30	
180-116605-22	C7-0-5 pH 12	Solid	01/24/21 13:30	01/28/21 08:30	
180-116605-24	C7-0-5 pH 9	Solid	01/24/21 13:30	01/28/21 08:30	
180-116605-25	C7-0-5 pH 8	Solid	01/24/21 13:30	01/28/21 08:30	
180-116605-26	C7-0-5 pH 7	Solid	01/24/21 13:30	01/28/21 08:30	
180-116605-27	C7-0-5 pH 5.5	Solid	01/24/21 13:30	01/28/21 08:30	
180-116605-28	C7-0-5 pH 4	Solid	01/24/21 13:30	01/28/21 08:30	
180-116605-29	C7-0-5 pH 2	Solid	01/24/21 13:30	01/28/21 08:30	
180-116605-30	C7-0-5 pH NATURAL	Solid	01/24/21 13:30	01/28/21 08:30	
180-116605-31	BLANK LOW	Solid	01/25/21 00:00	01/28/21 08:30	
180-116605-32	BLANK MEDIUM	Solid	01/25/21 00:00	01/28/21 08:30	
180-116605-33	BLANK HIGH	Solid	01/25/21 00:00	01/28/21 08:30	
180-116605-34	A1-0-5 PRETEST	Solid	01/25/21 11:35	01/28/21 08:30	
180-116605-36	C7-0-5 PRETEST	Solid	01/24/21 13:30	01/28/21 08:30	

Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020B	Metals (ICP/MS)	SW846	TAL PIT
2540G	SM 2540G	SM22	TAL PIT
EPA 9040C	pH	SW846	TAL PIT
SM 2510B	Conductivity, Specific Conductance	SM	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 2580B	Reduction-Oxidation (REDOX) Potential	SM	TAL PIT
1313	Liquid-Solid Partitioning as a Function of pH via Parallel Batch	SW846	TAL PIT
3010A	Preparation, Total Metals	SW846	TAL PIT

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 13

Lab Sample ID: 180-116605-1

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 12:53	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			346924	02/18/21 13:09	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 16:01	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		5			347908	02/27/21 12:13	RJR	TAL PIT
		Instrument ID: NEMO								
Total/NA	Analysis	2540G		1			345845	02/08/21 12:30	LWM	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:19	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:23	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	1 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:20	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: A1-0-5 pH 12

Lab Sample ID: 180-116605-2

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 11:31	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 16:16	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		5			347908	02/27/21 12:24	RJR	TAL PIT
		Instrument ID: NEMO								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 12

Lab Sample ID: 180-116605-2

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:22	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:26	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:23	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: A1-0-5 pH 10.5

Lab Sample ID: 180-116605-3

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			347322	02/23/21 19:05	SAT	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 20:00	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		2			347908	02/27/21 13:24	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			347138	02/19/21 11:33	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347140	02/19/21 11:36	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	50 mL	100 mL	347449	02/23/21 17:43	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347139	02/19/21 11:33	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 8

Lab Sample ID: 180-116605-5

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			347241	02/22/21 18:09	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			347241	02/22/21 18:25	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 21:45	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347908	02/27/21 13:48	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346999	02/17/21 09:43	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347001	02/17/21 09:46	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347000	02/17/21 09:43	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: A1-0-5 pH 7

Lab Sample ID: 180-116605-6

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			347241	02/22/21 18:41	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			347241	02/22/21 18:58	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 22:00	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347908	02/27/21 13:50	RJR	TAL PIT
		Instrument ID: NEMO								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 7

Date Collected: 01/25/21 11:35

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346999	02/17/21 09:49	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347001	02/17/21 09:52	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347000	02/17/21 09:49	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: A1-0-5 pH 5.5

Date Collected: 01/25/21 11:35

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		25			347322	02/23/21 20:08	SAT	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 20:15	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		2			347908	02/27/21 13:27	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			347138	02/19/21 11:39	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347140	02/19/21 11:42	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	347450	02/23/21 17:57	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347139	02/19/21 11:39	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 4

Date Collected: 01/25/21 11:35

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		250			346924	02/18/21 16:42	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 16:30	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347838	02/26/21 18:53	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347908	02/27/21 12:27	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:28	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:29	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:26	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: A1-0-5 pH 2

Date Collected: 01/25/21 11:35

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		25			347241	02/22/21 19:47	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 22:14	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347728	02/25/21 22:18	RSK	TAL PIT
		Instrument ID: A								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 2

Lab Sample ID: 180-116605-9

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			347908	02/27/21 13:53	RJR	TAL PIT
Instrument ID: NEMO										
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346999	02/17/21 09:52	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347001	02/17/21 09:55	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			35 g	299.6 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347000	02/17/21 09:52	MTW	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: A1-0-5 NATURAL

Lab Sample ID: 180-116605-10

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 10:26	SAT	TAL PIT
Instrument ID: CHICS2100B										
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 15:46	RSK	TAL PIT
Instrument ID: A										
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		2			347908	02/27/21 12:11	RJR	TAL PIT
Instrument ID: NEMO										
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:13	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:16	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:13	MTW	TAL PIT
Instrument ID: NOEQUIP										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 13

Lab Sample ID: 180-116605-11

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 11:47	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 16:59	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			348027	03/01/21 14:02	RJR	TAL PIT
		Instrument ID: NEMO								
Total/NA	Analysis	2540G		1			345845	02/08/21 12:30	LWM	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:32	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:33	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	1 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:30	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: A9-0-5 pH 12

Lab Sample ID: 180-116605-12

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 12:04	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 17:21	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		5			348027	03/01/21 14:04	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:35	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 12

Lab Sample ID: 180-116605-12

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:36	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:33	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: A9-0-5 pH 9

Lab Sample ID: 180-116605-14

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			347241	02/22/21 19:14	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			347241	02/22/21 19:30	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 22:32	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347908	02/27/21 13:55	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346999	02/17/21 09:55	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347001	02/17/21 09:58	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347000	02/17/21 09:55	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 8

Date Collected: 01/25/21 10:25

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			347322	02/23/21 19:37	SAT	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			347581	02/25/21 09:53	EPS	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 20:29	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			347908	02/27/21 13:29	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			347138	02/19/21 11:42	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347140	02/19/21 11:45	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	347450	02/23/21 17:57	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347139	02/19/21 11:42	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: A9-0-5 pH 7

Date Collected: 01/25/21 10:25

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		250			346924	02/18/21 16:58	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 17:35	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			347838	02/26/21 19:18	RSK	TAL PIT
		Instrument ID: A								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 7

Date Collected: 01/25/21 10:25

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			348027	03/01/21 14:07	RJR	TAL PIT
Instrument ID: NEMO										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:38	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:39	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:36	MTW	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: A9-0-5 pH 5.5

Date Collected: 01/25/21 10:25

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		250			346924	02/18/21 17:14	SAT	TAL PIT
Instrument ID: CHICS2100B										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 17:50	RSK	TAL PIT
Instrument ID: A										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			347838	02/26/21 19:40	RSK	TAL PIT
Instrument ID: A										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			348027	03/01/21 14:10	RJR	TAL PIT
Instrument ID: NEMO										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:41	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:43	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
Instrument ID: NOEQUIP										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 5.5

Date Collected: 01/25/21 10:25

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:40	MTW	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: A9-0-5 pH 4

Date Collected: 01/25/21 10:25

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		25			347241	02/22/21 20:19	SAT	TAL PIT
Instrument ID: CHICS2100B										
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 22:47	RSK	TAL PIT
Instrument ID: A										
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		50			347838	02/26/21 22:49	RSK	TAL PIT
Instrument ID: A										
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		50			347908	02/27/21 13:58	RJR	TAL PIT
Instrument ID: NEMO										
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346999	02/17/21 09:58	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347001	02/17/21 10:01	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	309.9 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347000	02/17/21 09:58	MTW	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: A9-0-5 pH 2

Date Collected: 01/25/21 10:25

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		250			347322	02/23/21 21:12	SAT	TAL PIT
Instrument ID: CHIC2100A										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 2

Date Collected: 01/25/21 10:25

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 20:44	RSK	TAL PIT
	Instrument ID: A									
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347728	02/25/21 20:47	RSK	TAL PIT
	Instrument ID: A									
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		100			347908	02/27/21 13:32	RJR	TAL PIT
	Instrument ID: NEMO									
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			347138	02/19/21 11:45	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347140	02/19/21 11:48	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	5 mL	100 mL	347450	02/23/21 17:57	GRB	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			45 g	309.9 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347139	02/19/21 11:45	MTW	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: A9-0-5 pH NATURAL

Date Collected: 01/25/21 10:25

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 13:25	SAT	TAL PIT
	Instrument ID: CHICS2100B									
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			346924	02/18/21 13:42	SAT	TAL PIT
	Instrument ID: CHICS2100B									
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 16:44	RSK	TAL PIT
	Instrument ID: A									
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		5			347908	02/27/21 12:30	RJR	TAL PIT
	Instrument ID: NEMO									

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH NATURAL

Lab Sample ID: 180-116605-20

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:47	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:52	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	309.9 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:46	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: C7-0-5 pH 13

Lab Sample ID: 180-116605-21

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 13:58	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			346924	02/18/21 14:14	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 18:19	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			348027	03/01/21 14:15	RJR	TAL PIT
		Instrument ID: NEMO								
Total/NA	Analysis	2540G		1			345845	02/08/21 12:30	LWM	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:56	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 09:02	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	1 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:56	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH 12

Date Collected: 01/24/21 13:30

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-22

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 14:31	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			346924	02/18/21 14:47	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 18:33	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			348027	03/01/21 14:18	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:59	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 09:06	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	50 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 09:00	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: C7-0-5 pH 9

Date Collected: 01/24/21 13:30

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-24

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			347170	02/20/21 13:06	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 22:57	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347908	02/27/21 14:01	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346999	02/17/21 10:01	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

MWG13-15_81215

3/12/2021

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH 9

Lab Sample ID: 180-116605-24

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347001	02/17/21 10:04	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	346849	02/17/21 13:17	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347000	02/17/21 10:01	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: C7-0-5 pH 8

Lab Sample ID: 180-116605-25

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		2.5			347170	02/20/21 12:33	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 23:12	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347908	02/27/21 14:03	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346999	02/17/21 10:04	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347001	02/17/21 10:07	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	346849	02/17/21 13:17	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347000	02/17/21 10:04	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH 7

Date Collected: 01/24/21 13:30

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-26

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			347170	02/20/21 12:01	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 23:27	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347908	02/27/21 14:16	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346999	02/17/21 10:07	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347001	02/17/21 10:10	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	346849	02/17/21 13:17	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347000	02/17/21 10:07	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: C7-0-5 pH 5.5

Date Collected: 01/24/21 13:30

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-27

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		25			347322	02/23/21 20:40	SAT	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 21:02	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			347838	02/26/21 21:47	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			347908	02/27/21 13:40	RJR	TAL PIT
		Instrument ID: NEMO								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH 5.5

Date Collected: 01/24/21 13:30

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-27

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			347138	02/19/21 11:48	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347140	02/19/21 11:51	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	347450	02/23/21 17:57	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347139	02/19/21 11:48	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: C7-0-5 pH 4

Date Collected: 01/24/21 13:30

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-28

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		250			346924	02/18/21 17:31	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 18:48	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			347838	02/26/21 20:13	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			348027	03/01/21 14:20	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 09:05	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 09:09	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 09:03	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

MWG13-15_81218

3/12/2021

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH 2

Date Collected: 01/24/21 13:30

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-29

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		250			347322	02/23/21 21:27	SAT	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 21:24	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			347728	02/25/21 21:27	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		25			347908	02/27/21 13:42	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			347138	02/19/21 11:51	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347140	02/19/21 11:54	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	347450	02/23/21 17:57	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			45 g	316.8 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347139	02/19/21 11:51	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: C7-0-5 pH NATURAL

Date Collected: 01/24/21 13:30

Date Received: 01/28/21 08:30

Lab Sample ID: 180-116605-30

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 15:03	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			346924	02/18/21 15:20	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 18:04	RSK	TAL PIT
		Instrument ID: A								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH NATURAL

Lab Sample ID: 180-116605-30

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		10			348027	03/01/21 14:12	RJR	TAL PIT
Instrument ID: NEMO										
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:53	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 08:59	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 08:53	MTW	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: BLANK LOW

Lab Sample ID: 180-116605-31

Date Collected: 01/25/21 00:00

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			1.0 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			347241	02/22/21 16:47	SAT	TAL PIT
Instrument ID: CHICS2100B										
Leach	Leach	1313			1.0 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 23:41	RSK	TAL PIT
Instrument ID: A										
Leach	Leach	1313			1.0 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347908	02/27/21 14:19	RJR	TAL PIT
Instrument ID: NEMO										
Leach	Leach	1313			1.0 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346999	02/17/21 10:10	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			1.0 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347001	02/17/21 10:13	MTW	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			1.0 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	346849	02/17/21 13:17	GRB	TAL PIT
Instrument ID: NOEQUIP										
Leach	Leach	1313			1.0 g	316.8 mL	346570	02/15/21 09:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347000	02/17/21 10:10	MTW	TAL PIT
Instrument ID: NOEQUIP										

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: BLANK MEDIUM

Lab Sample ID: 180-116605-32

Date Collected: 01/25/21 00:00

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 10:09	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			1.0 g	300 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			347170	02/20/21 11:37	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 19:02	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			1.0 g	300 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 21:41	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			1.0 g	300 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347152	02/19/21 14:57	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347908	02/27/21 13:45	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			348027	03/01/21 14:28	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 09:08	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	300 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			347138	02/19/21 11:54	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 09:12	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	300 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			347140	02/19/21 11:57	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	300 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	50 mL	100 mL	347450	02/23/21 17:57	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 09:06	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	300 mL	346857	02/17/21 12:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			347139	02/19/21 11:54	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

MWG13-15_81221

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: BLANK HIGH

Lab Sample ID: 180-116605-33

Date Collected: 01/25/21 00:00

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			346924	02/18/21 16:09	SAT	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347728	02/25/21 19:06	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			347908	02/27/21 13:01	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	347151	02/19/21 14:53	TJO	TAL PIT
Leach	Analysis	EPA 6020B		1			348027	03/01/21 14:31	RJR	TAL PIT
		Instrument ID: NEMO								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 09:11	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			346443	02/12/21 09:16	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	1 mL	100 mL	346837	02/17/21 11:55	GRB	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			346440	02/12/21 09:10	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: A1-0-5 PRETEST

Lab Sample ID: 180-116605-34

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			35 g	299.6 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 08:25	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: C7-0-5 PRETEST

Lab Sample ID: 180-116605-36

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			45 g	316.8 mL	346097	02/10/21 08:10	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			346435	02/12/21 09:02	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

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: Leach

LWM = Larry Matko

Batch Type: Prep

TJO = Tyler Oliver

Batch Type: Analysis

EPS = Evan Scheuer

GRB = Gabriel Berghe

LWM = Larry Matko

MTW = Michael Wesoloski

RJR = Ron Rosenbaum

RSK = Robert Kurtz

SAT = Stephen Tallam

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 13

Lab Sample ID: 180-116605-1

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.71	mg/L			02/18/21 12:53	1
Sulfate	86		5.0	3.8	mg/L			02/18/21 13:09	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	260		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 16:01	1
Boron	7100		400	190	ug/L		02/19/21 14:53	02/27/21 12:13	5
Calcium	3000		500	130	ug/L		02/19/21 14:53	02/25/21 16:01	1
Iron	170		50	20	ug/L		02/19/21 14:53	02/25/21 16:01	1
Lithium	9.3		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 16:01	1
Manganese	3.5	J	5.0	0.87	ug/L		02/19/21 14:53	02/25/21 16:01	1
Molybdenum	120		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 16:01	1
Thallium	0.32	J	1.0	0.15	ug/L		02/19/21 14:53	02/25/21 16:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13.1		0.1	0.1	%			02/08/21 12:30	1
Percent Solids	86.9		0.1	0.1	%			02/08/21 12:30	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	13.1		0.1	0.1	SU			02/12/21 08:19	1
Specific Conductance	57000		1.0	1.0	umhos/cm			02/12/21 08:23	1
Total Dissolved Solids	17000		1000	1000	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	-41		10	10	millivolts			02/12/21 08:20	1

Client Sample ID: A1-0-5 pH 12

Lab Sample ID: 180-116605-2

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.71	mg/L			02/18/21 11:31	1
Sulfate	86		1.0	0.76	mg/L			02/18/21 11:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	140		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 16:16	1
Boron	6600		400	190	ug/L		02/19/21 14:53	02/27/21 12:24	5
Calcium	2000		500	130	ug/L		02/19/21 14:53	02/25/21 16:16	1
Iron	190		50	20	ug/L		02/19/21 14:53	02/25/21 16:16	1
Lithium	ND		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 16:16	1
Manganese	3.7	J	5.0	0.87	ug/L		02/19/21 14:53	02/25/21 16:16	1
Molybdenum	100		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 16:16	1
Thallium	ND		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 16:16	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.2		0.1	0.1	SU			02/12/21 08:22	1
Specific Conductance	4700		1.0	1.0	umhos/cm			02/12/21 08:26	1
Total Dissolved Solids	2400		40	40	mg/L			02/17/21 11:55	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 12

Lab Sample ID: 180-116605-2

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

General Chemistry - Leach (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oxidation Reduction Potential	37		10	10	millivolts			02/12/21 08:23	1

Client Sample ID: A1-0-5 pH 10.5

Lab Sample ID: 180-116605-3

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.2		1.0	0.71	mg/L			02/23/21 19:05	1
Sulfate	54		1.0	0.76	mg/L			02/23/21 19:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	32		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 20:00	1
Boron	3500		160	77	ug/L		02/19/21 14:57	02/27/21 13:24	2
Calcium	21000		500	130	ug/L		02/19/21 14:57	02/25/21 20:00	1
Iron	60		50	20	ug/L		02/19/21 14:57	02/25/21 20:00	1
Lithium	13		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 20:00	1
Manganese	0.94	J	5.0	0.87	ug/L		02/19/21 14:57	02/25/21 20:00	1
Molybdenum	60		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 20:00	1
Thallium	0.31	J	1.0	0.15	ug/L		02/19/21 14:57	02/25/21 20:00	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	10.5		0.1	0.1	SU			02/19/21 11:33	1
Specific Conductance	400		1.0	1.0	umhos/cm			02/19/21 11:36	1
Total Dissolved Solids	230		20	20	mg/L			02/23/21 17:43	1
Oxidation Reduction Potential	260		10	10	millivolts			02/19/21 11:33	1

Client Sample ID: A1-0-5 pH 8

Lab Sample ID: 180-116605-5

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		1.0	0.71	mg/L			02/22/21 18:09	1
Sulfate	230		5.0	3.8	mg/L			02/22/21 18:25	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 21:45	1
Boron	14000		800	390	ug/L		02/19/21 14:57	02/27/21 13:48	10
Calcium	390000		500	130	ug/L		02/19/21 14:57	02/25/21 21:45	1
Iron	23	J	50	20	ug/L		02/19/21 14:57	02/25/21 21:45	1
Lithium	38		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 21:45	1
Manganese	4.9	J	5.0	0.87	ug/L		02/19/21 14:57	02/25/21 21:45	1
Molybdenum	190		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 21:45	1
Thallium	0.85	J	1.0	0.15	ug/L		02/19/21 14:57	02/25/21 21:45	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 8

Lab Sample ID: 180-116605-5

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.7		0.1	0.1	SU			02/17/21 09:43	1
Specific Conductance	1900		1.0	1.0	umhos/cm			02/17/21 09:46	1
Total Dissolved Solids	1500		40	40	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	180		10	10	millivolts			02/17/21 09:43	1

Client Sample ID: A1-0-5 pH 7

Lab Sample ID: 180-116605-6

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.7		1.0	0.71	mg/L			02/22/21 18:41	1
Sulfate	220		5.0	3.8	mg/L			02/22/21 18:58	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.1		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 22:00	1
Boron	14000		800	390	ug/L		02/19/21 14:57	02/27/21 13:50	10
Calcium	640000		500	130	ug/L		02/19/21 14:57	02/25/21 22:00	1
Iron	22 J		50	20	ug/L		02/19/21 14:57	02/25/21 22:00	1
Lithium	52		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 22:00	1
Manganese	430		5.0	0.87	ug/L		02/19/21 14:57	02/25/21 22:00	1
Molybdenum	150		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 22:00	1
Thallium	3.6		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 22:00	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.8		0.1	0.1	SU			02/17/21 09:49	1
Specific Conductance	3300		1.0	1.0	umhos/cm			02/17/21 09:52	1
Total Dissolved Solids	2800		40	40	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	230		10	10	millivolts			02/17/21 09:49	1

Client Sample ID: A1-0-5 pH 5.5

Lab Sample ID: 180-116605-7

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		25	18	mg/L			02/23/21 20:08	25
Sulfate	65		25	19	mg/L			02/23/21 20:08	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 20:15	1
Boron	4800		160	77	ug/L		02/19/21 14:57	02/27/21 13:27	2
Calcium	400000		500	130	ug/L		02/19/21 14:57	02/25/21 20:15	1
Iron	350000		50	20	ug/L		02/19/21 14:57	02/25/21 20:15	1
Lithium	220		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 20:15	1
Manganese	2600		5.0	0.87	ug/L		02/19/21 14:57	02/25/21 20:15	1
Molybdenum	2.7 J		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 20:15	1
Thallium	16		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 20:15	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 5.5

Lab Sample ID: 180-116605-7

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.4		0.1	0.1	SU			02/19/21 11:39	1
Specific Conductance	6600		1.0	1.0	umhos/cm			02/19/21 11:42	1
Total Dissolved Solids	4000		40	40	mg/L			02/23/21 17:57	1
Oxidation Reduction Potential	460		10	10	millivolts			02/19/21 11:39	1

Client Sample ID: A1-0-5 pH 4

Lab Sample ID: 180-116605-8

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		250	180	mg/L			02/18/21 16:42	250
Sulfate	260		250	190	mg/L			02/18/21 16:42	250

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.8		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 16:30	1
Boron	21000		800	390	ug/L		02/19/21 14:53	02/27/21 12:27	10
Calcium	1500000		5000	1300	ug/L		02/19/21 14:53	02/26/21 18:53	10
Iron	5200		50	20	ug/L		02/19/21 14:53	02/25/21 16:30	1
Lithium	190		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 16:30	1
Manganese	7300		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 16:30	1
Molybdenum	9.2		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 16:30	1
Thallium	61		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 16:30	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	3.7		0.1	0.1	SU			02/12/21 08:28	1
Specific Conductance	9400		1.0	1.0	umhos/cm			02/12/21 08:29	1
Total Dissolved Solids	7100		100	100	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	450		10	10	millivolts			02/12/21 08:26	1

Client Sample ID: A1-0-5 pH 2

Lab Sample ID: 180-116605-9

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		25	18	mg/L			02/22/21 19:47	25
Sulfate	530		25	19	mg/L			02/22/21 19:47	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	520		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 22:14	1
Boron	51000		2000	970	ug/L		02/19/21 14:57	02/27/21 13:53	25
Calcium	2000000		5000	1300	ug/L		02/19/21 14:57	02/25/21 22:18	10
Iron	620000		50	20	ug/L		02/19/21 14:57	02/25/21 22:14	1
Lithium	380		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 22:14	1
Manganese	13000		50	8.7	ug/L		02/19/21 14:57	02/25/21 22:18	10
Molybdenum	280		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 22:14	1
Thallium	180		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 22:14	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A1-0-5 pH 2

Lab Sample ID: 180-116605-9

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	2.4		0.1	0.1	SU			02/17/21 09:52	1
Specific Conductance	18000		1.0	1.0	umhos/cm			02/17/21 09:55	1
Total Dissolved Solids	15000		100	100	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	520		10	10	millivolts			02/17/21 09:52	1

Client Sample ID: A1-0-5 NATURAL

Lab Sample ID: 180-116605-10

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		1.0	0.71	mg/L			02/18/21 10:26	1
Sulfate	93		1.0	0.76	mg/L			02/18/21 10:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 15:46	1
Boron	5000		160	77	ug/L		02/19/21 14:53	02/27/21 12:11	2
Calcium	55000		500	130	ug/L		02/19/21 14:53	02/25/21 15:46	1
Iron	ND		50	20	ug/L		02/19/21 14:53	02/25/21 15:46	1
Lithium	14		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 15:46	1
Manganese	0.93 J		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 15:46	1
Molybdenum	94		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 15:46	1
Thallium	0.26 J		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 15:46	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	9.4		0.1	0.1	SU			02/12/21 08:13	1
Specific Conductance	310		1.0	1.0	umhos/cm			02/12/21 08:16	1
Total Dissolved Solids	220		10	10	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	280		10	10	millivolts			02/12/21 08:13	1

Client Sample ID: A9-0-5 pH 13

Lab Sample ID: 180-116605-11

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			02/18/21 11:47	1
Sulfate	19		1.0	0.76	mg/L			02/18/21 11:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1900		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 16:59	1
Boron	8700		800	390	ug/L		02/19/21 14:53	03/01/21 14:02	10
Calcium	2300		500	130	ug/L		02/19/21 14:53	02/25/21 16:59	1
Iron	140		50	20	ug/L		02/19/21 14:53	02/25/21 16:59	1
Lithium	6.4		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 16:59	1
Manganese	6.4		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 16:59	1
Molybdenum	71		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 16:59	1
Thallium	1.2		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 16:59	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 13

Lab Sample ID: 180-116605-11

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28.3		0.1	0.1	%			02/08/21 12:30	1
Percent Solids	71.7		0.1	0.1	%			02/08/21 12:30	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	13.1		0.1	0.1	SU			02/12/21 08:32	1
Specific Conductance	56000		1.0	1.0	umhos/cm			02/12/21 08:33	1
Total Dissolved Solids	16000		1000	1000	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	- 5		10	10	millivolts			02/12/21 08:30	1

Client Sample ID: A9-0-5 pH 12

Lab Sample ID: 180-116605-12

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.90	J	1.0	0.71	mg/L			02/18/21 12:04	1
Sulfate	76		1.0	0.76	mg/L			02/18/21 12:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	810		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 17:21	1
Boron	7300		400	190	ug/L		02/19/21 14:53	03/01/21 14:04	5
Calcium	2700		500	130	ug/L		02/19/21 14:53	02/25/21 17:21	1
Iron	29	J	50	20	ug/L		02/19/21 14:53	02/25/21 17:21	1
Lithium	ND		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 17:21	1
Manganese	1.7	J	5.0	0.87	ug/L		02/19/21 14:53	02/25/21 17:21	1
Molybdenum	51		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 17:21	1
Thallium	0.22	J	1.0	0.15	ug/L		02/19/21 14:53	02/25/21 17:21	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.3		0.1	0.1	SU			02/12/21 08:35	1
Specific Conductance	5000		1.0	1.0	umhos/cm			02/12/21 08:36	1
Total Dissolved Solids	1700		40	40	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	45		10	10	millivolts			02/12/21 08:33	1

Client Sample ID: A9-0-5 pH 9

Lab Sample ID: 180-116605-14

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.1		1.0	0.71	mg/L			02/22/21 19:14	1
Sulfate	500		5.0	3.8	mg/L			02/22/21 19:30	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	17		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 22:32	1
Boron	25000		800	390	ug/L		02/19/21 14:57	02/27/21 13:55	10
Calcium	490000		500	130	ug/L		02/19/21 14:57	02/25/21 22:32	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 9

Lab Sample ID: 180-116605-14

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	50		50	20	ug/L		02/19/21 14:57	02/25/21 22:32	1
Lithium	13		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 22:32	1
Manganese	3.0	J	5.0	0.87	ug/L		02/19/21 14:57	02/25/21 22:32	1
Molybdenum	210		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 22:32	1
Thallium	0.47	J	1.0	0.15	ug/L		02/19/21 14:57	02/25/21 22:32	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	9.0		0.1	0.1	SU			02/17/21 09:55	1
Specific Conductance	2200		1.0	1.0	umhos/cm			02/17/21 09:58	1
Total Dissolved Solids	1900		10	10	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	330		10	10	millivolts			02/17/21 09:55	1

Client Sample ID: A9-0-5 pH 8

Lab Sample ID: 180-116605-15

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.71	J	1.0	0.71	mg/L			02/23/21 19:37	1
Sulfate	1100		50	38	mg/L			02/25/21 09:53	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 20:29	1
Boron	58000		2000	970	ug/L		02/19/21 14:57	02/27/21 13:29	25
Calcium	1100000		500	130	ug/L		02/19/21 14:57	02/25/21 20:29	1
Iron	54		50	20	ug/L		02/19/21 14:57	02/25/21 20:29	1
Lithium	26		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 20:29	1
Manganese	4.8	J	5.0	0.87	ug/L		02/19/21 14:57	02/25/21 20:29	1
Molybdenum	520		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 20:29	1
Thallium	0.74	J	1.0	0.15	ug/L		02/19/21 14:57	02/25/21 20:29	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.4		0.1	0.1	SU			02/19/21 11:42	1
Specific Conductance	4800		1.0	1.0	umhos/cm			02/19/21 11:45	1
Total Dissolved Solids	4500		40	40	mg/L			02/23/21 17:57	1
Oxidation Reduction Potential	190		10	10	millivolts			02/19/21 11:42	1

Client Sample ID: A9-0-5 pH 7

Lab Sample ID: 180-116605-16

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		250	180	mg/L			02/18/21 16:58	250
Sulfate	900		250	190	mg/L			02/18/21 16:58	250

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 7

Lab Sample ID: 180-116605-16

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 17:35	1
Boron	50000		2000	970	ug/L		02/19/21 14:53	03/01/21 14:07	25
Calcium	1400000		13000	3200	ug/L		02/19/21 14:53	02/26/21 19:18	25
Iron	ND		50	20	ug/L		02/19/21 14:53	02/25/21 17:35	1
Lithium	56		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 17:35	1
Manganese	220		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 17:35	1
Molybdenum	460		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 17:35	1
Thallium	2.6		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 17:35	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.0		0.1	0.1	SU			02/12/21 08:38	1
Specific Conductance	6000		1.0	1.0	umhos/cm			02/12/21 08:39	1
Total Dissolved Solids	5900		40	40	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	280		10	10	millivolts			02/12/21 08:36	1

Client Sample ID: A9-0-5 pH 5.5

Lab Sample ID: 180-116605-17

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		250	180	mg/L			02/18/21 17:14	250
Sulfate	1000		250	190	mg/L			02/18/21 17:14	250

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 17:50	1
Boron	60000		2000	970	ug/L		02/19/21 14:53	03/01/21 14:10	25
Calcium	2300000		13000	3200	ug/L		02/19/21 14:53	02/26/21 19:40	25
Iron	ND		50	20	ug/L		02/19/21 14:53	02/25/21 17:50	1
Lithium	160		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 17:50	1
Manganese	5000		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 17:50	1
Molybdenum	120		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 17:50	1
Thallium	8.2		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 17:50	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.7		0.1	0.1	SU			02/12/21 08:41	1
Specific Conductance	10000		1.0	1.0	umhos/cm			02/12/21 08:43	1
Total Dissolved Solids	9800		100	100	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	350		10	10	millivolts			02/12/21 08:40	1

Client Sample ID: A9-0-5 pH 4

Lab Sample ID: 180-116605-18

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		25	18	mg/L			02/22/21 20:19	25
Sulfate	1100		25	19	mg/L			02/22/21 20:19	25

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH 4

Lab Sample ID: 180-116605-18

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 22:47	1
Boron	81000		4000	1900	ug/L		02/19/21 14:57	02/27/21 13:58	50
Calcium	2800000		25000	6400	ug/L		02/19/21 14:57	02/26/21 22:49	50
Iron	540		50	20	ug/L		02/19/21 14:57	02/25/21 22:47	1
Lithium	250		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 22:47	1
Manganese	9500		5.0	0.87	ug/L		02/19/21 14:57	02/25/21 22:47	1
Molybdenum	13		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 22:47	1
Thallium	26		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 22:47	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	3.9		0.1	0.1	SU			02/17/21 09:58	1
Specific Conductance	14000		1.0	1.0	umhos/cm			02/17/21 10:01	1
Total Dissolved Solids	12000		100	100	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	500		10	10	millivolts			02/17/21 09:58	1

Client Sample ID: A9-0-5 pH 2

Lab Sample ID: 180-116605-19

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		250	180	mg/L			02/23/21 21:12	250
Sulfate	1800		250	190	mg/L			02/23/21 21:12	250

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	970		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 20:44	1
Boron	120000		8000	3900	ug/L		02/19/21 14:57	02/27/21 13:32	100
Calcium	2700000		5000	1300	ug/L		02/19/21 14:57	02/25/21 20:47	10
Iron	400000		50	20	ug/L		02/19/21 14:57	02/25/21 20:44	1
Lithium	470		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 20:44	1
Manganese	22000		50	8.7	ug/L		02/19/21 14:57	02/25/21 20:47	10
Molybdenum	300		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 20:44	1
Thallium	91		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 20:44	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	2.1		0.1	0.1	SU			02/19/21 11:45	1
Specific Conductance	22000		1.0	1.0	umhos/cm			02/19/21 11:48	1
Total Dissolved Solids	18000		200	200	mg/L			02/23/21 17:57	1
Oxidation Reduction Potential	670		10	10	millivolts			02/19/21 11:45	1

Client Sample ID: A9-0-5 pH NATURAL

Lab Sample ID: 180-116605-20

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.71	mg/L			02/18/21 13:25	1
Sulfate	140		5.0	3.8	mg/L			02/18/21 13:42	5

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: A9-0-5 pH NATURAL

Lab Sample ID: 180-116605-20

Date Collected: 01/25/21 10:25

Matrix: Solid

Date Received: 01/28/21 08:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	58		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 16:44	1
Boron	8200		400	190	ug/L		02/19/21 14:53	02/27/21 12:30	5
Calcium	85000		500	130	ug/L		02/19/21 14:53	02/25/21 16:44	1
Iron	ND		50	20	ug/L		02/19/21 14:53	02/25/21 16:44	1
Lithium	4.8 J		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 16:44	1
Manganese	1.3 J		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 16:44	1
Molybdenum	72		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 16:44	1
Thallium	0.17 J		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 16:44	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	10.1		0.1	0.1	SU			02/12/21 08:47	1
Specific Conductance	420		1.0	1.0	umhos/cm			02/12/21 08:52	1
Total Dissolved Solids	310		10	10	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	310		10	10	millivolts			02/12/21 08:46	1

Client Sample ID: C7-0-5 pH 13

Lab Sample ID: 180-116605-21

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0		1.0	0.71	mg/L			02/18/21 13:58	1
Sulfate	160		5.0	3.8	mg/L			02/18/21 14:14	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1000		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 18:19	1
Boron	11000		800	390	ug/L		02/19/21 14:53	03/01/21 14:15	10
Calcium	10000		500	130	ug/L		02/19/21 14:53	02/25/21 18:19	1
Iron	3500		50	20	ug/L		02/19/21 14:53	02/25/21 18:19	1
Lithium	5.2		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 18:19	1
Manganese	41		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 18:19	1
Molybdenum	180		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 18:19	1
Thallium	3.5		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 18:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26.8		0.1	0.1	%			02/08/21 12:30	1
Percent Solids	73.2		0.1	0.1	%			02/08/21 12:30	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	13.1		0.1	0.1	SU			02/12/21 08:56	1
Specific Conductance	49000		1.0	1.0	umhos/cm			02/12/21 09:02	1
Total Dissolved Solids	20000		1000	1000	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	- 70		10	10	millivolts			02/12/21 08:56	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH 12

Lab Sample ID: 180-116605-22

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9		1.0	0.71	mg/L			02/18/21 14:31	1
Sulfate	180		5.0	3.8	mg/L			02/18/21 14:47	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	470		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 18:33	1
Boron	9900		800	390	ug/L		02/19/21 14:53	03/01/21 14:18	10
Calcium	11000		500	130	ug/L		02/19/21 14:53	02/25/21 18:33	1
Iron	6000		50	20	ug/L		02/19/21 14:53	02/25/21 18:33	1
Lithium	5.9		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 18:33	1
Manganese	65		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 18:33	1
Molybdenum	190		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 18:33	1
Thallium	1.1		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 18:33	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.0		0.1	0.1	SU			02/12/21 08:59	1
Specific Conductance	3000		1.0	1.0	umhos/cm			02/12/21 09:06	1
Total Dissolved Solids	3800		20	20	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	12		10	10	millivolts			02/12/21 09:00	1

Client Sample ID: C7-0-5 pH 9

Lab Sample ID: 180-116605-24

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			02/20/21 13:06	1
Sulfate	190		1.0	0.76	mg/L			02/20/21 13:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	26		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 22:57	1
Boron	18000		800	390	ug/L		02/19/21 14:57	02/27/21 14:01	10
Calcium	270000		500	130	ug/L		02/19/21 14:57	02/25/21 22:57	1
Iron	ND		50	20	ug/L		02/19/21 14:57	02/25/21 22:57	1
Lithium	4.4 J		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 22:57	1
Manganese	2.0 J		5.0	0.87	ug/L		02/19/21 14:57	02/25/21 22:57	1
Molybdenum	250		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 22:57	1
Thallium	0.38 J		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 22:57	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.9		0.1	0.1	SU			02/17/21 10:01	1
Specific Conductance	1300		1.0	1.0	umhos/cm			02/17/21 10:04	1
Total Dissolved Solids	1100		10	10	mg/L			02/17/21 13:17	1
Oxidation Reduction Potential	340		10	10	millivolts			02/17/21 10:01	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH 8

Lab Sample ID: 180-116605-25

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		2.5	1.8	mg/L			02/20/21 12:33	2.5
Sulfate	230		2.5	1.9	mg/L			02/20/21 12:33	2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	35		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 23:12	1
Boron	23000		800	390	ug/L		02/19/21 14:57	02/27/21 14:03	10
Calcium	450000		500	130	ug/L		02/19/21 14:57	02/25/21 23:12	1
Iron	ND		50	20	ug/L		02/19/21 14:57	02/25/21 23:12	1
Lithium	8.9		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 23:12	1
Manganese	1.8	J	5.0	0.87	ug/L		02/19/21 14:57	02/25/21 23:12	1
Molybdenum	320		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 23:12	1
Thallium	0.66	J	1.0	0.15	ug/L		02/19/21 14:57	02/25/21 23:12	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.3		0.1	0.1	SU			02/17/21 10:04	1
Specific Conductance	2200		1.0	1.0	umhos/cm			02/17/21 10:07	1
Total Dissolved Solids	1800		10	10	mg/L			02/17/21 13:17	1
Oxidation Reduction Potential	300		10	10	millivolts			02/17/21 10:04	1

Client Sample ID: C7-0-5 pH 7

Lab Sample ID: 180-116605-26

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		5.0	3.6	mg/L			02/20/21 12:01	5
Sulfate	ND		5.0	3.8	mg/L			02/20/21 12:01	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	28		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 23:27	1
Boron	26000		800	390	ug/L		02/19/21 14:57	02/27/21 14:16	10
Calcium	980000		500	130	ug/L		02/19/21 14:57	02/25/21 23:27	1
Iron	ND		50	20	ug/L		02/19/21 14:57	02/25/21 23:27	1
Lithium	70		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 23:27	1
Manganese	180		5.0	0.87	ug/L		02/19/21 14:57	02/25/21 23:27	1
Molybdenum	320		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 23:27	1
Thallium	3.8		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 23:27	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.8		0.1	0.1	SU			02/17/21 10:07	1
Specific Conductance	4600		1.0	1.0	umhos/cm			02/17/21 10:10	1
Total Dissolved Solids	4000		40	40	mg/L			02/17/21 13:17	1
Oxidation Reduction Potential	310		10	10	millivolts			02/17/21 10:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH 5.5

Lab Sample ID: 180-116605-27

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		25	18	mg/L			02/23/21 20:40	25
Sulfate	770		25	19	mg/L			02/23/21 20:40	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.3		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 21:02	1
Boron	48000		2000	970	ug/L		02/19/21 14:57	02/27/21 13:40	25
Calcium	2000000		13000	3200	ug/L		02/19/21 14:57	02/26/21 21:47	25
Iron	47	J	50	20	ug/L		02/19/21 14:57	02/25/21 21:02	1
Lithium	140		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 21:02	1
Manganese	2800		5.0	0.87	ug/L		02/19/21 14:57	02/25/21 21:02	1
Molybdenum	290		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 21:02	1
Thallium	9.4		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 21:02	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.6		0.1	0.1	SU			02/19/21 11:48	1
Specific Conductance	8700		1.0	1.0	umhos/cm			02/19/21 11:51	1
Total Dissolved Solids	8200		100	100	mg/L			02/23/21 17:57	1
Oxidation Reduction Potential	320		10	10	millivolts			02/19/21 11:48	1

Client Sample ID: C7-0-5 pH 4

Lab Sample ID: 180-116605-28

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		250	180	mg/L			02/18/21 17:31	250
Sulfate	490		250	190	mg/L			02/18/21 17:31	250

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.7		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 18:48	1
Boron	33000		2000	970	ug/L		02/19/21 14:53	03/01/21 14:20	25
Calcium	1700000		13000	3200	ug/L		02/19/21 14:53	02/26/21 20:13	25
Iron	410		50	20	ug/L		02/19/21 14:53	02/25/21 18:48	1
Lithium	230		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 18:48	1
Manganese	8900		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 18:48	1
Molybdenum	6.2		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 18:48	1
Thallium	18		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 18:48	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	4.0		0.1	0.1	SU			02/12/21 09:05	1
Specific Conductance	9100		1.0	1.0	umhos/cm			02/12/21 09:09	1
Total Dissolved Solids	8200		100	100	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	490		10	10	millivolts			02/12/21 09:03	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: C7-0-5 pH 2

Lab Sample ID: 180-116605-29

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		250	180	mg/L			02/23/21 21:27	250
Sulfate	650		250	190	mg/L			02/23/21 21:27	250

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	710		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 21:24	1
Boron	50000		2000	970	ug/L		02/19/21 14:57	02/27/21 13:42	25
Calcium	2200000		5000	1300	ug/L		02/19/21 14:57	02/25/21 21:27	10
Iron	340000		50	20	ug/L		02/19/21 14:57	02/25/21 21:24	1
Lithium	730		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 21:24	1
Manganese	18000		50	8.7	ug/L		02/19/21 14:57	02/25/21 21:27	10
Molybdenum	150		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 21:24	1
Thallium	170		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 21:24	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	2.2		0.1	0.1	SU			02/19/21 11:51	1
Specific Conductance	19000		1.0	1.0	umhos/cm			02/19/21 11:54	1
Total Dissolved Solids	15000		100	100	mg/L			02/23/21 17:57	1
Oxidation Reduction Potential	560		10	10	millivolts			02/19/21 11:51	1

Client Sample ID: C7-0-5 pH NATURAL

Lab Sample ID: 180-116605-30

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.71	mg/L			02/18/21 15:03	1
Sulfate	290		5.0	3.8	mg/L			02/18/21 15:20	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	22		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 18:04	1
Boron	13000		800	390	ug/L		02/19/21 14:53	03/01/21 14:12	10
Calcium	150000		500	130	ug/L		02/19/21 14:53	02/25/21 18:04	1
Iron	ND		50	20	ug/L		02/19/21 14:53	02/25/21 18:04	1
Lithium	4.2 J		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 18:04	1
Manganese	0.98 J		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 18:04	1
Molybdenum	170		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 18:04	1
Thallium	ND		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 18:04	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	9.6		0.1	0.1	SU			02/12/21 08:53	1
Specific Conductance	690		1.0	1.0	umhos/cm			02/12/21 08:59	1
Total Dissolved Solids	580		10	10	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	200		10	10	millivolts			02/12/21 08:53	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: BLANK LOW

Lab Sample ID: 180-116605-31

Date Collected: 01/25/21 00:00

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			02/22/21 16:47	1
Sulfate	ND		1.0	0.76	mg/L			02/22/21 16:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 23:41	1
Boron	91		80	39	ug/L		02/19/21 14:57	02/27/21 14:19	1
Calcium	460	J	500	130	ug/L		02/19/21 14:57	02/25/21 23:41	1
Iron	27	J	50	20	ug/L		02/19/21 14:57	02/25/21 23:41	1
Lithium	ND		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 23:41	1
Manganese	1.5	J	5.0	0.87	ug/L		02/19/21 14:57	02/25/21 23:41	1
Molybdenum	ND		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 23:41	1
Thallium	ND		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 23:41	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	0.8		0.1	0.1	SU			02/17/21 10:10	1
Specific Conductance	74000		1.0	1.0	umhos/cm			02/17/21 10:13	1
Total Dissolved Solids	4100		40	40	mg/L			02/17/21 13:17	1
Oxidation Reduction Potential	560		10	10	millivolts			02/17/21 10:10	1

Client Sample ID: BLANK MEDIUM

Lab Sample ID: 180-116605-32

Date Collected: 01/25/21 00:00

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			02/18/21 10:09	1
Chloride	ND		1.0	0.71	mg/L			02/20/21 11:37	1
Sulfate	ND		1.0	0.76	mg/L			02/18/21 10:09	1
Sulfate	ND		1.0	0.76	mg/L			02/20/21 11:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 19:02	1
Arsenic	ND		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 21:41	1
Boron	81		80	39	ug/L		02/19/21 14:57	02/27/21 13:45	1
Boron	ND		80	39	ug/L		02/19/21 14:53	03/01/21 14:28	1
Calcium	310	J	500	130	ug/L		02/19/21 14:53	02/25/21 19:02	1
Calcium	330	J	500	130	ug/L		02/19/21 14:57	02/25/21 21:41	1
Iron	ND		50	20	ug/L		02/19/21 14:53	02/25/21 19:02	1
Iron	32	J	50	20	ug/L		02/19/21 14:57	02/25/21 21:41	1
Lithium	ND		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 19:02	1
Lithium	ND		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 21:41	1
Manganese	1.7	J	5.0	0.87	ug/L		02/19/21 14:53	02/25/21 19:02	1
Manganese	2.7	J	5.0	0.87	ug/L		02/19/21 14:57	02/25/21 21:41	1
Molybdenum	ND		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 19:02	1
Molybdenum	ND		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 21:41	1
Thallium	ND		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 19:02	1
Thallium	ND		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 21:41	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Client Sample ID: BLANK MEDIUM

Lab Sample ID: 180-116605-32

Date Collected: 01/25/21 00:00

Matrix: Solid

Date Received: 01/28/21 08:30

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.7		0.1	0.1	SU			02/12/21 09:08	1
pH	5.4		0.1	0.1	SU			02/19/21 11:54	1
Specific Conductance	1.0		1.0	1.0	umhos/cm			02/12/21 09:12	1
Specific Conductance	ND		1.0	1.0	umhos/cm			02/19/21 11:57	1
Total Dissolved Solids	ND		10	10	mg/L			02/17/21 11:55	1
Total Dissolved Solids	ND		20	20	mg/L			02/23/21 17:57	1
Oxidation Reduction Potential	390		10	10	millivolts			02/12/21 09:06	1
Oxidation Reduction Potential	460		10	10	millivolts			02/19/21 11:54	1

Client Sample ID: BLANK HIGH

Lab Sample ID: 180-116605-33

Date Collected: 01/25/21 00:00

Matrix: Solid

Date Received: 01/28/21 08:30

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			02/18/21 16:09	1
Sulfate	ND		1.0	0.76	mg/L			02/18/21 16:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 19:06	1
Boron	ND		80	39	ug/L		02/19/21 14:53	03/01/21 14:31	1
Calcium	ND		500	130	ug/L		02/19/21 14:53	02/27/21 13:01	1
Iron	ND		50	20	ug/L		02/19/21 14:53	02/25/21 19:06	1
Lithium	ND		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 19:06	1
Manganese	2.7	J	5.0	0.87	ug/L		02/19/21 14:53	02/25/21 19:06	1
Molybdenum	ND		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 19:06	1
Thallium	ND		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 19:06	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	13.2		0.1	0.1	SU			02/12/21 09:11	1
Specific Conductance	62000		1.0	1.0	umhos/cm			02/12/21 09:16	1
Total Dissolved Solids	19000		1000	1000	mg/L			02/17/21 11:55	1
Oxidation Reduction Potential	10		10	10	millivolts			02/12/21 09:10	1

Client Sample ID: A1-0-5 PRETEST

Lab Sample ID: 180-116605-34

Date Collected: 01/25/21 11:35

Matrix: Solid

Date Received: 01/28/21 08:30

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.3		0.1	0.1	SU			02/12/21 08:25	1

Client Sample ID: C7-0-5 PRETEST

Lab Sample ID: 180-116605-36

Date Collected: 01/24/21 13:30

Matrix: Solid

Date Received: 01/28/21 08:30

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.0		0.1	0.1	SU			02/12/21 09:02	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-346924/6

Matrix: Solid

Analysis Batch: 346924

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			02/18/21 07:53	1
Sulfate	ND		1.0	0.76	mg/L			02/18/21 07:53	1

Lab Sample ID: LCS 180-346924/5

Matrix: Solid

Analysis Batch: 346924

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	49.3		mg/L		99	80 - 120
Sulfate	50.0	49.0		mg/L		98	80 - 120

Lab Sample ID: MB 180-347170/20

Matrix: Solid

Analysis Batch: 347170

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			02/20/21 09:59	1
Sulfate	ND		1.0	0.76	mg/L			02/20/21 09:59	1

Lab Sample ID: LCS 180-347170/19

Matrix: Solid

Analysis Batch: 347170

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	52.2		mg/L		104	80 - 120
Sulfate	50.0	53.5		mg/L		107	80 - 120

Lab Sample ID: MB 180-347241/6

Matrix: Solid

Analysis Batch: 347241

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			02/22/21 11:05	1
Sulfate	ND		1.0	0.76	mg/L			02/22/21 11:05	1

Lab Sample ID: LCS 180-347241/5

Matrix: Solid

Analysis Batch: 347241

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.9		mg/L		102	80 - 120
Sulfate	50.0	51.2		mg/L		102	80 - 120

Lab Sample ID: MB 180-347322/6

Matrix: Solid

Analysis Batch: 347322

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			02/23/21 08:55	1
Sulfate	ND		1.0	0.76	mg/L			02/23/21 08:55	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: LCS 180-347322/5

Matrix: Solid

Analysis Batch: 347322

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	51.0		mg/L		102	80 - 120
Sulfate	50.0	51.0		mg/L		102	80 - 120

Lab Sample ID: MB 180-347581/6

Matrix: Solid

Analysis Batch: 347581

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		1.0	0.76	mg/L			02/25/21 06:59	1

Lab Sample ID: LCS 180-347581/5

Matrix: Solid

Analysis Batch: 347581

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	50.5		mg/L		101	80 - 120

Lab Sample ID: 180-116605-10 MS

Matrix: Solid

Analysis Batch: 346924

Client Sample ID: A1-0-5 NATURAL

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND		250	246		mg/L		98	80 - 120
Sulfate	100		250	327		mg/L		90	80 - 120

Lab Sample ID: 180-116605-10 MSD

Matrix: Solid

Analysis Batch: 346924

Client Sample ID: A1-0-5 NATURAL

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		250	248		mg/L		99	80 - 120	1	15
Sulfate	100		250	334		mg/L		93	80 - 120	2	15

Lab Sample ID: 180-116605-24 MS

Matrix: Solid

Analysis Batch: 347170

Client Sample ID: C7-0-5 pH 9

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND	F1	500	ND	F1	mg/L		0	80 - 120
Sulfate	190	F1 F2	500	964	F1	mg/L		154	80 - 120

Lab Sample ID: 180-116605-24 MSD

Matrix: Solid

Analysis Batch: 347170

Client Sample ID: C7-0-5 pH 9

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND	F1	500	ND	F1	mg/L		0	80 - 120	NC	15
Sulfate	190	F1 F2	500	90.6	F1 F2	mg/L		-20	80 - 120	166	15

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

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

Lab Sample ID: MB 180-347151/1-A

Matrix: Solid

Analysis Batch: 347728

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 347151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.31	ug/L		02/19/21 14:53	02/25/21 15:36	1
Calcium	ND		500	130	ug/L		02/19/21 14:53	02/25/21 15:36	1
Iron	ND		50	20	ug/L		02/19/21 14:53	02/25/21 15:36	1
Lithium	ND		5.0	3.4	ug/L		02/19/21 14:53	02/25/21 15:36	1
Manganese	ND		5.0	0.87	ug/L		02/19/21 14:53	02/25/21 15:36	1
Molybdenum	ND		5.0	0.61	ug/L		02/19/21 14:53	02/25/21 15:36	1
Thallium	ND		1.0	0.15	ug/L		02/19/21 14:53	02/25/21 15:36	1

Lab Sample ID: MB 180-347151/1-A

Matrix: Solid

Analysis Batch: 347908

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 347151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		80	39	ug/L		02/19/21 14:53	02/27/21 12:03	1

Lab Sample ID: LCS 180-347151/2-A

Matrix: Solid

Analysis Batch: 347728

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 347151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	990		ug/L		99	80 - 120
Calcium	25000	27400		ug/L		110	80 - 120
Iron	5000	5720		ug/L		114	80 - 120
Lithium	500	492		ug/L		98	80 - 120
Manganese	500	515		ug/L		103	80 - 120
Molybdenum	500	517		ug/L		103	80 - 120
Thallium	1000	1100		ug/L		110	80 - 120

Lab Sample ID: LCS 180-347151/2-A

Matrix: Solid

Analysis Batch: 347908

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 347151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1250	1190		ug/L		95	80 - 120

Lab Sample ID: LCSD 180-347151/3-A

Matrix: Solid

Analysis Batch: 347728

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 347151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1000	993		ug/L		99	80 - 120	0	20
Calcium	25000	27000		ug/L		108	80 - 120	2	20
Iron	5000	5820		ug/L		116	80 - 120	2	20
Lithium	500	496		ug/L		99	80 - 120	1	20
Manganese	500	519		ug/L		104	80 - 120	1	20
Molybdenum	500	526		ug/L		105	80 - 120	2	20
Thallium	1000	1090		ug/L		109	80 - 120	1	20

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QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

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

Lab Sample ID: LCSD 180-347151/3-A

Matrix: Solid

Analysis Batch: 347908

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 347151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1250	1180		ug/L		95	80 - 120	0	20

Lab Sample ID: MB 180-347152/1-A

Matrix: Solid

Analysis Batch: 347728

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 347152

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.31	ug/L		02/19/21 14:57	02/25/21 19:42	1
Calcium	ND		500	130	ug/L		02/19/21 14:57	02/25/21 19:42	1
Iron	ND		50	20	ug/L		02/19/21 14:57	02/25/21 19:42	1
Lithium	ND		5.0	3.4	ug/L		02/19/21 14:57	02/25/21 19:42	1
Manganese	ND		5.0	0.87	ug/L		02/19/21 14:57	02/25/21 19:42	1
Molybdenum	ND		5.0	0.61	ug/L		02/19/21 14:57	02/25/21 19:42	1
Thallium	ND		1.0	0.15	ug/L		02/19/21 14:57	02/25/21 19:42	1

Lab Sample ID: MB 180-347152/1-A

Matrix: Solid

Analysis Batch: 347908

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 347152

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		80	39	ug/L		02/19/21 14:57	02/27/21 13:17	1

Lab Sample ID: LCS 180-347152/2-A

Matrix: Solid

Analysis Batch: 347728

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 347152

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	992		ug/L		99	80 - 120
Calcium	25000	27300		ug/L		109	80 - 120
Iron	5000	5320		ug/L		106	80 - 120
Lithium	500	505		ug/L		101	80 - 120
Manganese	500	514		ug/L		103	80 - 120
Molybdenum	500	525		ug/L		105	80 - 120
Thallium	1000	1110		ug/L		111	80 - 120

Lab Sample ID: LCS 180-347152/2-A

Matrix: Solid

Analysis Batch: 347908

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 347152

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1250	1260		ug/L		101	80 - 120

Lab Sample ID: LCSD 180-347152/3-A

Matrix: Solid

Analysis Batch: 347728

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 347152

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1000	999		ug/L		100	80 - 120	1	20
Calcium	25000	28000		ug/L		112	80 - 120	3	20
Iron	5000	5360		ug/L		107	80 - 120	1	20

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MWG13-15_81243

3/12/2021

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

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

Lab Sample ID: LCSD 180-347152/3-A
Matrix: Solid
Analysis Batch: 347728

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 347152

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	500	502		ug/L		100	80 - 120	1	20
Manganese	500	524		ug/L		105	80 - 120	2	20
Molybdenum	500	529		ug/L		106	80 - 120	1	20
Thallium	1000	1110		ug/L		111	80 - 120	1	20

Lab Sample ID: LCSD 180-347152/3-A
Matrix: Solid
Analysis Batch: 347908

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 347152

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1250	1270		ug/L		101	80 - 120	0	20

Method: 2540G - SM 2540G

Lab Sample ID: 180-116605-1 DU
Matrix: Solid
Analysis Batch: 345845

Client Sample ID: A1-0-5 pH 13
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	13.1		11.7		%		11	10
Percent Solids	86.9		88.3		%		2	10

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-346435/1
Matrix: Solid
Analysis Batch: 346435

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
pH	7.00	7.0		SU		100	99 - 101		

Lab Sample ID: LCS 180-346999/1
Matrix: Solid
Analysis Batch: 346999

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
pH	7.00	7.0		SU		100	99 - 101		

Lab Sample ID: LCS 180-347138/1
Matrix: Solid
Analysis Batch: 347138

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
pH	7.00	7.0		SU		100	99 - 101		

Lab Sample ID: 180-116605-10 DU
Matrix: Solid
Analysis Batch: 346435

Client Sample ID: A1-0-5 NATURAL
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	9.4		9.4		SU		0	2

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QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Method: EPA 9040C - pH

Lab Sample ID: 180-116605-20 DU
Matrix: Solid
Analysis Batch: 346435

Client Sample ID: A9-0-5 pH NATURAL
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	10.1		10.1		SU		0	2

Lab Sample ID: 180-116605-5 DU
Matrix: Solid
Analysis Batch: 346999

Client Sample ID: A1-0-5 pH 8
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	7.7		7.8		SU		0.1	2

Lab Sample ID: 180-116605-3 DU
Matrix: Solid
Analysis Batch: 347138

Client Sample ID: A1-0-5 pH 10.5
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	10.5		10.5		SU		0.1	2

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 180-346443/2
Matrix: Solid
Analysis Batch: 346443

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			02/12/21 08:13	1

Lab Sample ID: LCS 180-346443/1
Matrix: Solid
Analysis Batch: 346443

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	84.0	85.9		umhos/cm		102	90 - 110

Lab Sample ID: MB 180-347001/2
Matrix: Solid
Analysis Batch: 347001

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			02/17/21 09:43	1

Lab Sample ID: LCS 180-347001/1
Matrix: Solid
Analysis Batch: 347001

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	84.0	85.9		umhos/cm		102	90 - 110

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QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: MB 180-347140/2

Matrix: Solid

Analysis Batch: 347140

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			02/19/21 11:33	1

Lab Sample ID: LCS 180-347140/1

Matrix: Solid

Analysis Batch: 347140

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	84.0	86.2		umhos/cm		103	90 - 110

Lab Sample ID: 180-116605-10 DU

Matrix: Solid

Analysis Batch: 346443

Client Sample ID: A1-0-5 NATURAL

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	310		309		umhos/cm		0.6	20

Lab Sample ID: 180-116605-20 DU

Matrix: Solid

Analysis Batch: 346443

Client Sample ID: A9-0-5 pH NATURAL

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	420		424		umhos/cm		0.09	20

Lab Sample ID: 180-116605-5 DU

Matrix: Solid

Analysis Batch: 347001

Client Sample ID: A1-0-5 pH 8

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	1900		1930		umhos/cm		0.2	20

Lab Sample ID: 180-116605-3 DU

Matrix: Solid

Analysis Batch: 347140

Client Sample ID: A1-0-5 pH 10.5

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	400		403		umhos/cm		0.3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-346837/2

Matrix: Solid

Analysis Batch: 346837

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			02/17/21 11:55	1

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QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 180-346837/1

Matrix: Solid

Analysis Batch: 346837

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	457	446		mg/L		98	80 - 120

Lab Sample ID: MB 180-346849/2

Matrix: Solid

Analysis Batch: 346849

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			02/17/21 13:17	1

Lab Sample ID: LCS 180-346849/1

Matrix: Solid

Analysis Batch: 346849

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	457	438		mg/L		96	80 - 120

Lab Sample ID: MB 180-347449/2

Matrix: Solid

Analysis Batch: 347449

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			02/23/21 17:43	1

Lab Sample ID: LCS 180-347449/1

Matrix: Solid

Analysis Batch: 347449

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	457	440		mg/L		96	80 - 120

Lab Sample ID: MB 180-347450/2

Matrix: Solid

Analysis Batch: 347450

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			02/23/21 17:57	1

Lab Sample ID: LCS 180-347450/1

Matrix: Solid

Analysis Batch: 347450

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	457	436		mg/L		95	80 - 120

Lab Sample ID: 180-116605-5 DU

Matrix: Solid

Analysis Batch: 346837

Client Sample ID: A1-0-5 pH 8

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1500		1400		mg/L		5	10

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QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: 180-116605-8 DU

Matrix: Solid

Analysis Batch: 346837

Client Sample ID: A1-0-5 pH 4

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	7100		7450		mg/L		6	10

Lab Sample ID: 180-116605-15 DU

Matrix: Solid

Analysis Batch: 347450

Client Sample ID: A9-0-5 pH 8

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	4500		4550		mg/L		1	10

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

Lab Sample ID: LCS 180-346440/1

Matrix: Solid

Analysis Batch: 346440

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oxidation Reduction Potential	475	462		millivolts		97	90 - 110

Lab Sample ID: LCS 180-347000/1

Matrix: Solid

Analysis Batch: 347000

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oxidation Reduction Potential	475	460		millivolts		97	90 - 110

Lab Sample ID: LCS 180-347139/1

Matrix: Solid

Analysis Batch: 347139

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oxidation Reduction Potential	475	461		millivolts		97	90 - 110

Lab Sample ID: 180-116605-10 DU

Matrix: Solid

Analysis Batch: 346440

Client Sample ID: A1-0-5 NATURAL

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	280		270		millivolts		2	20

Lab Sample ID: 180-116605-20 DU

Matrix: Solid

Analysis Batch: 346440

Client Sample ID: A9-0-5 pH NATURAL

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	310		300		millivolts		3	20

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QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential (Continued)

Lab Sample ID: 180-116605-5 DU

Matrix: Solid

Analysis Batch: 347000

Client Sample ID: A1-0-5 pH 8

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	180		175		millivolts		1	20

Lab Sample ID: 180-116605-3 DU

Matrix: Solid

Analysis Batch: 347139

Client Sample ID: A1-0-5 pH 10.5

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Oxidation Reduction Potential	260		250		millivolts		4	20

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

HPLC/IC

Leach Batch: 346097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	1313	
180-116605-2	A1-0-5 pH 12	Leach	Solid	1313	
180-116605-8	A1-0-5 pH 4	Leach	Solid	1313	
180-116605-10	A1-0-5 NATURAL	Leach	Solid	1313	
180-116605-11	A9-0-5 pH 13	Leach	Solid	1313	
180-116605-12	A9-0-5 pH 12	Leach	Solid	1313	
180-116605-16	A9-0-5 pH 7	Leach	Solid	1313	
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	1313	
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	1313	
180-116605-21	C7-0-5 pH 13	Leach	Solid	1313	
180-116605-22	C7-0-5 pH 12	Leach	Solid	1313	
180-116605-28	C7-0-5 pH 4	Leach	Solid	1313	
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	1313	
180-116605-32	BLANK MEDIUM	Leach	Solid	1313	
180-116605-33	BLANK HIGH	Leach	Solid	1313	
180-116605-10 MS	A1-0-5 NATURAL	Leach	Solid	1313	
180-116605-10 MSD	A1-0-5 NATURAL	Leach	Solid	1313	

Leach Batch: 346570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-5	A1-0-5 pH 8	Leach	Solid	1313	
180-116605-6	A1-0-5 pH 7	Leach	Solid	1313	
180-116605-9	A1-0-5 pH 2	Leach	Solid	1313	
180-116605-14	A9-0-5 pH 9	Leach	Solid	1313	
180-116605-18	A9-0-5 pH 4	Leach	Solid	1313	
180-116605-24	C7-0-5 pH 9	Leach	Solid	1313	
180-116605-25	C7-0-5 pH 8	Leach	Solid	1313	
180-116605-26	C7-0-5 pH 7	Leach	Solid	1313	
180-116605-31	BLANK LOW	Leach	Solid	1313	
180-116605-24 MS	C7-0-5 pH 9	Leach	Solid	1313	
180-116605-24 MSD	C7-0-5 pH 9	Leach	Solid	1313	

Leach Batch: 346857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	1313	
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	1313	
180-116605-15	A9-0-5 pH 8	Leach	Solid	1313	
180-116605-19	A9-0-5 pH 2	Leach	Solid	1313	
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	1313	
180-116605-29	C7-0-5 pH 2	Leach	Solid	1313	
180-116605-32	BLANK MEDIUM	Leach	Solid	1313	

Analysis Batch: 346924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	EPA 9056A	346097
180-116605-1	A1-0-5 pH 13	Leach	Solid	EPA 9056A	346097
180-116605-2	A1-0-5 pH 12	Leach	Solid	EPA 9056A	346097
180-116605-8	A1-0-5 pH 4	Leach	Solid	EPA 9056A	346097
180-116605-10	A1-0-5 NATURAL	Leach	Solid	EPA 9056A	346097
180-116605-11	A9-0-5 pH 13	Leach	Solid	EPA 9056A	346097
180-116605-12	A9-0-5 pH 12	Leach	Solid	EPA 9056A	346097

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

HPLC/IC (Continued)

Analysis Batch: 346924 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-16	A9-0-5 pH 7	Leach	Solid	EPA 9056A	346097
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	EPA 9056A	346097
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	EPA 9056A	346097
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	EPA 9056A	346097
180-116605-21	C7-0-5 pH 13	Leach	Solid	EPA 9056A	346097
180-116605-21	C7-0-5 pH 13	Leach	Solid	EPA 9056A	346097
180-116605-22	C7-0-5 pH 12	Leach	Solid	EPA 9056A	346097
180-116605-22	C7-0-5 pH 12	Leach	Solid	EPA 9056A	346097
180-116605-28	C7-0-5 pH 4	Leach	Solid	EPA 9056A	346097
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	EPA 9056A	346097
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	EPA 9056A	346097
180-116605-32	BLANK MEDIUM	Leach	Solid	EPA 9056A	346097
180-116605-33	BLANK HIGH	Leach	Solid	EPA 9056A	346097
MB 180-346924/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-346924/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	
180-116605-10 MS	A1-0-5 NATURAL	Leach	Solid	EPA 9056A	346097
180-116605-10 MSD	A1-0-5 NATURAL	Leach	Solid	EPA 9056A	346097

Analysis Batch: 347170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-24	C7-0-5 pH 9	Leach	Solid	EPA 9056A	346570
180-116605-25	C7-0-5 pH 8	Leach	Solid	EPA 9056A	346570
180-116605-26	C7-0-5 pH 7	Leach	Solid	EPA 9056A	346570
180-116605-32	BLANK MEDIUM	Leach	Solid	EPA 9056A	346857
MB 180-347170/20	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-347170/19	Lab Control Sample	Total/NA	Solid	EPA 9056A	
180-116605-24 MS	C7-0-5 pH 9	Leach	Solid	EPA 9056A	346570
180-116605-24 MSD	C7-0-5 pH 9	Leach	Solid	EPA 9056A	346570

Analysis Batch: 347241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-5	A1-0-5 pH 8	Leach	Solid	EPA 9056A	346570
180-116605-5	A1-0-5 pH 8	Leach	Solid	EPA 9056A	346570
180-116605-6	A1-0-5 pH 7	Leach	Solid	EPA 9056A	346570
180-116605-6	A1-0-5 pH 7	Leach	Solid	EPA 9056A	346570
180-116605-9	A1-0-5 pH 2	Leach	Solid	EPA 9056A	346570
180-116605-14	A9-0-5 pH 9	Leach	Solid	EPA 9056A	346570
180-116605-14	A9-0-5 pH 9	Leach	Solid	EPA 9056A	346570
180-116605-18	A9-0-5 pH 4	Leach	Solid	EPA 9056A	346570
180-116605-31	BLANK LOW	Leach	Solid	EPA 9056A	346570
MB 180-347241/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-347241/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Analysis Batch: 347322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	EPA 9056A	346857
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	EPA 9056A	346857
180-116605-15	A9-0-5 pH 8	Leach	Solid	EPA 9056A	346857
180-116605-19	A9-0-5 pH 2	Leach	Solid	EPA 9056A	346857
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	EPA 9056A	346857
180-116605-29	C7-0-5 pH 2	Leach	Solid	EPA 9056A	346857

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QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

HPLC/IC (Continued)

Analysis Batch: 347322 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-347322/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-347322/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Analysis Batch: 347581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-15	A9-0-5 pH 8	Leach	Solid	EPA 9056A	346857
MB 180-347581/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-347581/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Metals

Leach Batch: 346097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	1313	
180-116605-2	A1-0-5 pH 12	Leach	Solid	1313	
180-116605-8	A1-0-5 pH 4	Leach	Solid	1313	
180-116605-10	A1-0-5 NATURAL	Leach	Solid	1313	
180-116605-11	A9-0-5 pH 13	Leach	Solid	1313	
180-116605-12	A9-0-5 pH 12	Leach	Solid	1313	
180-116605-16	A9-0-5 pH 7	Leach	Solid	1313	
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	1313	
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	1313	
180-116605-21	C7-0-5 pH 13	Leach	Solid	1313	
180-116605-22	C7-0-5 pH 12	Leach	Solid	1313	
180-116605-28	C7-0-5 pH 4	Leach	Solid	1313	
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	1313	
180-116605-32	BLANK MEDIUM	Leach	Solid	1313	
180-116605-33	BLANK HIGH	Leach	Solid	1313	

Leach Batch: 346570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-5	A1-0-5 pH 8	Leach	Solid	1313	
180-116605-6	A1-0-5 pH 7	Leach	Solid	1313	
180-116605-9	A1-0-5 pH 2	Leach	Solid	1313	
180-116605-14	A9-0-5 pH 9	Leach	Solid	1313	
180-116605-18	A9-0-5 pH 4	Leach	Solid	1313	
180-116605-24	C7-0-5 pH 9	Leach	Solid	1313	
180-116605-25	C7-0-5 pH 8	Leach	Solid	1313	
180-116605-26	C7-0-5 pH 7	Leach	Solid	1313	
180-116605-31	BLANK LOW	Leach	Solid	1313	

Leach Batch: 346857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	1313	
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	1313	
180-116605-15	A9-0-5 pH 8	Leach	Solid	1313	
180-116605-19	A9-0-5 pH 2	Leach	Solid	1313	
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	1313	
180-116605-29	C7-0-5 pH 2	Leach	Solid	1313	
180-116605-32	BLANK MEDIUM	Leach	Solid	1313	

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QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Metals

Prep Batch: 347151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	3010A	346097
180-116605-2	A1-0-5 pH 12	Leach	Solid	3010A	346097
180-116605-8	A1-0-5 pH 4	Leach	Solid	3010A	346097
180-116605-10	A1-0-5 NATURAL	Leach	Solid	3010A	346097
180-116605-11	A9-0-5 pH 13	Leach	Solid	3010A	346097
180-116605-12	A9-0-5 pH 12	Leach	Solid	3010A	346097
180-116605-16	A9-0-5 pH 7	Leach	Solid	3010A	346097
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	3010A	346097
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	3010A	346097
180-116605-21	C7-0-5 pH 13	Leach	Solid	3010A	346097
180-116605-22	C7-0-5 pH 12	Leach	Solid	3010A	346097
180-116605-28	C7-0-5 pH 4	Leach	Solid	3010A	346097
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	3010A	346097
180-116605-32	BLANK MEDIUM	Leach	Solid	3010A	346097
180-116605-33	BLANK HIGH	Leach	Solid	3010A	346097
MB 180-347151/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-347151/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-347151/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Prep Batch: 347152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	3010A	346857
180-116605-5	A1-0-5 pH 8	Leach	Solid	3010A	346570
180-116605-6	A1-0-5 pH 7	Leach	Solid	3010A	346570
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	3010A	346857
180-116605-9	A1-0-5 pH 2	Leach	Solid	3010A	346570
180-116605-14	A9-0-5 pH 9	Leach	Solid	3010A	346570
180-116605-15	A9-0-5 pH 8	Leach	Solid	3010A	346857
180-116605-18	A9-0-5 pH 4	Leach	Solid	3010A	346570
180-116605-19	A9-0-5 pH 2	Leach	Solid	3010A	346857
180-116605-24	C7-0-5 pH 9	Leach	Solid	3010A	346570
180-116605-25	C7-0-5 pH 8	Leach	Solid	3010A	346570
180-116605-26	C7-0-5 pH 7	Leach	Solid	3010A	346570
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	3010A	346857
180-116605-29	C7-0-5 pH 2	Leach	Solid	3010A	346857
180-116605-31	BLANK LOW	Leach	Solid	3010A	346570
180-116605-32	BLANK MEDIUM	Leach	Solid	3010A	346857
MB 180-347152/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-347152/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-347152/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Analysis Batch: 347728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	EPA 6020B	347151
180-116605-2	A1-0-5 pH 12	Leach	Solid	EPA 6020B	347151
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	EPA 6020B	347152
180-116605-5	A1-0-5 pH 8	Leach	Solid	EPA 6020B	347152
180-116605-6	A1-0-5 pH 7	Leach	Solid	EPA 6020B	347152
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	EPA 6020B	347152
180-116605-8	A1-0-5 pH 4	Leach	Solid	EPA 6020B	347151
180-116605-9	A1-0-5 pH 2	Leach	Solid	EPA 6020B	347152

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QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Metals (Continued)

Analysis Batch: 347728 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-9	A1-0-5 pH 2	Leach	Solid	EPA 6020B	347152
180-116605-10	A1-0-5 NATURAL	Leach	Solid	EPA 6020B	347151
180-116605-11	A9-0-5 pH 13	Leach	Solid	EPA 6020B	347151
180-116605-12	A9-0-5 pH 12	Leach	Solid	EPA 6020B	347151
180-116605-14	A9-0-5 pH 9	Leach	Solid	EPA 6020B	347152
180-116605-15	A9-0-5 pH 8	Leach	Solid	EPA 6020B	347152
180-116605-16	A9-0-5 pH 7	Leach	Solid	EPA 6020B	347151
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	EPA 6020B	347151
180-116605-18	A9-0-5 pH 4	Leach	Solid	EPA 6020B	347152
180-116605-19	A9-0-5 pH 2	Leach	Solid	EPA 6020B	347152
180-116605-19	A9-0-5 pH 2	Leach	Solid	EPA 6020B	347152
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	EPA 6020B	347151
180-116605-21	C7-0-5 pH 13	Leach	Solid	EPA 6020B	347151
180-116605-22	C7-0-5 pH 12	Leach	Solid	EPA 6020B	347151
180-116605-24	C7-0-5 pH 9	Leach	Solid	EPA 6020B	347152
180-116605-25	C7-0-5 pH 8	Leach	Solid	EPA 6020B	347152
180-116605-26	C7-0-5 pH 7	Leach	Solid	EPA 6020B	347152
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	EPA 6020B	347152
180-116605-28	C7-0-5 pH 4	Leach	Solid	EPA 6020B	347151
180-116605-29	C7-0-5 pH 2	Leach	Solid	EPA 6020B	347152
180-116605-29	C7-0-5 pH 2	Leach	Solid	EPA 6020B	347152
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	EPA 6020B	347151
180-116605-31	BLANK LOW	Leach	Solid	EPA 6020B	347152
180-116605-32	BLANK MEDIUM	Leach	Solid	EPA 6020B	347151
180-116605-32	BLANK MEDIUM	Leach	Solid	EPA 6020B	347152
180-116605-33	BLANK HIGH	Leach	Solid	EPA 6020B	347151
MB 180-347151/1-A	Method Blank	Total/NA	Solid	EPA 6020B	347151
MB 180-347152/1-A	Method Blank	Total/NA	Solid	EPA 6020B	347152
LCS 180-347151/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020B	347151
LCS 180-347152/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020B	347152
LCSD 180-347151/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020B	347151
LCSD 180-347152/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020B	347152

Analysis Batch: 347838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-8	A1-0-5 pH 4	Leach	Solid	EPA 6020B	347151
180-116605-16	A9-0-5 pH 7	Leach	Solid	EPA 6020B	347151
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	EPA 6020B	347151
180-116605-18	A9-0-5 pH 4	Leach	Solid	EPA 6020B	347152
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	EPA 6020B	347152
180-116605-28	C7-0-5 pH 4	Leach	Solid	EPA 6020B	347151

Analysis Batch: 347908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	EPA 6020B	347151
180-116605-2	A1-0-5 pH 12	Leach	Solid	EPA 6020B	347151
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	EPA 6020B	347152
180-116605-5	A1-0-5 pH 8	Leach	Solid	EPA 6020B	347152
180-116605-6	A1-0-5 pH 7	Leach	Solid	EPA 6020B	347152
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	EPA 6020B	347152
180-116605-8	A1-0-5 pH 4	Leach	Solid	EPA 6020B	347151

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QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

Metals (Continued)

Analysis Batch: 347908 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-9	A1-0-5 pH 2	Leach	Solid	EPA 6020B	347152
180-116605-10	A1-0-5 NATURAL	Leach	Solid	EPA 6020B	347151
180-116605-14	A9-0-5 pH 9	Leach	Solid	EPA 6020B	347152
180-116605-15	A9-0-5 pH 8	Leach	Solid	EPA 6020B	347152
180-116605-18	A9-0-5 pH 4	Leach	Solid	EPA 6020B	347152
180-116605-19	A9-0-5 pH 2	Leach	Solid	EPA 6020B	347152
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	EPA 6020B	347151
180-116605-24	C7-0-5 pH 9	Leach	Solid	EPA 6020B	347152
180-116605-25	C7-0-5 pH 8	Leach	Solid	EPA 6020B	347152
180-116605-26	C7-0-5 pH 7	Leach	Solid	EPA 6020B	347152
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	EPA 6020B	347152
180-116605-29	C7-0-5 pH 2	Leach	Solid	EPA 6020B	347152
180-116605-31	BLANK LOW	Leach	Solid	EPA 6020B	347152
180-116605-32	BLANK MEDIUM	Leach	Solid	EPA 6020B	347152
180-116605-33	BLANK HIGH	Leach	Solid	EPA 6020B	347151
MB 180-347151/1-A	Method Blank	Total/NA	Solid	EPA 6020B	347151
MB 180-347152/1-A	Method Blank	Total/NA	Solid	EPA 6020B	347152
LCS 180-347151/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020B	347151
LCS 180-347152/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020B	347152
LCSD 180-347151/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020B	347151
LCSD 180-347152/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020B	347152

Analysis Batch: 348027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-11	A9-0-5 pH 13	Leach	Solid	EPA 6020B	347151
180-116605-12	A9-0-5 pH 12	Leach	Solid	EPA 6020B	347151
180-116605-16	A9-0-5 pH 7	Leach	Solid	EPA 6020B	347151
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	EPA 6020B	347151
180-116605-21	C7-0-5 pH 13	Leach	Solid	EPA 6020B	347151
180-116605-22	C7-0-5 pH 12	Leach	Solid	EPA 6020B	347151
180-116605-28	C7-0-5 pH 4	Leach	Solid	EPA 6020B	347151
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	EPA 6020B	347151
180-116605-32	BLANK MEDIUM	Leach	Solid	EPA 6020B	347151
180-116605-33	BLANK HIGH	Leach	Solid	EPA 6020B	347151

General Chemistry

Analysis Batch: 345845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Total/NA	Solid	2540G	
180-116605-11	A9-0-5 pH 13	Total/NA	Solid	2540G	
180-116605-21	C7-0-5 pH 13	Total/NA	Solid	2540G	
180-116605-1 DU	A1-0-5 pH 13	Total/NA	Solid	2540G	

Leach Batch: 346097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	1313	
180-116605-2	A1-0-5 pH 12	Leach	Solid	1313	
180-116605-8	A1-0-5 pH 4	Leach	Solid	1313	
180-116605-10	A1-0-5 NATURAL	Leach	Solid	1313	
180-116605-11	A9-0-5 pH 13	Leach	Solid	1313	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

General Chemistry (Continued)

Leach Batch: 346097 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-12	A9-0-5 pH 12	Leach	Solid	1313	
180-116605-16	A9-0-5 pH 7	Leach	Solid	1313	
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	1313	
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	1313	
180-116605-21	C7-0-5 pH 13	Leach	Solid	1313	
180-116605-22	C7-0-5 pH 12	Leach	Solid	1313	
180-116605-28	C7-0-5 pH 4	Leach	Solid	1313	
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	1313	
180-116605-32	BLANK MEDIUM	Leach	Solid	1313	
180-116605-33	BLANK HIGH	Leach	Solid	1313	
180-116605-34	A1-0-5 PRETEST	Leach	Solid	1313	
180-116605-36	C7-0-5 PRETEST	Leach	Solid	1313	
180-116605-8 DU	A1-0-5 pH 4	Leach	Solid	1313	
180-116605-10 DU	A1-0-5 NATURAL	Leach	Solid	1313	
180-116605-20 DU	A9-0-5 pH NATURAL	Leach	Solid	1313	

Analysis Batch: 346435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	EPA 9040C	346097
180-116605-2	A1-0-5 pH 12	Leach	Solid	EPA 9040C	346097
180-116605-8	A1-0-5 pH 4	Leach	Solid	EPA 9040C	346097
180-116605-10	A1-0-5 NATURAL	Leach	Solid	EPA 9040C	346097
180-116605-11	A9-0-5 pH 13	Leach	Solid	EPA 9040C	346097
180-116605-12	A9-0-5 pH 12	Leach	Solid	EPA 9040C	346097
180-116605-16	A9-0-5 pH 7	Leach	Solid	EPA 9040C	346097
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	EPA 9040C	346097
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	EPA 9040C	346097
180-116605-21	C7-0-5 pH 13	Leach	Solid	EPA 9040C	346097
180-116605-22	C7-0-5 pH 12	Leach	Solid	EPA 9040C	346097
180-116605-28	C7-0-5 pH 4	Leach	Solid	EPA 9040C	346097
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	EPA 9040C	346097
180-116605-32	BLANK MEDIUM	Leach	Solid	EPA 9040C	346097
180-116605-33	BLANK HIGH	Leach	Solid	EPA 9040C	346097
180-116605-34	A1-0-5 PRETEST	Leach	Solid	EPA 9040C	346097
180-116605-36	C7-0-5 PRETEST	Leach	Solid	EPA 9040C	346097
LCS 180-346435/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	
180-116605-10 DU	A1-0-5 NATURAL	Leach	Solid	EPA 9040C	346097
180-116605-20 DU	A9-0-5 pH NATURAL	Leach	Solid	EPA 9040C	346097

Analysis Batch: 346440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	SM 2580B	346097
180-116605-2	A1-0-5 pH 12	Leach	Solid	SM 2580B	346097
180-116605-8	A1-0-5 pH 4	Leach	Solid	SM 2580B	346097
180-116605-10	A1-0-5 NATURAL	Leach	Solid	SM 2580B	346097
180-116605-11	A9-0-5 pH 13	Leach	Solid	SM 2580B	346097
180-116605-12	A9-0-5 pH 12	Leach	Solid	SM 2580B	346097
180-116605-16	A9-0-5 pH 7	Leach	Solid	SM 2580B	346097
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	SM 2580B	346097
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	SM 2580B	346097
180-116605-21	C7-0-5 pH 13	Leach	Solid	SM 2580B	346097

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

General Chemistry (Continued)

Analysis Batch: 346440 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-22	C7-0-5 pH 12	Leach	Solid	SM 2580B	346097
180-116605-28	C7-0-5 pH 4	Leach	Solid	SM 2580B	346097
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	SM 2580B	346097
180-116605-32	BLANK MEDIUM	Leach	Solid	SM 2580B	346097
180-116605-33	BLANK HIGH	Leach	Solid	SM 2580B	346097
LCS 180-346440/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-116605-10 DU	A1-0-5 NATURAL	Leach	Solid	SM 2580B	346097
180-116605-20 DU	A9-0-5 pH NATURAL	Leach	Solid	SM 2580B	346097

Analysis Batch: 346443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	SM 2510B	346097
180-116605-2	A1-0-5 pH 12	Leach	Solid	SM 2510B	346097
180-116605-8	A1-0-5 pH 4	Leach	Solid	SM 2510B	346097
180-116605-10	A1-0-5 NATURAL	Leach	Solid	SM 2510B	346097
180-116605-11	A9-0-5 pH 13	Leach	Solid	SM 2510B	346097
180-116605-12	A9-0-5 pH 12	Leach	Solid	SM 2510B	346097
180-116605-16	A9-0-5 pH 7	Leach	Solid	SM 2510B	346097
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	SM 2510B	346097
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	SM 2510B	346097
180-116605-21	C7-0-5 pH 13	Leach	Solid	SM 2510B	346097
180-116605-22	C7-0-5 pH 12	Leach	Solid	SM 2510B	346097
180-116605-28	C7-0-5 pH 4	Leach	Solid	SM 2510B	346097
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	SM 2510B	346097
180-116605-32	BLANK MEDIUM	Leach	Solid	SM 2510B	346097
180-116605-33	BLANK HIGH	Leach	Solid	SM 2510B	346097
MB 180-346443/2	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-346443/1	Lab Control Sample	Total/NA	Solid	SM 2510B	
180-116605-10 DU	A1-0-5 NATURAL	Leach	Solid	SM 2510B	346097
180-116605-20 DU	A9-0-5 pH NATURAL	Leach	Solid	SM 2510B	346097

Leach Batch: 346570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-5	A1-0-5 pH 8	Leach	Solid	1313	
180-116605-6	A1-0-5 pH 7	Leach	Solid	1313	
180-116605-9	A1-0-5 pH 2	Leach	Solid	1313	
180-116605-14	A9-0-5 pH 9	Leach	Solid	1313	
180-116605-18	A9-0-5 pH 4	Leach	Solid	1313	
180-116605-24	C7-0-5 pH 9	Leach	Solid	1313	
180-116605-25	C7-0-5 pH 8	Leach	Solid	1313	
180-116605-26	C7-0-5 pH 7	Leach	Solid	1313	
180-116605-31	BLANK LOW	Leach	Solid	1313	
180-116605-5 DU	A1-0-5 pH 8	Leach	Solid	1313	

Analysis Batch: 346837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-1	A1-0-5 pH 13	Leach	Solid	SM 2540C	346097
180-116605-2	A1-0-5 pH 12	Leach	Solid	SM 2540C	346097
180-116605-5	A1-0-5 pH 8	Leach	Solid	SM 2540C	346570
180-116605-6	A1-0-5 pH 7	Leach	Solid	SM 2540C	346570
180-116605-8	A1-0-5 pH 4	Leach	Solid	SM 2540C	346097

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

General Chemistry (Continued)

Analysis Batch: 346837 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-9	A1-0-5 pH 2	Leach	Solid	SM 2540C	346570
180-116605-10	A1-0-5 NATURAL	Leach	Solid	SM 2540C	346097
180-116605-11	A9-0-5 pH 13	Leach	Solid	SM 2540C	346097
180-116605-12	A9-0-5 pH 12	Leach	Solid	SM 2540C	346097
180-116605-14	A9-0-5 pH 9	Leach	Solid	SM 2540C	346570
180-116605-16	A9-0-5 pH 7	Leach	Solid	SM 2540C	346097
180-116605-17	A9-0-5 pH 5.5	Leach	Solid	SM 2540C	346097
180-116605-18	A9-0-5 pH 4	Leach	Solid	SM 2540C	346570
180-116605-20	A9-0-5 pH NATURAL	Leach	Solid	SM 2540C	346097
180-116605-21	C7-0-5 pH 13	Leach	Solid	SM 2540C	346097
180-116605-22	C7-0-5 pH 12	Leach	Solid	SM 2540C	346097
180-116605-28	C7-0-5 pH 4	Leach	Solid	SM 2540C	346097
180-116605-30	C7-0-5 pH NATURAL	Leach	Solid	SM 2540C	346097
180-116605-32	BLANK MEDIUM	Leach	Solid	SM 2540C	346097
180-116605-33	BLANK HIGH	Leach	Solid	SM 2540C	346097
MB 180-346837/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-346837/1	Lab Control Sample	Total/NA	Solid	SM 2540C	
180-116605-5 DU	A1-0-5 pH 8	Leach	Solid	SM 2540C	346570
180-116605-8 DU	A1-0-5 pH 4	Leach	Solid	SM 2540C	346097

Analysis Batch: 346849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-24	C7-0-5 pH 9	Leach	Solid	SM 2540C	346570
180-116605-25	C7-0-5 pH 8	Leach	Solid	SM 2540C	346570
180-116605-26	C7-0-5 pH 7	Leach	Solid	SM 2540C	346570
180-116605-31	BLANK LOW	Leach	Solid	SM 2540C	346570
MB 180-346849/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-346849/1	Lab Control Sample	Total/NA	Solid	SM 2540C	

Leach Batch: 346857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	1313	
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	1313	
180-116605-15	A9-0-5 pH 8	Leach	Solid	1313	
180-116605-19	A9-0-5 pH 2	Leach	Solid	1313	
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	1313	
180-116605-29	C7-0-5 pH 2	Leach	Solid	1313	
180-116605-32	BLANK MEDIUM	Leach	Solid	1313	
180-116605-3 DU	A1-0-5 pH 10.5	Leach	Solid	1313	
180-116605-15 DU	A9-0-5 pH 8	Leach	Solid	1313	

Analysis Batch: 346999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-5	A1-0-5 pH 8	Leach	Solid	EPA 9040C	346570
180-116605-6	A1-0-5 pH 7	Leach	Solid	EPA 9040C	346570
180-116605-9	A1-0-5 pH 2	Leach	Solid	EPA 9040C	346570
180-116605-14	A9-0-5 pH 9	Leach	Solid	EPA 9040C	346570
180-116605-18	A9-0-5 pH 4	Leach	Solid	EPA 9040C	346570
180-116605-24	C7-0-5 pH 9	Leach	Solid	EPA 9040C	346570
180-116605-25	C7-0-5 pH 8	Leach	Solid	EPA 9040C	346570
180-116605-26	C7-0-5 pH 7	Leach	Solid	EPA 9040C	346570

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

General Chemistry (Continued)

Analysis Batch: 346999 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-31	BLANK LOW	Leach	Solid	EPA 9040C	346570
LCS 180-346999/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	
180-116605-5 DU	A1-0-5 pH 8	Leach	Solid	EPA 9040C	346570

Analysis Batch: 347000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-5	A1-0-5 pH 8	Leach	Solid	SM 2580B	346570
180-116605-6	A1-0-5 pH 7	Leach	Solid	SM 2580B	346570
180-116605-9	A1-0-5 pH 2	Leach	Solid	SM 2580B	346570
180-116605-14	A9-0-5 pH 9	Leach	Solid	SM 2580B	346570
180-116605-18	A9-0-5 pH 4	Leach	Solid	SM 2580B	346570
180-116605-24	C7-0-5 pH 9	Leach	Solid	SM 2580B	346570
180-116605-25	C7-0-5 pH 8	Leach	Solid	SM 2580B	346570
180-116605-26	C7-0-5 pH 7	Leach	Solid	SM 2580B	346570
180-116605-31	BLANK LOW	Leach	Solid	SM 2580B	346570
LCS 180-347000/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-116605-5 DU	A1-0-5 pH 8	Leach	Solid	SM 2580B	346570

Analysis Batch: 347001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-5	A1-0-5 pH 8	Leach	Solid	SM 2510B	346570
180-116605-6	A1-0-5 pH 7	Leach	Solid	SM 2510B	346570
180-116605-9	A1-0-5 pH 2	Leach	Solid	SM 2510B	346570
180-116605-14	A9-0-5 pH 9	Leach	Solid	SM 2510B	346570
180-116605-18	A9-0-5 pH 4	Leach	Solid	SM 2510B	346570
180-116605-24	C7-0-5 pH 9	Leach	Solid	SM 2510B	346570
180-116605-25	C7-0-5 pH 8	Leach	Solid	SM 2510B	346570
180-116605-26	C7-0-5 pH 7	Leach	Solid	SM 2510B	346570
180-116605-31	BLANK LOW	Leach	Solid	SM 2510B	346570
MB 180-347001/2	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-347001/1	Lab Control Sample	Total/NA	Solid	SM 2510B	
180-116605-5 DU	A1-0-5 pH 8	Leach	Solid	SM 2510B	346570

Analysis Batch: 347138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	EPA 9040C	346857
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	EPA 9040C	346857
180-116605-15	A9-0-5 pH 8	Leach	Solid	EPA 9040C	346857
180-116605-19	A9-0-5 pH 2	Leach	Solid	EPA 9040C	346857
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	EPA 9040C	346857
180-116605-29	C7-0-5 pH 2	Leach	Solid	EPA 9040C	346857
180-116605-32	BLANK MEDIUM	Leach	Solid	EPA 9040C	346857
LCS 180-347138/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	
180-116605-3 DU	A1-0-5 pH 10.5	Leach	Solid	EPA 9040C	346857

Analysis Batch: 347139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	SM 2580B	346857
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	SM 2580B	346857
180-116605-15	A9-0-5 pH 8	Leach	Solid	SM 2580B	346857
180-116605-19	A9-0-5 pH 2	Leach	Solid	SM 2580B	346857

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan Generating Station

Job ID: 180-116605-1

General Chemistry (Continued)

Analysis Batch: 347139 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	SM 2580B	346857
180-116605-29	C7-0-5 pH 2	Leach	Solid	SM 2580B	346857
180-116605-32	BLANK MEDIUM	Leach	Solid	SM 2580B	346857
LCS 180-347139/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
180-116605-3 DU	A1-0-5 pH 10.5	Leach	Solid	SM 2580B	346857

Analysis Batch: 347140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	SM 2510B	346857
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	SM 2510B	346857
180-116605-15	A9-0-5 pH 8	Leach	Solid	SM 2510B	346857
180-116605-19	A9-0-5 pH 2	Leach	Solid	SM 2510B	346857
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	SM 2510B	346857
180-116605-29	C7-0-5 pH 2	Leach	Solid	SM 2510B	346857
180-116605-32	BLANK MEDIUM	Leach	Solid	SM 2510B	346857
MB 180-347140/2	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-347140/1	Lab Control Sample	Total/NA	Solid	SM 2510B	
180-116605-3 DU	A1-0-5 pH 10.5	Leach	Solid	SM 2510B	346857

Analysis Batch: 347449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-3	A1-0-5 pH 10.5	Leach	Solid	SM 2540C	346857
MB 180-347449/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-347449/1	Lab Control Sample	Total/NA	Solid	SM 2540C	

Analysis Batch: 347450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-116605-7	A1-0-5 pH 5.5	Leach	Solid	SM 2540C	346857
180-116605-15	A9-0-5 pH 8	Leach	Solid	SM 2540C	346857
180-116605-19	A9-0-5 pH 2	Leach	Solid	SM 2540C	346857
180-116605-27	C7-0-5 pH 5.5	Leach	Solid	SM 2540C	346857
180-116605-29	C7-0-5 pH 2	Leach	Solid	SM 2540C	346857
180-116605-32	BLANK MEDIUM	Leach	Solid	SM 2540C	346857
MB 180-347450/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-347450/1	Lab Control Sample	Total/NA	Solid	SM 2540C	
180-116605-15 DU	A9-0-5 pH 8	Leach	Solid	SM 2540C	346857

Chain of Custody Record

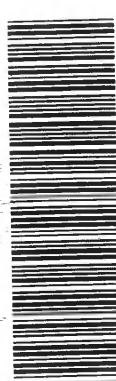
417665

Environment Testing
TestAmerica

Address:

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact		Project Manager:		Site Contact:		COC No:		
Company Name: KPRK and Associates		Tel/Email:		Lab Contact:		Date: 11/27/21		
Address: 14665 W L33rd Rd Ste 1A		Analysis Turnaround Time		Carrier: FEDEX		COCs		
City/State/Zip: Brookfield / WI / 53005		☐ CALENDAR DAYS ☐ WORKING DAYS				Sampler:		
Phone: 262-981-0475		TAT if different from Below				For Lab Use Only:		
Fax:		☐ 2 weeks				Walk-in Client:		
Project Name: Waukegan Soil Samples		☐ 1 week				Lab Sampling:		
Site: Waukegan Generating Station		☐ 2 days				Job / SDG No.:		
P O #		☐ 1 day						
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Sample Specific Notes:
A1-0-5	11/25/20	1135	C	S		N	X	
A9-0-5	11/25/20	1025	C	S		N	X	
C7-0-5	11/24/20	1330	C	S		N	X	
 180-116605 Chain of Custody								
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other								
Possible Hazard Identification: 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								
Special Instructions/QC Requirements & Comments: Parameter List: As, Ba, Chloride, Fe, Li, Mn, Mo, Sulfate, Ti, pH								
Custody Seal No.:		Cooler Temp. (°C): Obs'd:		Corr'd:		Therm ID No.:		
Relinquished by: Mitchell Delan Mo 192		Received by: FEDEX		Company:		Date/Time: 11/27/20 11600		
Relinquished by: 812		Received by: [Signature]		Company: [Signature]		Date/Time: 1-28-21 8:30		
Relinquished by:		Received in Laboratory by:		Company:		Date/Time:		

BRODKE
UNITED
TO 2907
TE 301
RICK
PIT
(412) 963-
RMA: 11/18

FedEx
TRK# 7125 4943 9708
0221

THU - 28 JAN 10:30A
PRIORITY OVERNIGHT
1523B
PA-US PT

NA AGCA
Uncorrected temp
Thermometer ID 2.8 14 °C
CF 0 Initials J
PT-WI-SR-001 effective 11/8/18



180-116605 Waybill

- 1
- 2
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- 8
- 9
- 10
- 11
- 12
- 13

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-116605-1

Login Number: 116605

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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?	False	
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

EPA METHOD 1313

Liquid-Solid Partitioning as a Function of Extract pH using Parallel Batch Extractions LeachXS™ Lite Data Template - Version 4.2, September 2018

PROJECT INFORMATION

Project Code	KPRG		
Project Sponsor	MIDWEST GENERATION		
Project Description	MIDWEST GENERATION		
Material Code	A1-0-5		
Material Replicate	A		
Full Name	Larry Matko		
Origin/Reference	A1-0-5		
Description	A1-0-5		
Test Method Lab	Eurofins TestAmerica Pittsburgh	Date Complete	
Contact	Larry Matko	Phone	412-963-2442
Analytical Lab	Eurofins TestAmerica Pittsburgh	Date Complete	
Contact	Carrie Gamber	Phone	412-963-2428

DATABASE INFORMATION

Name of Database KPRG

WORKBOOK OVERVIEW

EPA Method 1313 LeachXS™ Lite Data Template:

This Excel workbook can be used to document and archive laboratory data and analytical results of EPA Method 1313.

In addition, the date in a completed data template is formatted to be compatible with the data upload tool contained in LeachXS Lite™. Entries shown in **bold red text** in the "Title Sheet", "Extraction Summary" and "Analytical Data"

Note for Coal Combustion Residue (CCR) Materials:

If the material to be tested is a residual from combustion of coal, this workbook contains a hidden tab that can be used record additional source-specific information about the CCR material and how it was produced.

To unhide the "Material Classification" tab:

- Hover the cursor over the "Mositure Content" tab.
- Right click to open the context-sensitive menu and select "Unhide" from the menu list.
- Select "Material Classification" from the list of hidden tabs and click "OK".
- The "Material Classification" tab should be revealed.

To hide the "Material Classification" tab:

- Hover the cursor over the "Material Classification" tab.
- Right click to open the context-sensitive menu and select "Hide" from the menu list.

Database Material Code	MIDWEST GENERATION
Material Class	Coal Combustion
Material Subclass	Fly Ash

↓ indicates a drop down menu with data validation.

- The "Material Classification" tab should be hidden.

SIGNATURES	
Data Compiler:	Date:
Data Reviewer:	Date:
Approved by:	Date:
LeachXS™ Lite Upload:	Date:

ASSISTANCE: (unhide columns B-M)

METHOD 1313 LeachXS Lite Data Template

METHOD 1313 LeachXS Lite Data Template

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

KPRG

A1-0-5

A

Test conducted by: PH

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]	2.520				
Dish + "Wet" Sample [g]	7.870				
Dish + "Dry" Sample [g]	7.170				
Check (Dish + "Dry" Sample) [g]	7.170				
Moisture Content (MC) [g-water/g]	0.131			Mean MC =	0.131 [g-water/g]
Solids Content (SC) [g-dry/g]	0.869			Mean SC =	0.869 [g-dry/g]

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

A-rerun

Test conducted by:

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]					
Dish + "Wet" Sample [g]					
Dish + "Dry" Sample [g]					
Check (Dish + "Dry" Sample) [g]					
Moisture Content (MC) [g-water/g]				Mean MC =	[g-water/g]
Solids Content (SC) [g-dry/g]				Mean SC =	[g-dry/g]

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

KPRG

A1-0-5

B

Test conducted by:

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]					
Dish + Sample [g]					
Dish + Dry Sample [g]					
Check (Dish + Dry Sample) [g]					
Moisture Content (MC) [g-water/g]				Mean MC =	[g-water/g]
Solids Content (SC) [g-dry/g]				Mean SC =	[g-dry/g]

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

KPRG

A1-0-5

C

Test conducted by:

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]					
Dish + Sample [g]					
Dish + Dry Sample [g]					
Check (Dish + Dry Sample) [g]					
Moisture Content (MC) [g-water/g]				Mean MC =	[g-water/g]
Solids Content (SC) [g-dry/g]				Mean SC =	[g-dry/g]

METHOD 1313 PRE-TEST TITRATION

Project

KPRG

Material

A1-0-5

Test Replicate

Pre-Test

Test conducted by:

Extraction Information

LS Ratio

10

mL/g-dry

Liquid Volume / Extraction

400

mL

Recommended Bottle Size

500

mL

Temperature°C

Solids Information

Particle Size (85 wt% less than)

2

mm

Dry Equivalent Mass

40.00

g-dry

Solids Content (default = 1)

0.131

g-dry/g

Mass of "As Tested" Material/Extraction

305.71

g

Extraction Contact Time

Date

Time

Test Start

Test End

Required Contact Time

47-49

[hr]

Reagent Information

Acid Type

HNO3

↓

Acid Normality

16.0

meq/mL

Base Type

NaOH

↓

Base Normality

10.0

meq/mL

Pre-Test Extraction Setup

additional extracts P06 thru P10 as needed to obtain curve resolution

Test Position	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10
"As Tested" Solid [g] (±0.05g)	305.71	305.71	305.71	305.71	305.71	305.71	305.71	305.71	305.71	305.71
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-
Acid Addition [meq/g-dry]										
Eluate pH										

Total Amounts Needed

Total Solid

1528.6

g

Total WatermL

Total AcidmL

Total BasemL

DEVELOPING A SCHEDULE OF ACID/BASE ADDITIONS

14

12

10

8

6

4

2

0

Eluate pH

Series1

Acid Addition for Target pH

Natural pH Indicator

-2

-1

0

1

2

Acid Addition [meq/g-dry]

Schedule of Acid/Base Additions

Test Position	Acid Addition [meg/g-dry]	pH Target	Tol	Rationale
T01		13.0	±0.5	Upper bound (field conditions) for amphoteric COPCs
T02		12.0	±0.5	Maximum in alkaline range for LSP curves of amphoteric COPCs
T03		10.5	±0.5	Substitution if natural pH falls within range of a mandatory pH target
T04		9.0	±0.5	Minimum of LSP curve for many cationic and amphoteric COPCs
T05		8.0	±0.5	Endpoint pH of carbonated alkaline materials
T06		7.0	±0.5	Neutral pH region; high release of oxyanions
T07		5.5	±0.5	Typical lower range of industrial waste landfills
T08		4.0	±0.5	Lower pH limit of typical management scenario
T09		2.0	±0.5	Provides total or available content of COPCs
NAT	0			Natural pH at LS 10 mL/g-dry (no acid/base addition)

NAT = natural pH extraction

↓ indicates drop down menu

TABLE 1

EXTRACTION PARAMETERS AS FUNCTION OF MAXIMUM PARTICLE SIZE

Particle Size (85 wt% less than) (mm)	US Sieve Size	Minimum Dry Mass (g-dry)	Contact Time (h)	Suggested Vessel Size (mL)
0.3	50	20 ± 0.02	24 ± 2	250
2.0	10	40 ± 0.02	48 ± 2	500
5.0	4	80 ± 0.02	72 ± 2	1000

TABLE 2

MATERIAL NEUTRALIZATION CLASSIFICATIONS

Neutralization Classification	Material Types
Low Alkalinity	soils; sediments; CCR fly ash; CCR bottom ash; coal milling rejects; MSWI fly ash, MSWI bottom ash; sewage sludge amended soil
Moderate Alkalinity	soils; wood preserving waste; MSWI bottom ash; steel slag; electric arc furnace dust; MSW compost; nickel sludge; Portland cement mortar
High Alkalinity	Portland cement clinker; steel blast furnace slag, solidified waste (fly ash, blast furnace slag, Portland cement)

NOTE: CCR = Coal combustion residue
MSWI = Municipal solid waste incinerator

TABLE 3

PRE-TEST TITRATION: ACID EQUIVALENT SCHEDULE

Neutralization Classification	Equivalents of Acid (meq/g-dry)				
	Bottle 1	Bottle 2	Bottle 3	Bottle 4	Bottle 5
Low Alkalinity	-2.0	-1.0	0	1.0	2.0
Moderate Alkalinity	-2.0	0	2.0	5.0	10.0
High Alkalinity	0	5.0	10.0	15.0	25.0

NOTE: 1) Base additions shown as opposite sign of acid equivalents.
2) Additional pre-test point(s) interpolating or extrapolating from the pre-test schedule may be necessary to provide adequate resolution in the titration curve.

METHOD 1313 LeachX5™ Lite Data Template

METHOD 1313 LAB EXTRACTION DATA

Project: **KFRG**
Material: **A1-D-5**
Test Replicate: **A**

Test conducted by: **[]**

LS Ratio: **10** mL/g dry
Liquid Volume / Extraction: **304.100** mL
Recommended Bottle Size: **500** mL
Temperature: **21** °C

Solids Information
Maximum Particle Size: **2** mm
Dry Equivalent Mass: **35.52** g-dry
Solids Content (default = 1): **0.862** g-dry/g
Mass of "As Tested" Material/Extraction: **35.00** g

Reagent Information
Acid Type: **HNO3** ↓
Acid Normality: **16.0** meq/mL
Base Type: **NaOH** ↓
Base Normality: **10.0** meq/mL

Date: **10-Feb-21** Time: **8:10 AM**
Test Start: **12-Feb-21** Time: **8:10 AM**
Test End: **12-Feb-21** Time: **8:10 AM**
Required Contact Time: **47-48** hr

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	no solid	no solid	no solid	350.0 g
Reagent Water [mL] (±5%)	289.59	298.59	299.54	-	299.34	299.09	298.32	297.59	299.59	299.59	304.17	300.17	294.17	3175.8 mL
Acid Volume [mL] (±1%)	-	-	-	-	0.25	0.50	1.27	2.00	4.00	-	-	-	-	12.0 mL
Base Volume [mL] (±1%)	10.00	1.00	0.05	-	-	-	-	-	-	-	-	-	-	21.0 mL
Acid Normality [meq/mL]	-	-	-	-	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-
Base Normality [meq/mL]	10.0	10.0	10.0	-	-	-	-	-	-	-	-	-	-	10.0

Target pH: **13.0±0.5** **12.0±0.5** **10.5±0.5** **9.0±0.5** **8.0±0.5** **7.0±0.5** **5.5±0.5** **4.0±0.5** **2.0±0.5** **NAT**

Acid Addition [meq/g] **3.28731** **0.32873** **0.03287** **0.01644** **0.111492** **0.222985** **0.445969** **0.668953** **1.05194** **2.103879** **0**

Eluate pH: **13.12** **12.21** **10.49** **-** **7.74** **6.80** **5.39** **3.66** **2.37** **9.37** **0** **Water** **Acid** **Base**

Eluate EC [mS/cm]: **56.67** **4.622** **0.4021** **-** **1.938** **3.32** **6.56** **9.352** **18.31** **0.3107** **-** **-** **-** **-**

Eluate ORP [mV]: **-41** **37** **259** **-** **176** **229** **464** **449** **519** **275** **-** **-** **-** **-**

Notes or Remarks:

Meets pH criteria? **[]** Enter "x" for acceptable or "y" for rejected.

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Project: **KFRG**
Material: **A1-D-5**
Test Replicate: **B**

Test conducted by: **[]**

LS Ratio: **10** mL/g dry
Liquid Volume / Extraction: **304.100** mL
Recommended Bottle Size: **500** mL
Temperature: **21** °C

Solids Information
Maximum Particle Size: **[]** mm
Dry Equivalent Mass: **[]** g-dry
Solids Content (default = 1): **[]** g-dry/g
Mass of "As Tested" Material/Extraction: **[]** g

Reagent Information
Acid Type: **[]** ↓
Acid Normality: **[]** meq/mL
Base Type: **[]** ↓
Base Normality: **[]** meq/mL

Date: **[]** Time: **[]**
Test Start: **[]** Time: **[]**
Test End: **[]** Time: **[]**
Required Contact Time: **[]** hr

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: **13.0±0.5** **12.0±0.5** **10.5±0.5** **9.0±0.5** **8.0±0.5** **7.0±0.5** **5.5±0.5** **4.0±0.5** **2.0±0.5** **NAT**

Acid Addition [meq/g]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **0** **Water** **Acid** **Base**

Eluate pH: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate EC [mS/cm]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate ORP [mV]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Notes or Remarks:

Meets pH criteria? **[]** Enter "x" for acceptable or "y" for rejected.

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Project: **KFRG**
Material: **A1-D-5**
Test Replicate: **C**

Test conducted by: **[]**

LS Ratio: **10** mL/g dry
Liquid Volume / Extraction: **304.100** mL
Recommended Bottle Size: **500** mL
Temperature: **21** °C

Solids Information
Maximum Particle Size: **[]** mm
Dry Equivalent Mass: **[]** g-dry
Solids Content (default = 1): **[]** g-dry/g
Mass of "As Tested" Material/Extraction: **[]** g

Reagent Information
Acid Type: **[]** ↓
Acid Normality: **[]** meq/mL
Base Type: **[]** ↓
Base Normality: **[]** meq/mL

Date: **[]** Time: **[]**
Test Start: **[]** Time: **[]**
Test End: **[]** Time: **[]**
Required Contact Time: **[]** hr

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: **13.0±0.5** **12.0±0.5** **10.5±0.5** **9.0±0.5** **8.0±0.5** **7.0±0.5** **5.5±0.5** **4.0±0.5** **2.0±0.5** **NAT**

Acid Addition [meq/g]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **0** **Water** **Acid** **Base**

Eluate pH: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate EC [mS/cm]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate ORP [mV]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Notes or Remarks:

Meets pH criteria? **[]** Enter "x" for acceptable or "y" for rejected.

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 LeachX5™ Lite Data Template

METHOD 1313 EXTRACTION DATA

Project: **KFRG**
Material: **A1-D-5**
Test Replicate: **A**

Test conducted by: **[]**

LS Ratio: **10** mL/g dry
Liquid Volume / Extraction: **304.100** mL
Recommended Bottle Size: **500** mL
Temperature: **21** °C

Solids Information
Maximum Particle Size: **[]** mm
Dry Equivalent Mass: **[]** g-dry
Solids Content (default = 1): **[]** g-dry/g
Mass of "As Tested" Material/Extraction: **[]** g

Reagent Information
Acid Type: **[]** ↓
Acid Normality: **[]** meq/mL
Base Type: **[]** ↓
Base Normality: **[]** meq/mL

Date: **[]** Time: **[]**
Test Start: **[]** Time: **[]**
Test End: **[]** Time: **[]**
Required Contact Time: **[]** hr

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: **13.0±0.5** **12.0±0.5** **10.5±0.5** **9.0±0.5** **8.0±0.5** **7.0±0.5** **5.5±0.5** **4.0±0.5** **2.0±0.5** **NAT**

Acid Addition [meq/g]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **0** **Water** **Acid** **Base**

Eluate pH: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate EC [mS/cm]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate ORP [mV]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Notes or Remarks:

Meets pH criteria? **[]** Enter "x" for acceptable or "y" for rejected.

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Project: **KFRG**
Material: **A1-D-5**
Test Replicate: **B**

Test conducted by: **[]**

LS Ratio: **10** mL/g dry
Liquid Volume / Extraction: **304.100** mL
Recommended Bottle Size: **500** mL
Temperature: **21** °C

Solids Information
Maximum Particle Size: **[]** mm
Dry Equivalent Mass: **[]** g-dry
Solids Content (default = 1): **[]** g-dry/g
Mass of "As Tested" Material/Extraction: **[]** g

Reagent Information
Acid Type: **[]** ↓
Acid Normality: **[]** meq/mL
Base Type: **[]** ↓
Base Normality: **[]** meq/mL

Date: **[]** Time: **[]**
Test Start: **[]** Time: **[]**
Test End: **[]** Time: **[]**
Required Contact Time: **[]** hr

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: **13.0±0.5** **12.0±0.5** **10.5±0.5** **9.0±0.5** **8.0±0.5** **7.0±0.5** **5.5±0.5** **4.0±0.5** **2.0±0.5** **NAT**

Acid Addition [meq/g]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **0** **Water** **Acid** **Base**

Eluate pH: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate EC [mS/cm]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate ORP [mV]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Notes or Remarks:

Meets pH criteria? **[]** Enter "x" for acceptable or "y" for rejected.

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Project: **KFRG**
Material: **A1-D-5**
Test Replicate: **C**

Test conducted by: **[]**

LS Ratio: **10** mL/g dry
Liquid Volume / Extraction: **304.100** mL
Recommended Bottle Size: **500** mL
Temperature: **21** °C

Solids Information
Maximum Particle Size: **[]** mm
Dry Equivalent Mass: **[]** g-dry
Solids Content (default = 1): **[]** g-dry/g
Mass of "As Tested" Material/Extraction: **[]** g

Reagent Information
Acid Type: **[]** ↓
Acid Normality: **[]** meq/mL
Base Type: **[]** ↓
Base Normality: **[]** meq/mL

Date: **[]** Time: **[]**
Test Start: **[]** Time: **[]**
Test End: **[]** Time: **[]**
Required Contact Time: **[]** hr

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: **13.0±0.5** **12.0±0.5** **10.5±0.5** **9.0±0.5** **8.0±0.5** **7.0±0.5** **5.5±0.5** **4.0±0.5** **2.0±0.5** **NAT**

Acid Addition [meq/g]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **0** **Water** **Acid** **Base**

Eluate pH: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate EC [mS/cm]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Eluate ORP [mV]: **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]** **[]**

Notes or Remarks:

Meets pH criteria? **[]** Enter "x" for acceptable or "y" for rejected.

↓ indicates drop down menu with data validation NAT = natural pH extraction

TABLE 1
EXTRACTION PARAMETERS AS FUNCTION OF MAXIMUM PARTICLE SIZE

Particle Size (80 wt% less than) (mm)	US Sieve Size	Minimum Dry Mass (g-dry)	Contact Time (hr)	Suggested Vessel Size (mL)
0.3	50	20 ± 0.02	24 ± 2	250
2.0	10	40 ± 0.02	48 ± 2	500
5.0	4	80 ± 0.02	72 ± 2	1000

METHOD 1313 LeachXS Lite Data Template

METHOD 1313 SUMMARY OF COMPLETED EXTRACTION INFORMATION

Code
Project KPRG
Material A1-0-5

Test Replicate **A**

Particle Size (85% less than) mm
Solids Content g-dry/g
Temperature °C

Acid Type HNO₃ ↓
Base Type NaOH ↓
Lab Technician LM

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
Test Start Date	10-Feb-21	10-Feb-21	17-Feb-21		15-Feb-21	15-Feb-21	17-Feb-21	10-Feb-21	15-Feb-21	10-Feb-21			
Test End Date	12-Feb-21	12-Feb-21	19-Feb-21		17-Feb-21	17-Feb-21	19-Feb-21	12-Feb-21	17-Feb-21	12-Feb-21			
Extraction Duration [hr]	48.0	48.0	48.0		48.0	48.0	48.0	48.0	48.0	48.0			
Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
"As Tested" Solid [g]	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	no solid	no solid	no solid
Reagent Water [mL]	289.59	298.59	299.54	-	299.34	299.09	298.32	297.59	295.59	299.59	495.10	485.10	485.10
Acid Volume [mL]	-	-	-	-	0.25	0.50	1.27	2.00	4.00	-	-	10.00	-
Base Volume [mL]	10.00	1.00	0.05	-	-	-	-	-	-	-	-	-	10.00
Acid Normality [meq/mL]	-	-	-	-	16.0	16.0	16.0	16.0	16.0	-	-	16.0	-
Base Normality [meq/mL]	10.0	10.0	10.0	-	-	-	-	-	-	-	-	-	10.0
Acid Addition [meq/g]	13.0±0.5	12.0±0.5	10.5±0.5	9.0±0.5	8.0±0.5	7.0±0.5	5.5±0.5	4.0±0.5	2.0±0.5	NAT	Water	Acid	Base
Eluate pH	-3.287311	-0.328731	-0.016437		0.131492	0.262985	0.667982	1.05194	2.103879	0			
Eluate EC [mS/cm]	56.67	4.622	0.4021		1.938	3.32	6.56	9.352	18.31	0.3107			
Eluate ORP [mV]	-41	37	259		176	229	464	449	519	275			
Remarks													

↓ indicates drop down menu with data validation NAT = natural pH extraction

Test Replicate **B**

Particle Size (85% less than) mm
Solids Content g-dry/g
Temperature °C

Acid Type ↓
Base Type ↓
Lab Technician

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
Test Start Date													
Test End Date													
Extraction Duration [hr]													
Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
"As Tested" Solid [g]											no solid	no solid	no solid
Reagent Water [mL]													
Acid Volume [mL]													
Base Volume [mL]													
Acid Normality [meq/mL]													
Base Normality [meq/mL]													
Acid Addition [meq/g]	13.0±0.5	12.0±0.5	10.5±0.5	9.0±0.5	8.0±0.5	7.0±0.5	5.5±0.5	4.0±0.5	2.0±0.5	NAT	Water	Acid	Base
Eluate pH													
Eluate EC [mS/cm]													
Eluate ORP [mV]													
Remarks													

↓ indicates drop down menu with data validation NAT = natural pH extraction

Test Replicate **C**

Particle Size (85% less than) mm
Solids Content g-dry/g
Temperature °C

Acid Type ↓
Base Type ↓
Lab Technician

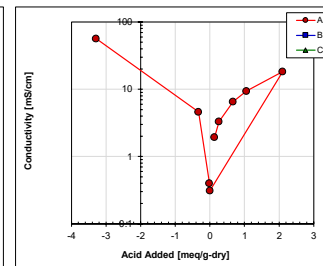
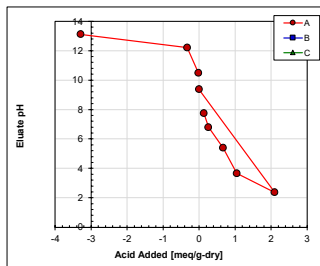
Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
Test Start Date													
Test End Date													
Extraction Duration [hr]													
Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
"As Tested" Solid [g]											no solid	no solid	no solid
Reagent Water [mL]													
Acid Volume [mL]													
Base Volume [mL]													
Acid Normality [meq/mL]													
Base Normality [meq/mL]													
Acid Addition [meq/g]	13.0±0.5	12.0±0.5	10.5±0.5	9.0±0.5	8.0±0.5	7.0±0.5	5.5±0.5	4.0±0.5	2.0±0.5	NAT	Water	Acid	Base
Eluate pH													
Eluate EC [mS/cm]													
Eluate ORP [mV]													
Remarks													

↓ indicates drop down menu with data validation NAT = natural pH extraction

TABLE 5

FINAL EXTRACT PH TARGETS

Test Position	pH Target	Rationale
T01	13.0±0.5	Upper bound (field conditions) for amphoteric COPCs
T02	12.0±0.5	Maximum in alkaline range for LSP curves of amphoteric COPCs
T03	10.5±0.5	Minimum of LSP curve for some cationic and amphoteric COPCs
T04	9.0±0.5	Minimum of LSP curve for some cationic and amphoteric COPCs
T05	8.0±0.5	Endpoint pH of carbonated alkaline materials
T06	7.0±0.5	Neutral pH region; high release of oxyanions
T07	5.5±0.5	Typical lower range of industrial waste landfills
T08	4.0±0.5	Lower pH limit of typical management scenario
T09	2.0±0.5	Provides estimates of total or available COPC content
T10	variable	Natural pH at L/S 10 mL/g-dry (no acid/base addition)



[illegible]

EPA METHOD 1313

Liquid-Solid Partitioning as a Function of Extract pH using Parallel Batch Extractions
LeachXS™ Lite Data Template - Version 4.2, September 2018

PROJECT INFORMATION

Project Code	KPRG		
Project Sponsor	MIDWEST GENERATION		
Project Description	MIDWEST GENERATION		
Material Code	A9-0-5		
Material Replicate	A		
Full Name	Larry Matko		
Origin/Reference	A9-0-5		
Description	A9-0-5		
Test Method Lab	Eurofins TestAmerica Pittsburgh	Date Complete	
Contact	Larry Matko	Phone	412-963-2442
Analytical Lab	Eurofins TestAmerica Pittsburgh	Date Complete	
Contact	Carrie Gamber	Phone	412-963-2428

DATABASE INFORMATION

Name of Database	KPRG
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WORKBOOK OVERVIEW

EPA Method 1313 LeachXS™ Lite Data Template:

This Excel workbook can be used to document and archive laboratory data and analytical results of EPA Method 1313.

In addition, the date in a completed data template is formatted to be compatible with the data upload tool contained in LeachXS Lite™. Entries shown in **bold red text** in the "Title Sheet", "Extraction Summary" and "Analytical Data"

Note for Coal Combustion Residue (CCR) Materials:

If the material to be tested is a residual from combustion of coal, this workbook contains a hidden tab that can be used record additional source-specific information about the CCR material and how it was produced.

To unhide the "Material Classification" tab:

- Hover the cursor over the "Mositure Content" tab.
- Right click to open the context-sensitive menu and select "Unhide" from the menu list.
- Select "Material Classification" from the list of hidden tabs and click "OK".
- The "Material Classification" tab should be revealed.

To hide the "Material Classification" tab:

- Hover the cursor over the "Material Classification" tab.
- Right click to open the context-sensitive menu and select "Hide" from the menu list.

Database Material Code	MIDWEST GENERATION	
Material Class	Coal Combustion	↓
Material Subclass	Fly Ash	↓
↓ indicates a drop down menu with data validation.		

- The "Material Classification" tab should be hidden.

SIGNATURES	
Data Compiler: _____	Date: _____
Data Reviewer: _____	Date: _____
Approved by: _____	Date: _____
LeachXS™ Lite Upload: _____	Date: _____

ASSISTANCE: (unhide columns B-M)

METHOD 1313 LeachXS Lite Data Template

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

KPRG

A9-0-5

A

Test conducted by: PH

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]	2.480				
Dish + "Wet" Sample [g]	7.960				
Dish + "Dry" Sample [g]	6.410				
Check (Dish + "Dry" Sample) [g]	6.410				
Moisture Content (MC) [g-water/g]	0.283			Mean MC =	0.283 [g-water/g]
Solids Content (SC) [g-dry/g]	0.717			Mean SC =	0.717 [g-dry/g]

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

KPRG

A9-0-5

B

Test conducted by:

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]					
Dish + Sample [g]					
Dish + Dry Sample [g]					
Check (Dish + Dry Sample) [g]					
Moisture Content (MC) [g-water/g]				Mean MC =	[g-water/g]
Solids Content (SC) [g-dry/g]				Mean SC =	[g-dry/g]

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

KPRG

A9-0-5

C

Test conducted by:

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]					
Dish + Sample [g]					
Dish + Dry Sample [g]					
Check (Dish + Dry Sample) [g]					
Moisture Content (MC) [g-water/g]				Mean MC =	[g-water/g]
Solids Content (SC) [g-dry/g]				Mean SC =	[g-dry/g]

METHOD 1313 LeachXS Lite Data Template

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

A-rerun

Test conducted by:

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]					
Dish + "Wet" Sample [g]					
Dish + "Dry" Sample [g]					
Check (Dish + "Dry" Sample) [g]					
Moisture Content (MC) [g-water/g]				Mean MC =	[g-water/g]
Solids Content (SC) [g-dry/g]				Mean SC =	[g-dry/g]

METHOD 1313 PRE-TEST TITRATION

Project

KPRG

Material

A9-0-5

Test Replicate

Pre-Test

Test conducted by:

Extraction Information

LS Ratio

10

mL/g-dry

Liquid Volume / Extraction

400

mL

Recommended Bottle Size

500

mL

Temperature°C

Solids Information

Particle Size (85 wt% less than)

2

mm

Dry Equivalent Mass

40.00

g-dry

Solids Content (default = 1)

0.283

g-dry/g

Mass of "As Tested" Material/Extraction

141.42

g

Extraction Contact Time

Date

Time

Test Start

Test End

Required Contact Time

47-49

[hr]

Reagent Information

Acid Type

HNO3

↓

Acid Normality

16.0

meq/mL

Base Type

NaOH

↓

Base Normality

10.0

meq/mL

Pre-Test Extraction Setup

additional extracts P06 thru P10 as needed to obtain curve resolution

Test Position	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10
"As Tested" Solid [g] (±0.05g)	141.42	141.42	141.42	141.42	141.42	141.42	141.42	141.42	141.42	141.42
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-
Acid Addition [meq/g-dry]										
Eluate pH										

Total Amounts Needed

Total Solid

707.1

g

Total WatermL

Total AcidmL

Total BasemL

DEVELOPING A SCHEDULE OF ACID/BASE ADDITIONS

Schedule of Acid/Base Additions

Test Position	Acid Addition [meg/g-dry]	pH Target	Tol	Rationale
T01		13.0	±0.5	Upper bound (field conditions) for amphoteric COPCs
T02		12.0	±0.5	Maximum in alkaline range for LSP curves of amphoteric COPCs
T03		10.5	±0.5	Substitution if natural pH falls within range of a mandatory pH target
T04		9.0	±0.5	Minimum of LSP curve for many cationic and amphoteric COPCs
T05		8.0	±0.5	Endpoint pH of carbonated alkaline materials
T06		7.0	±0.5	Neutral pH region; high release of oxyanions
T07		5.5	±0.5	Typical lower range of industrial waste landfills
T08		4.0	±0.5	Lower pH limit of typical management scenario
T09		2.0	±0.5	Provides total or available content of COPCs
NAT	0			Natural pH at LS 10 mL/g-dry (no acid/base addition)

NAT = natural pH extraction

↓ indicates drop down menu

TABLE 1

EXTRACTION PARAMETERS AS FUNCTION OF MAXIMUM PARTICLE SIZE

Particle Size (85 wt% less than) (mm)	US Sieve Size	Minimum Dry Mass (g-dry)	Contact Time (h)	Suggested Vessel Size (mL)
0.3	50	20 ± 0.02	24 ± 2	250
2.0	10	40 ± 0.02	48 ± 2	500
5.0	4	80 ± 0.02	72 ± 2	1000

TABLE 2

MATERIAL NEUTRALIZATION CLASSIFICATIONS

Neutralization Classification	Material Types
Low Alkalinity	soils; sediments; CCR fly ash; CCR bottom ash; coal milling rejects; MSWI fly ash, MSWI bottom ash; sewage sludge amended soil
Moderate Alkalinity	soils; wood preserving waste; MSWI bottom ash; steel slag; electric arc furnace dust; MSW compost; nickel sludge; Portland cement mortar
High Alkalinity	Portland cement clinker; steel blast furnace slag, solidified waste (fly ash, blast furnace slag, Portland cement)

NOTE: CCR = Coal combustion residue
MSWI = Municipal solid waste incinerator

TABLE 3

PRE-TEST TITRATION: ACID EQUIVALENT SCHEDULE

Neutralization Classification	Equivalents of Acid (meq/g-dry)				
	Bottle 1	Bottle 2	Bottle 3	Bottle 4	Bottle 5
Low Alkalinity	-2.0	-1.0	0	1.0	2.0
Moderate Alkalinity	-2.0	0	2.0	5.0	10.0
High Alkalinity	0	5.0	10.0	15.0	25.0

NOTE: 1) Base additions shown as opposite sign of acid equivalents.
2) Additional pre-test point(s) interpolating or extrapolating from the pre-test schedule may be necessary to provide adequate resolution in the titration curve.

MWG13-15_81274

METHOD 1313 LeachX5™ Lite Data Template

METHOD 1313 LAB EXTRACTION DATA

Test conducted by:

Project: Code:

Material: Solids Information:

Test Replicate: Maximum Particle Size: mm

Date: Time:

Test Start: 10-Feb-21 8:10 AM

Test End: 12-Feb-21 8:10 AM

Required Contact Time: 47-48 hr

Mass of "As Tested" Material/Extraction: 45.00 g

Reagent Information:

Acid Type: HNO3

Acid Normality: 16.0 meq/mL

Base Type: NaOH

Base Normality: 10.0 meq/mL

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	no solid	no solid	no solid	450.0 g
Reagent Water [mL] (±5%)	299.97	308.97	-	308.72	309.27	308.97	307.97	306.97	304.97	309.97	322.70	317.70	312.70	1719.9 mL
Acid Volume [mL] (±1%)	-	-	-	0.25	0.70	1.00	2.00	3.00	3.00	-	-	-	-	17.0 mL
Base Volume [mL] (±1%)	10.00	1.00	-	-	-	-	-	-	-	-	-	-	-	10.00 mL
Acid Normality [meq/mL]	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	-	-
Base Normality [meq/mL]	10.0	10.0	-	-	-	-	-	-	-	-	-	-	-	10.0

Target pH: 13.0±0.5

Acid Addition [meq/g]: 3.09933

Eluate pH: 13.11

Eluate EC [mS/cm]: 55.64

Eluate ORP [mV]: -6

Notes or Remarks:

Meets pH criteria?

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Test conducted by:

Project: Code:

Material: Solids Information:

Test Replicate: Maximum Particle Size: mm

Date: Time:

Test Start:

Test End:

Required Contact Time: hr

Mass of "As Tested" Material/Extraction: g

Reagent Information:

Acid Type:

Acid Normality: meq/mL

Base Type:

Base Normality: meq/mL

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: 13.0±0.5

Acid Addition [meq/g]:

Eluate pH:

Eluate EC [mS/cm]:

Eluate ORP [mV]:

Notes or Remarks:

Meets pH criteria?

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Test conducted by:

Project: Code:

Material: Solids Information:

Test Replicate: Maximum Particle Size: mm

Date: Time:

Test Start:

Test End:

Required Contact Time: hr

Mass of "As Tested" Material/Extraction: g

Reagent Information:

Acid Type:

Acid Normality: meq/mL

Base Type:

Base Normality: meq/mL

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: 13.0±0.5

Acid Addition [meq/g]:

Eluate pH:

Eluate EC [mS/cm]:

Eluate ORP [mV]:

Notes or Remarks:

Meets pH criteria?

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 LeachX5™ Lite Data Template

METHOD 1313 EXTRACTION DATA

Test conducted by:

Project: Code:

Material: Solids Information:

Test Replicate: Maximum Particle Size: mm

Date: Time:

Test Start:

Test End:

Required Contact Time: hr

Mass of "As Tested" Material/Extraction: g

Reagent Information:

Acid Type:

Acid Normality: meq/mL

Base Type:

Base Normality: meq/mL

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: 13.0±0.5

Acid Addition [meq/g]:

Eluate pH:

Eluate EC [mS/cm]:

Eluate ORP [mV]:

Notes or Remarks:

Meets pH criteria?

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Test conducted by:

Project: Code:

Material: Solids Information:

Test Replicate: Maximum Particle Size: mm

Date: Time:

Test Start:

Test End:

Required Contact Time: hr

Mass of "As Tested" Material/Extraction: g

Reagent Information:

Acid Type:

Acid Normality: meq/mL

Base Type:

Base Normality: meq/mL

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: 13.0±0.5

Acid Addition [meq/g]:

Eluate pH:

Eluate EC [mS/cm]:

Eluate ORP [mV]:

Notes or Remarks:

Meets pH criteria?

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Test conducted by:

Project: Code:

Material: Solids Information:

Test Replicate: Maximum Particle Size: mm

Date: Time:

Test Start:

Test End:

Required Contact Time: hr

Mass of "As Tested" Material/Extraction: g

Reagent Information:

Acid Type:

Acid Normality: meq/mL

Base Type:

Base Normality: meq/mL

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Target pH: 13.0±0.5

Acid Addition [meq/g]:

Eluate pH:

Eluate EC [mS/cm]:

Eluate ORP [mV]:

Notes or Remarks:

Meets pH criteria?

↓ indicates drop down menu with data validation NAT = natural pH extraction

TABLE 1
EXTRACTION PARAMETERS AS FUNCTION OF MAXIMUM PARTICLE SIZE

Particle Size (80 wt% less than) (mm)	US Sieve Size	Minimum Dry Mass (g-dry)	Contact Time (hr)	Suggested Vessel Size (mL)
0.3	50	20 ± 0.02	24 ± 2	250
2.0	10	40 ± 0.02	48 ± 2	500
5.0	4	80 ± 0.02	72 ± 2	1000

METHOD 1313 LeachXS Lite Data Template

METHOD 1313 LeachXS Lite Data Template

METHOD 1313 SUMMARY OF COMPLETED EXTRACTION INFORMATION

Code

ProjectKPRG

MaterialA9-O-5

Test ReplicateA

Particle Size (85% less than)2mm

Solids Content0.717g-dry/g

Temperature21°C

Acid TypeHNO3

Base TypeNaOH

Lab TechnicianLM

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
Test Start Date	10-Feb-21	10-Feb-21		15-Feb-21	15-Feb-21	15-Feb-21	17-Feb-21	10-Feb-21	17-Feb-21	10-Feb-21			
Test End Date	12-Feb-21	12-Feb-21		17-Feb-21	17-Feb-21	17-Feb-21	19-Feb-21	12-Feb-21	19-Feb-21	12-Feb-21			
Extraction Duration [hr]	48.0	48.0		48.0	48.0	48.0	48.0	48.0	48.0	48.0			

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
"As Tested" Solid [g]	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	no solid	no solid	no solid
Reagent Water [mL]	299.97	308.97	-	309.72	309.27	308.97	307.97	306.97	304.97	309.97	495.10	485.10	485.10
Acid Volume [mL]	-	-	-	0.25	0.70	1.00	2.00	3.00	5.00	-	-	10.00	-
Base Volume [mL]	10.00	1.00	-	-	-	-	-	-	-	-	-	-	10.00
Acid Normality [meq/mL]	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	-	-	16.0	-
Base Normality [meq/mL]	10.0	10.0	-	-	-	-	-	-	-	-	-	-	10.0

	13.0±0.5	12.0±0.5	10.5±0.5	9.0±0.5	8.0±0.5	7.0±0.5	5.5±0.5	4.0±0.5	2.0±0.5	NAT			
Acid Addition [meq/g]	-3.099334	-0.309933		0.123973	0.347125	0.495893	0.991787	1.48768	2.479467	0	Water	Acid	Base
Eluate pH	13.11	12.28		8.97	8.36	6.99	5.73	3.94	2.10	10.05			
Eluate EC [mS/cm]	55.64	4.958		2.175	4.804	6.05	9.99	13.51	22.17	0.424			
Eluate ORP [mV]	-5	45		334	189	275	347	495	674	308			
Remarks													

↓ indicates drop down menu with data validation

NAT = natural pH extraction

Test ReplicateB

Particle Size (85% less than)

Solids Content

Temperature

Acid Type

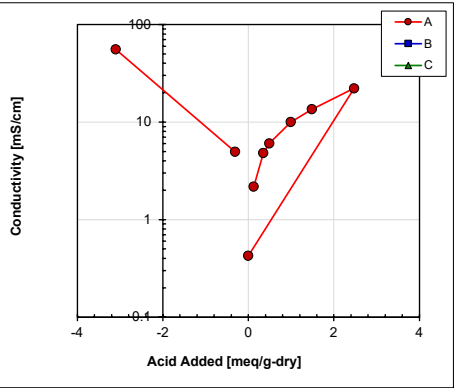
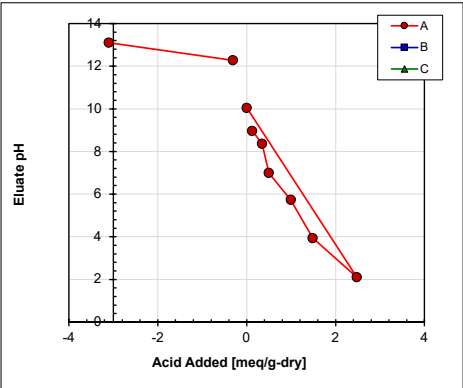
Base Type

Lab Technician

TABLE 5

FINAL EXTRACT PH TARGETS

Test Position	pH Target	Rationale
T01	13.0±0.5	Upper bound (field conditions) for amphoteric COPCs
T02	12.0±0.5	Maximum in alkaline range for LSP curves of amphoteric COPCs
T03	10.5±0.5	Minimum of LSP curve for some cationic and amphoteric COPCs
T04	9.0±0.5	Minimum of LSP curve for some cationic and amphoteric COPCs
T05	8.0±0.5	Endpoint pH of carbonated alkaline materials
T06	7.0±0.5	Neutral pH region; high release of oxyanions
T07	5.5±0.5	Typical lower range of industrial waste landfills
T08	4.0±0.5	Lower pH limit of typical management scenario
T09	2.0±0.5	Provides estimates of total or available COPC content
T10	variable	Natural pH at L/S 10 mL/g-dry (no acid/base addition)



EPA METHOD 1313

Liquid-Solid Partitioning as a Function of Extract pH using Parallel Batch Extractions LeachXS™ Lite Data Template - Version 4.2, September 2018

PROJECT INFORMATION

Project Code	KPRG		
Project Sponsor	MIDWEST GENERATION		
Project Description	MIDWEST GENERATION		
Material Code	C7-0-5		
Material Replicate	A		
Full Name	Larry Matko		
Origin/Reference	C7-0-5		
Description	C7-0-5		
Test Method Lab	Eurofins TestAmerica Pittsburgh	Date Complete	
Contact	Larry Matko	Phone	412-963-2442
Analytical Lab	Eurofins TestAmerica Pittsburgh	Date Complete	
Contact	Carrie Gamber	Phone	412-963-2428

DATABASE INFORMATION

Name of Database KPRG

WORKBOOK OVERVIEW

EPA Method 1313 LeachXS™ Lite Data Template:

This Excel workbook can be used to document and archive laboratory data and analytical results of EPA Method 1313.

In addition, the date in a completed data template is formatted to be compatible with the data upload tool contained in LeachXS Lite™. Entries shown in **bold red text** in the "Title Sheet", "Extraction Summary" and "Analytical Data"

Note for Coal Combustion Residue (CCR) Materials:

If the material to be tested is a residual from combustion of coal, this workbook contains a hidden tab that can be used record additional source-specific information about the CCR material and how it was produced.

To unhide the "Material Classification" tab:

- Hover the cursor over the "Mositure Content" tab.
- Right click to open the context-sensitive menu and select "Unhide" from the menu list.
- Select "Material Classification" from the list of hidden tabs and click "OK".
- The "Material Classification" tab should be revealed.

To hide the "Material Classification" tab:

- Hover the cursor over the "Material Classification" tab.
- Right click to open the context-sensitive menu and select "Hide" from the menu list.

Database Material Code	MIDWEST GENERATION
Material Class	Coal Combustion
Material Subclass	Fly Ash

↓ indicates a drop down menu with data validation.

- The "Material Classification" tab should be hidden.

SIGNATURES	
Data Compiler: _____	Date: _____
Data Reviewer: _____	Date: _____
Approved by: _____	Date: _____
LeachXS™ Lite Upload: _____	Date: _____

ASSISTANCE: (unhide columns B-M)

METHOD 1313 LeachXS Lite Data Template

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

KPRG

C7-0-5

A

Test conducted by: PH

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]	2.500				
Dish + "Wet" Sample [g]	9.180				
Dish + "Dry" Sample [g]	7.390				
Check (Dish + "Dry" Sample) [g]	7.390				
Moisture Content (MC) [g-water/g]	0.268			Mean MC =	0.268 [g-water/g]
Solids Content (SC) [g-dry/g]	0.732			Mean SC =	0.732 [g-dry/g]

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

KPRG

C7-0-5

B

Test conducted by:

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]					
Dish + Sample [g]					
Dish + Dry Sample [g]					
Check (Dish + Dry Sample) [g]					
Moisture Content (MC) [g-water/g]				Mean MC =	[g-water/g]
Solids Content (SC) [g-dry/g]				Mean SC =	[g-dry/g]

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

KPRG

C7-0-5

C

Test conducted by:

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]					
Dish + Sample [g]					
Dish + Dry Sample [g]					
Check (Dish + Dry Sample) [g]					
Moisture Content (MC) [g-water/g]				Mean MC =	[g-water/g]
Solids Content (SC) [g-dry/g]				Mean SC =	[g-dry/g]

METHOD 1313 LeachXS Lite Data Template

MOISTURE CONTENT (WET BASIS) AND SOLIDS CONTENT WORKSHEET

Project

Material

Test Replicate

Code

A-rerun

Test conducted by:

	Dish-1	Dish-2	Dish-3	Date	Time
Empty Dish [g]					
Dish + "Wet" Sample [g]					
Dish + "Dry" Sample [g]					
Check (Dish + "Dry" Sample) [g]					
Moisture Content (MC) [g-water/g]				Mean MC =	[g-water/g]
Solids Content (SC) [g-dry/g]				Mean SC =	[g-dry/g]

METHOD 1313 PRE-TEST TITRATION

Project

KPRG

Material

C7-0-5

Test Replicate

Pre-Test

Test conducted by:

Extraction Information

LS Ratio

10

mL/g-dry

Liquid Volume / Extraction

400

mL

Recommended Bottle Size

500

mL

Temperature°C

Solids Information

Particle Size (85 wt% less than)

2

mm

Dry Equivalent Mass

40.00

g-dry

Solids Content (default = 1)

0.268

g-dry/g

Mass of "As Tested" Material/Extraction

149.27

g

Extraction Contact Time

Date

Time

Test Start

Test End

Required Contact Time

47-49

[hr]

Reagent Information

Acid Type

HNO3

↓

Acid Normality

16.0

meq/mL

Base Type

NaOH

↓

Base Normality

10.0

meq/mL

Pre-Test Extraction Setup

additional extracts P06 thru P10 as needed to obtain curve resolution

Test Position	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10
"As Tested" Solid [g] (±0.05g)	149.27	149.27	149.27	149.27	149.27	149.27	149.27	149.27	149.27	149.27
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-
Acid Addition [meq/g-dry]										
Eluate pH										

Total Amounts Needed

Total Solid

746.4

g

Total WatermL

Total AcidmL

Total BasemL

DEVELOPING A SCHEDULE OF ACID/BASE ADDITIONS

Eluate pH

14

12

10

8

6

4

2

0

Acid Addition [meq/g-dry]

-2

-1

0

1

2

Series1

Acid Addition for Target pH

Natural pH Indicator

Schedule of Acid/Base Additions

Test Position	Acid Addition [meg/g-dry]	pH Target	Tol	Rationale
T01		13.0	±0.5	Upper bound (field conditions) for amphoteric COPCs
T02		12.0	±0.5	Maximum in alkaline range for LSP curves of amphoteric COPCs
T03		10.5	±0.5	Substitution if natural pH falls within range of a mandatory pH target
T04		9.0	±0.5	Minimum of LSP curve for many cationic and amphoteric COPCs
T05		8.0	±0.5	Endpoint pH of carbonated alkaline materials
T06		7.0	±0.5	Neutral pH region; high release of oxyanions
T07		5.5	±0.5	Typical lower range of industrial waste landfills
T08		4.0	±0.5	Lower pH limit of typical management scenario
T09		2.0	±0.5	Provides total or available content of COPCs
NAT	0			Natural pH at LS 10 mL/g-dry (no acid/base addition)

NAT = natural pH extraction

↓ indicates drop down menu

TABLE 1

EXTRACTION PARAMETERS AS FUNCTION OF MAXIMUM PARTICLE SIZE

Particle Size (85 wt% less than) (mm)	US Sieve Size	Minimum Dry Mass (g-dry)	Contact Time (h)	Suggested Vessel Size (mL)
0.3	50	20 ± 0.02	24 ± 2	250
2.0	10	40 ± 0.02	48 ± 2	500
5.0	4	80 ± 0.02	72 ± 2	1000

TABLE 2

MATERIAL NEUTRALIZATION CLASSIFICATIONS

Neutralization Classification	Material Types
Low Alkalinity	soils; sediments; CCR fly ash; CCR bottom ash; coal milling rejects; MSWI fly ash, MSWI bottom ash; sewage sludge amended soil
Moderate Alkalinity	soils; wood preserving waste; MSWI bottom ash; steel slag; electric arc furnace dust; MSW compost; nickel sludge; Portland cement mortar
High Alkalinity	Portland cement clinker; steel blast furnace slag, solidified waste (fly ash, blast furnace slag, Portland cement)

NOTE: CCR = Coal combustion residue
MSWI = Municipal solid waste incinerator

TABLE 3

PRE-TEST TITRATION: ACID EQUIVALENT SCHEDULE

Neutralization Classification	Equivalents of Acid (meq/g-dry)				
	Bottle 1	Bottle 2	Bottle 3	Bottle 4	Bottle 5
Low Alkalinity	-2.0	-1.0	0	1.0	2.0
Moderate Alkalinity	-2.0	0	2.0	5.0	10.0
High Alkalinity	0	5.0	10.0	15.0	25.0

NOTE: 1) Base additions shown as opposite sign of acid equivalents.
2) Additional pre-test point(s) interpolating or extrapolating from the pre-test schedule may be necessary to provide adequate resolution in the titration curve.

MWG13-15_81281

ASSISTANCE: (unhide columns B-M)

METHOD 1313 LeachXS™ Lite Data Template

METHOD 1313 LAB EXTRACTION DATA

Code

Project

Material

Test Replicate

Test conducted by:

0

Extraction Information

LS Ratio

10

ml/g-dry

Liquid Volume / Extraction

329.4

ml

Recommended Bottle Size

500

ml

Temperature

21

°C

Solids Information

Particle Size (85 wt% less than)

2

mm

Dry Equivalent Mass

32.94

g-dry

Solids Content (default = 1)

0.732

g-dry/g

Mass of "As Tested" Material/Extraction

45.00

g

Reagent Information

Acid Type

HNO3

Acid Normality

16.0

meq/mL

Base Type

NaOH

Base Normality

10.0

meq/mL

Date

10-Feb-21

Time

8:10 AM

Test Start

12-Feb-21

Time

8:10 AM

Test End

Required Contact Time

47-49

hr

Schedule of Acid and Base Additions

	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	no solid	no solid	no solid	450.0 g
Reagent Water [mL] (±5%)	307.34	316.34	-	317.24	317.09	316.59	315.64	315.34	312.84	317.34	329.40	324.90	319.40	3809.5 mL
Acid Volume [mL] (±1%)	-	-	-	0.10	0.25	0.75	1.70	2.00	4.50	-	-	4.50	-	13.8 mL
Base Volume [mL] (±1%)	10.00	1.00	-	-	-	-	-	-	-	-	-	-	10.00	21.0 mL
Acid Normality [meq/mL]	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	-	-	16.0	-	
Base Normality [meq/mL]	10.0	10.0	-	-	-	-	-	-	-	-	-	-	10.0	

Target pH

13.0±0.5

12.0±0.5

10.5±0.5

9.0±0.5

8.0±0.5

7.0±0.5

5.5±0.5

4.0±0.5

2.0±0.5

NAT

0

Water

Acid

Base

Acid Addition [meq/g]	-3.03582	-0.30358		0.048573	0.121433	0.364299	0.825744	0.971493	2.185792					
Eluate pH	13.12	11.99		8.91	8.30	6.80	5.60	3.99	2.15	9.56				
Eluate EC [mS/cm]	49.47	3		1.339	2.169	4.62	8.72	9.12	18.72	0.6868				
Eluate ORP [mV]	-70	12		338	301	311	322	486	563	308				
Notes or Remarks														

Meets pH criteria?

Enter "a" for acceptable or "r" for rejected.

↓ indicates drop down menu with data validation

NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Code

Project

Material

Test conducted by:

Extraction Information

LS Ratio

ml/g-dry

Liquid Volume / Extraction

ml

Recommended Bottle Size

ml

Solids Information

Particle Size (85 wt% less than)

mm

Dry Equivalent Mass

g-dry

Solids Content (default = 1)

g-dry/g

Mass of "As Tested" Material/Extraction

g

Reagent Information

Acid Type

Acid Normality

meq/mL

Base Type

Base Normality

meq/mL

Date

Time

Test Start

Test End

Required Contact Time

hr

Schedule of Acid and Base Additions

	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	

Target pH

13.0±0.5

12.0±0.5

10.5±0.5

9.0±0.5

8.0±0.5

7.0±0.5

5.5±0.5

4.0±0.5

2.0±0.5

NAT

0

Water

Acid

Base

Acid Addition [meq/g]														
Eluate pH														
Eluate EC [mS/cm]														
Eluate ORP [mV]														
Notes or Remarks														

Meets pH criteria?

Enter "a" for acceptable or "r" for rejected.

↓ indicates drop down menu with data validation

NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Code

Project

Material

Test conducted by:

Extraction Information

LS Ratio

ml/g-dry

Liquid Volume / Extraction

ml

Recommended Bottle Size

ml

Solids Information

Particle Size (85 wt% less than)

mm

Dry Equivalent Mass

g-dry

Solids Content (default = 1)

g-dry/g

Mass of "As Tested" Material/Extraction

g

Reagent Information

Acid Type

Acid Normality

meq/mL

Base Type

Base Normality

meq/mL

Date

Time

Test Start

Test End

Required Contact Time

hr

Schedule of Acid and Base Additions

	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-	

Target pH

13.0±0.5

12.0±0.5

10.5±0.5

9.0±0.5

8.0±0.5

7.0±0.5

5.5±0.5

4.0±0.5

2.0±0.5

NAT

0

Water

Acid

Base

Acid Addition [meq/g]														
Eluate pH														
Eluate EC [mS/cm]														
Eluate ORP [mV]														
Notes or Remarks														

Meets pH criteria?

Enter "a" for acceptable or "r" for rejected.

↓ indicates drop down menu with data validation

NAT = natural pH extraction

TABLE 1				
EXTRACTION PARAMETERS AS FUNCTION OF MAXIMUM PARTICLE SIZE				
Particle Size (85 wt% less than) (mm)	US Sieve Size	Minimum Dry Mass (g-dry)	Contact Time (h)	Suggested Vessel Size (mL)
0.3	50	20 ± 0.02	24 ± 2	250
2.0	10	40 ± 0.02	48 ± 2	500
5.0	4	80 ± 0.02	72 ± 2	1000



Test ReplicateB

Maximum Particle Sizemm
Dry Equivalent Massg-dry
Solids Content (default = 1)g-dry/g
Mass of "As Tested" Material/Extractiong

Temperature°C

Reagent Information
Acid Type
Acid Normalitymeq/mL
Base Type
Base Normalitymeq/mL

DateTime
Test Start
Test End
Required Contact Timehr

Schedule of Acid and Base Addition

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	totals
"As Tested" Solid (g) (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water (mL) (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume (mL) (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume (mL) (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality (meq/mL)	-	-	-	-	-	-	-	-	4.0	-	-	-	-	
Base Normality (meq/mL)	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: If multiple replicate tests are carried out in parallel, only one set of method blanks is necessary.

Target pH13.0±0.512.0±0.510.5±0.59.0±0.58.0±0.57.0±0.55.5±0.54.0±0.52.0±0.5NAT

Acid Addition (meq/g)0WaterAcidBase

Eluate pH

Eluate EC (mS/cm)

Eluate ORP (mV)

Notes or Remarks

Meets pH criteria?

Enter "a" for acceptable or "r" for rejected .

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Code

ProjectKPRG
MaterialC7-O-5
Test ReplicateC

Test conducted by:

Solids Information
Maximum Particle Sizemm
Dry Equivalent Massg-dry
Solids Content (default = 1)g-dry/g
Mass of "As Tested" Material/Extractiong

Extraction Information
LS Ratio
Liquid Volume / Extraction
Recommended Bottle Size
Temperature°C

Reagent Information
Acid Type
Acid Normalitymeq/mL
Base Type
Base Normalitymeq/mL

DateTime
Test Start
Test End
Required Contact Timehr

Test ReplicateB-rerun

Maximum Particle Sizemm
Dry Equivalent Massg-dry
Solids Content (default = 1)g-dry/g
Mass of "As Tested" Material/Extractiong

Temperature°C

Nominal Reagent Information
Acid Type
Acid Normalitymeq/mL
Base Type
Base Normalitymeq/mL

DateTime
Test Start
Test End
Required Contact Timehr

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03	Amounts Needed
"As Tested" Solid (g) (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid	g
Reagent Water (mL) (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Volume (mL) (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Base Volume (mL) (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-	mL
Acid Normality (meq/mL)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Base Normality (meq/mL)	-	-	-	-	-	-	-	-	-	-	-	-	-	

Target pH13.0±0.512.0±0.510.5±0.59.0±0.58.0±0.57.0±0.55.5±0.54.0±0.52.0±0.5NAT

Acid Addition (meq/g)0WaterAcidBase

Eluate pH

Eluate EC (mS/cm)

Eluate ORP (mV)

Notes or Remarks

Meets pH criteria?

Enter "a" for acceptable or "r" for rejected .

↓ indicates drop down menu with data validation NAT = natural pH extraction

METHOD 1313 EXTRACTION DATA

Code

ProjectKPRG
MaterialC7-O-5
Test Replicate

Test conducted by:

Solids Information
Maximum Particle Sizemm
Dry Equivalent Massg-dry
Solids Content (default = 1)g-dry/g
Mass of "As Tested" Material/Extractiong

Extraction Information
LS Ratio
Liquid Volume / Extraction
Recommended Bottle Size
Temperature°C

Nominal Reagent Information
Acid Type
Acid Normalitymeq/mL
Base Type
Base Normalitymeq/mL

DateTime
Test Start
Test End
Required Contact Timehr

Schedule of Acid and Base Addition

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	4.0	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-

totals

g

mL

mL

mL

Note: If multiple replicate tests are carried out in parallel, only one set of method blanks is necessary.

Target pH

13.0±0.5

12.0±0.5

10.5±0.5

9.0±0.5

8.0±0.5

7.0±0.5

5.5±0.5

4.0±0.5

2.0±0.5

NAT

0

Water

Acid

Base

Acid Addition [meq/g]

Eluate pH

Eluate EC [mS/cm]

Eluate ORP [mV]

Notes or Remarks

Meets pH criteria?

↓ indicates drop down menu with data validation

NAT = natural pH extraction

Schedule of Acid and Base Additions

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	NAT	B01	B02	B03
"As Tested" Solid [g] (±0.05g)	-	-	-	-	-	-	-	-	-	-	no solid	no solid	no solid
Reagent Water [mL] (±5%)	-	-	-	-	-	-	-	-	-	-	-	-	-
Acid Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Volume [mL] (±1%)	-	-	-	-	-	-	-	-	-	-	-	-	-
Acid Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-
Base Normality [meq/mL]	-	-	-	-	-	-	-	-	-	-	-	-	-

Amounts Needed

g

mL

mL

mL

Target pH

13.0±0.5

12.0±0.5

10.5±0.5

9.0±0.5

8.0±0.5

7.0±0.5

5.5±0.5

4.0±0.5

2.0±0.5

NAT

Same as for Replicate B

Acid Addition [meq/g]

0

Water

Acid

Base

Eluate pH

Eluate EC [mS/cm]

Eluate ORP [mV]

Notes or Remarks

Meets pH criteria?

↓ indicates drop down menu with data validation

NAT = natural pH extraction

ASSISTANCE: (unhide columns B-M)

METHOD 1313 LeachXS Lite Data Template

METHOD 1313 SUMMARY OF COMPLETED EXTRACTION INFORMATION

Code

Project

Material

KPRG

C7-0-5

Test Replicate

A

Particle Size (85% less than)

2

mm

Solids Content

0.732

g-dry/g

Temperature

21

°C

Acid Type

Base Type

Lab Technician

HNO3

NaOH

LM

↓

↓

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
Test Start Date	10-Feb-21	10-Feb-21		15-Feb-21	15-Feb-21	15-Feb-21	17-Feb-21	15-Feb-21	17-Feb-21	10-Feb-21			
Test End Date	12-Feb-21	12-Feb-21		17-Feb-21	17-Feb-21	17-Feb-21	19-Feb-21	17-Feb-21	19-Feb-21	12-Feb-21			
Extraction Duration [hr]	48.0	48.0		48.0	48.0	48.0	48.0	48.0	48.0	48.0			

Test Position	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	B01	B02	B03
"As Tested" Solid [g]	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	no solid	no solid	no solid
Reagent Water [mL]	307.34	316.34	-	317.24	317.09	316.59	315.64	315.34	312.84	317.34	495.10	485.10	485.10
Acid Volume [mL]	-	-	-	0.10	0.25	0.75	1.70	2.00	4.50	-	-	10.00	-
Base Volume [mL]	10.00	1.00	-	-	-	-	-	-	-	-	-	-	10.00
Acid Normality [meq/mL]	-	-	-	16.0	16.0	16.0	16.0	16.0	16.0	-	-	16.0	-
Base Normality [meq/mL]	10.0	10.0	-	-	-	-	-	-	-	-	-	-	10.0

	13.0±0.5	12.0±0.5	10.5±0.5	9.0±0.5	8.0±0.5	7.0±0.5	5.5±0.5	4.0±0.5	2.0±0.5	NAT	Water	Acid	Base
Acid Addition [meq/g]	-3.035823	-0.303582		0.048573	0.121433	0.364299	0.825744	0.971493	2.185792	0			
Eluate pH	13.12	11.99		8.91	8.30	6.80	5.60	3.99	2.15	9.56			
Eluate EC [mS/cm]	49.47	3		1.339	2.169	4.62	8.72	9.12	18.72	0.6868			
Eluate ORP [mV]	-70	12		338	301	311	322	486	563	308			
Remarks													

↓ indicates drop down menu with data validation

NAT = natural pH extraction

Test Replicate

B

Particle Size (85% less than)

mm

Solids Content

g-dry/g

Temperature

°C

Acid Type

Base Type

Lab Technician

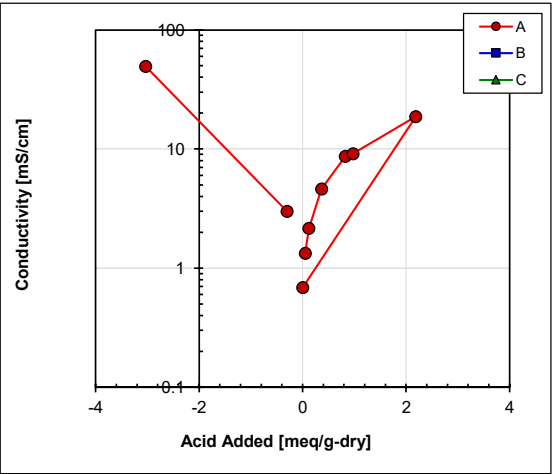
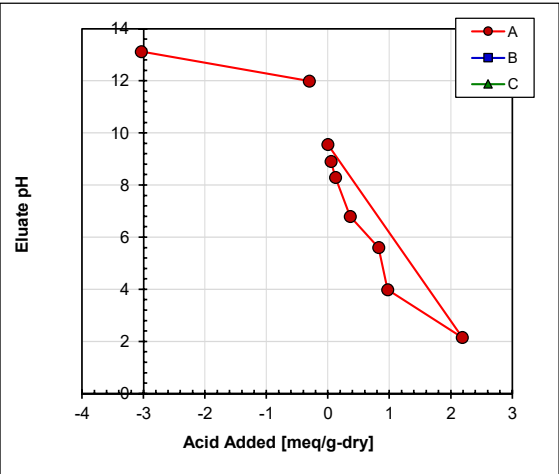
↓

↓

METHOD 1313 LeachXS Lite Data Template

TABLE 5
FINAL EXTRACT PH TARGETS

Test Position	pH Target	Rationale
T01	13.0±0.5	Upper bound (field conditions) for amphoteric COPCs
T02	12.0±0.5	Maximum in alkaline range for LSP curves of amphoteric COPCs
T03	10.5±0.5	Minimum of LSP curve for some cationic and amphoteric COPCs
T04	9.0±0.5	Minimum of LSP curve for some cationic and amphoteric COPCs
T05	8.0±0.5	Endpoint pH of carbonated alkaline materials
T06	7.0±0.5	Neutral pH region; high release of oxyanions
T07	5.5±0.5	Typical lower range of industrial waste landfills
T08	4.0±0.5	Lower pH limit of typical management scenario
T09	2.0±0.5	Provides estimates of total or available COPC content
T10	variable	Natural pH at L/S 10 ml/g-dry (no acid/base addition)



Client ID	Sample Collection Date	Laboratory Name	Sample Matrix	Job Number	Prep Date	Analysis Date	Batch Number	Method Number	Result Identifier	CAS Numbers	Result	Result Qualifier	Unit of Measure	Method Reference	Parameter Name	Detection Limit	Dilution Factor
A1-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-1	02/08/21	02/08/21	345845	Solids	TRG	STL00234	86.9		%	SM22	Percent Solids	0.1	1
A9-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-11	02/08/21	02/08/21	345845	Solids	TRG	STL00234	71.7		%	SM22	Percent Solids	0.1	1
C7-0-5 pH 13	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-21	02/08/21	02/08/21	345845	Solids	TRG	STL00234	73.2		%	SM22	Percent Solids	0.1	1
A1-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-1	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	13.1		SU	SW846	pH	0.1	1
A1-0-5 pH 12	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-2	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	12.2		SU	SW846	pH	0.1	1
A1-0-5 pH 10.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-3	02/19/21	02/19/21	347138	EPA 9040C	TRG	STL00204	10.5		SU	SW846	pH	0.1	1
A1-0-5 pH 8	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-5	02/17/21	02/17/21	346999	EPA 9040C	TRG	STL00204	7.7		SU	SW846	pH	0.1	1
A1-0-5 pH 7	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-6	02/17/21	02/17/21	346999	EPA 9040C	TRG	STL00204	6.8		SU	SW846	pH	0.1	1
A1-0-5 pH 5.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-7	02/19/21	02/19/21	347138	EPA 9040C	TRG	STL00204	5.4		SU	SW846	pH	0.1	1
A1-0-5 pH 4	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-8	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	3.7		SU	SW846	pH	0.1	1
A1-0-5 pH 2	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-9	02/17/21	02/17/21	346999	EPA 9040C	TRG	STL00204	2.4		SU	SW846	pH	0.1	1
A1-0-5 NATURAL	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-10	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	9.4		SU	SW846	pH	0.1	1
A9-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-11	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	13.1		SU	SW846	pH	0.1	1
A9-0-5 pH 12	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-12	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	12.3		SU	SW846	pH	0.1	1
A9-0-5 pH 9	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-14	02/17/21	02/17/21	346999	EPA 9040C	TRG	STL00204	9.0		SU	SW846	pH	0.1	1
A9-0-5 pH 8	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-15	02/19/21	02/19/21	347138	EPA 9040C	TRG	STL00204	8.4		SU	SW846	pH	0.1	1
A9-0-5 pH 7	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-16	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	7.0		SU	SW846	pH	0.1	1
A9-0-5 pH 5.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-17	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	5.7		SU	SW846	pH	0.1	1
A9-0-5 pH 4	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-18	02/17/21	02/17/21	346999	EPA 9040C	TRG	STL00204	3.9		SU	SW846	pH	0.1	1
A9-0-5 pH 2	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-19	02/19/21	02/19/21	347138	EPA 9040C	TRG	STL00204	2.1		SU	SW846	pH	0.1	1
A9-0-5 pH NATURAL	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-20	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	10.1		SU	SW846	pH	0.1	1
C7-0-5 pH 13	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-21	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	13.1		SU	SW846	pH	0.1	1
C7-0-5 pH 12	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-22	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	12.0		SU	SW846	pH	0.1	1
C7-0-5 pH 9	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-24	02/17/21	02/17/21	346999	EPA 9040C	TRG	STL00204	8.9		SU	SW846	pH	0.1	1
C7-0-5 pH 8	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-25	02/17/21	02/17/21	346999	EPA 9040C	TRG	STL00204	8.3		SU	SW846	pH	0.1	1
C7-0-5 pH 7	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-26	02/17/21	02/17/21	346999	EPA 9040C	TRG	STL00204	6.8		SU	SW846	pH	0.1	1
C7-0-5 pH 5.5	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-27	02/19/21	02/19/21	347138	EPA 9040C	TRG	STL00204	5.6		SU	SW846	pH	0.1	1
C7-0-5 pH 4	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-28	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	4.0		SU	SW846	pH	0.1	1
C7-0-5 pH 2	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-29	02/19/21	02/19/21	347138	EPA 9040C	TRG	STL00204	2.2		SU	SW846	pH	0.1	1
C7-0-5 pH NATURAL	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-30	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	9.6		SU	SW846	pH	0.1	1
BLANK LOW	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-31	02/17/21	02/17/21	346999	EPA 9040C	TRG	STL00204	0.8		SU	SW846	pH	0.1	1
BLANK MEDIUM	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-32	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	5.7		SU	SW846	pH	0.1	1
BLANK MEDIUM	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-32	02/19/21	02/19/21	347138	EPA 9040C	TRG	STL00204	5.4		SU	SW846	pH	0.1	1
BLANK HIGH	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-33	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	13.2		SU	SW846	pH	0.1	1
A1-0-5 PRETEST	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-34	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	6.3		SU	SW846	pH	0.1	1
C7-0-5 PRETEST	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-36	02/12/21	02/12/21	346435	EPA 9040C	TRG	STL00204	6.0		SU	SW846	pH	0.1	1
A1-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-1	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	57000		umhos/cm	SM	Specific Conductance	1.0	1
A1-0-5 pH 12	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-2	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	4700		umhos/cm	SM	Specific Conductance	1.0	1
A1-0-5 pH 10.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-3	02/19/21	02/19/21	347140	SM 2510B	TRG	STL00244	400		umhos/cm	SM	Specific Conductance	1.0	1
A1-0-5 pH 8	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-5	02/17/21	02/17/21	347001	SM 2510B	TRG	STL00244	1900		umhos/cm	SM	Specific Conductance	1.0	1
A1-0-5 pH 7	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-6	02/17/21	02/17/21	347001	SM 2510B	TRG	STL00244	3300		umhos/cm	SM	Specific Conductance	1.0	1
A1-0-5 pH 5.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-7	02/19/21	02/19/21	347140	SM 2510B	TRG	STL00244	6600		umhos/cm	SM	Specific Conductance	1.0	1
A1-0-5 pH 4	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-8	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	9400		umhos/cm	SM	Specific Conductance	1.0	1
A1-0-5 pH 2	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-9	02/17/21	02/17/21	347001	SM 2510B	TRG	STL00244	18000		umhos/cm	SM	Specific Conductance	1.0	1
A1-0-5 NATURAL	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-10	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	310		umhos/cm	SM	Specific Conductance	1.0	1
A9-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-11	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	56000		umhos/cm	SM	Specific Conductance	1.0	1
A9-0-5 pH 12	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-12	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	5000		umhos/cm	SM	Specific Conductance	1.0	1
A9-0-5 pH 9	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-14	02/17/21	02/17/21	347001	SM 2510B	TRG	STL00244	2200		umhos/cm	SM	Specific Conductance	1.0	1
A9-0-5 pH 8	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-15	02/19/21	02/19/21	347140	SM 2510B	TRG	STL00244	4800		umhos/cm	SM	Specific Conductance	1.0	1
A9-0-5 pH 7	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-16	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	6000		umhos/cm	SM	Specific Conductance	1.0	1
A9-0-5 pH 5.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-17	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	10000		umhos/cm	SM	Specific Conductance	1.0	1
A9-0-5 pH 4	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-18	02/17/21	02/17/21	347001	SM 2510B	TRG	STL00244	14000		umhos/cm	SM	Specific Conductance	1.0	1
A9-0-5 pH 2	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-19	02/19/21	02/19/21	347140	SM 2510B	TRG	STL00244	22000		umhos/cm	SM	Specific Conductance	1.0	1
A9-0-5 pH NATURAL	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-20	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	420		umhos/cm	SM	Specific Conductance	1.0	1
C7-0-5 pH 13	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-21	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	49000		umhos/cm	SM	Specific Conductance	1.0	1
C7-0-5 pH 12	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-22	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	3000		umhos/cm	SM	Specific Conductance	1.0	1
C7-0-5 pH 9	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-24	02/17/21	02/17/21	347001	SM 2510B	TRG	STL00244	1300		umhos/cm	SM	Specific Conductance	1.0	1
C7-0-5 pH 8	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-25	02/17/21	02/17/21	347001	SM 2510B	TRG	STL00244	2200		umhos/cm	SM	Specific Conductance	1.0	1
C7-0-5 pH 7	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-26	02/17/21	02/17/21	347001	SM 2510B	TRG	STL00244	4600		umhos/cm	SM	Specific Conductance	1.0	1
C7-0-5 pH 5.5	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-27	02/19/21	02/19/21	347140	SM 2510B	TRG	STL00244	8700		umhos/cm	SM	Specific Conductance	1.0	1
C7-0-5 pH 4	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-28	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	9100		umhos/cm	SM	Specific Conductance	1.0	1
C7-0-5 pH 2	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-29	02/19/21	02/19/21	347140	SM 2510B	TRG	STL00244	19000		umhos/cm	SM	Specific Conductance	1.0	1
C7-0-5 pH NATURAL	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-30	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	690		umhos/cm	SM	Specific Conductance	1.0	1

BLANK LOW	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-31	02/17/21	02/17/21	347001	SM 2510B	TRG	STL00244	74000	umhos/cm	SM	Specific Conductance	1.0	1
BLANK MEDIUM	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-32	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	1.0	umhos/cm	SM	Specific Conductance	1.0	1
BLANK MEDIUM	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-32	02/19/21	02/19/21	347140	SM 2510B	TRG	STL00244	1.0	umhos/cm	SM	Specific Conductance	1.0	1
BLANK HIGH	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-33	02/12/21	02/12/21	346443	SM 2510B	TRG	STL00244	62000	umhos/cm	SM	Specific Conductance	1.0	1
A1-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-1	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	17000	mg/L	SM	Total Dissolved Solids	1000	1
A1-0-5 pH 12	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-2	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	2400	mg/L	SM	Total Dissolved Solids	40	1
A1-0-5 pH 10.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-3	02/23/21	02/23/21	347449	SM 2540C	TRG	STL00242	230	mg/L	SM	Total Dissolved Solids	20	1
A1-0-5 pH 8	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-5	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	1500	mg/L	SM	Total Dissolved Solids	40	1
A1-0-5 pH 7	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-6	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	2800	mg/L	SM	Total Dissolved Solids	40	1
A1-0-5 pH 5.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-7	02/23/21	02/23/21	347450	SM 2540C	TRG	STL00242	4000	mg/L	SM	Total Dissolved Solids	40	1
A1-0-5 pH 4	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-8	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	7100	mg/L	SM	Total Dissolved Solids	100	1
A1-0-5 pH 2	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-9	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	15000	mg/L	SM	Total Dissolved Solids	100	1
A1-0-5 NATURAL	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-10	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	220	mg/L	SM	Total Dissolved Solids	10	1
A9-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-11	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	16000	mg/L	SM	Total Dissolved Solids	1000	1
A9-0-5 pH 12	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-12	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	1700	mg/L	SM	Total Dissolved Solids	40	1
A9-0-5 pH 9	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-14	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	1900	mg/L	SM	Total Dissolved Solids	10	1
A9-0-5 pH 8	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-15	02/23/21	02/23/21	347450	SM 2540C	TRG	STL00242	4500	mg/L	SM	Total Dissolved Solids	40	1
A9-0-5 pH 7	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-16	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	5900	mg/L	SM	Total Dissolved Solids	40	1
A9-0-5 pH 5.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-17	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	9800	mg/L	SM	Total Dissolved Solids	100	1
A9-0-5 pH 4	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-18	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	12000	mg/L	SM	Total Dissolved Solids	100	1
A9-0-5 pH 2	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-19	02/23/21	02/23/21	347450	SM 2540C	TRG	STL00242	18000	mg/L	SM	Total Dissolved Solids	200	1
A9-0-5 pH NATURAL	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-20	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	310	mg/L	SM	Total Dissolved Solids	10	1
C7-0-5 pH 13	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-21	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	20000	mg/L	SM	Total Dissolved Solids	1000	1
C7-0-5 pH 12	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-22	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	3800	mg/L	SM	Total Dissolved Solids	20	1
C7-0-5 pH 9	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-24	02/17/21	02/17/21	346849	SM 2540C	TRG	STL00242	1100	mg/L	SM	Total Dissolved Solids	10	1
C7-0-5 pH 8	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-25	02/17/21	02/17/21	346849	SM 2540C	TRG	STL00242	1800	mg/L	SM	Total Dissolved Solids	10	1
C7-0-5 pH 7	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-26	02/17/21	02/17/21	346849	SM 2540C	TRG	STL00242	4000	mg/L	SM	Total Dissolved Solids	40	1
C7-0-5 pH 5.5	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-27	02/23/21	02/23/21	347450	SM 2540C	TRG	STL00242	8200	mg/L	SM	Total Dissolved Solids	100	1
C7-0-5 pH 4	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-28	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	8200	mg/L	SM	Total Dissolved Solids	100	1
C7-0-5 pH 2	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-29	02/23/21	02/23/21	347450	SM 2540C	TRG	STL00242	15000	mg/L	SM	Total Dissolved Solids	100	1
C7-0-5 pH NATURAL	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-30	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	580	mg/L	SM	Total Dissolved Solids	10	1
BLANK LOW	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-31	02/17/21	02/17/21	346849	SM 2540C	TRG	STL00242	4100	mg/L	SM	Total Dissolved Solids	40	1
BLANK MEDIUM	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-32	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	10	mg/L	SM	Total Dissolved Solids	10	1
BLANK MEDIUM	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-32	02/23/21	02/23/21	347450	SM 2540C	TRG	STL00242	20	mg/L	SM	Total Dissolved Solids	20	1
BLANK HIGH	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-33	02/17/21	02/17/21	346837	SM 2540C	TRG	STL00242	19000	mg/L	SM	Total Dissolved Solids	1000	1
A1-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-1	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	- 41	millivolts	SM	Oxidation Reduction Potential	10	1
A1-0-5 pH 12	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-2	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	37	millivolts	SM	Oxidation Reduction Potential	10	1
A1-0-5 pH 10.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-3	02/19/21	02/19/21	347139	SM 2580B	TRG	STL00289	260	millivolts	SM	Oxidation Reduction Potential	10	1
A1-0-5 pH 8	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-5	02/17/21	02/17/21	347000	SM 2580B	TRG	STL00289	180	millivolts	SM	Oxidation Reduction Potential	10	1
A1-0-5 pH 7	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-6	02/17/21	02/17/21	347000	SM 2580B	TRG	STL00289	230	millivolts	SM	Oxidation Reduction Potential	10	1
A1-0-5 pH 5.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-7	02/19/21	02/19/21	347139	SM 2580B	TRG	STL00289	460	millivolts	SM	Oxidation Reduction Potential	10	1
A1-0-5 pH 4	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-8	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	450	millivolts	SM	Oxidation Reduction Potential	10	1
A1-0-5 pH 2	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-9	02/17/21	02/17/21	347000	SM 2580B	TRG	STL00289	520	millivolts	SM	Oxidation Reduction Potential	10	1
A1-0-5 NATURAL	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-10	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	280	millivolts	SM	Oxidation Reduction Potential	10	1
A9-0-5 pH 13	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-11	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	- 5	millivolts	SM	Oxidation Reduction Potential	10	1
A9-0-5 pH 12	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-12	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	45	millivolts	SM	Oxidation Reduction Potential	10	1
A9-0-5 pH 9	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-14	02/17/21	02/17/21	347000	SM 2580B	TRG	STL00289	330	millivolts	SM	Oxidation Reduction Potential	10	1
A9-0-5 pH 8	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-15	02/19/21	02/19/21	347139	SM 2580B	TRG	STL00289	190	millivolts	SM	Oxidation Reduction Potential	10	1
A9-0-5 pH 7	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-16	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	280	millivolts	SM	Oxidation Reduction Potential	10	1
A9-0-5 pH 5.5	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-17	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	350	millivolts	SM	Oxidation Reduction Potential	10	1
A9-0-5 pH 4	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-18	02/17/21	02/17/21	347000	SM 2580B	TRG	STL00289	500	millivolts	SM	Oxidation Reduction Potential	10	1
A9-0-5 pH 2	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-19	02/19/21	02/19/21	347139	SM 2580B	TRG	STL00289	670	millivolts	SM	Oxidation Reduction Potential	10	1
A9-0-5 pH NATURAL	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-20	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	310	millivolts	SM	Oxidation Reduction Potential	10	1
C7-0-5 pH 13	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-21	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	- 70	millivolts	SM	Oxidation Reduction Potential	10	1
C7-0-5 pH 12	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-22	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	12	millivolts	SM	Oxidation Reduction Potential	10	1
C7-0-5 pH 9	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-24	02/17/21	02/17/21	347000	SM 2580B	TRG	STL00289	340	millivolts	SM	Oxidation Reduction Potential	10	1
C7-0-5 pH 8	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-25	02/17/21	02/17/21	347000	SM 2580B	TRG	STL00289	300	millivolts	SM	Oxidation Reduction Potential	10	1
C7-0-5 pH 7	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-26	02/17/21	02/17/21	347000	SM 2580B	TRG	STL00289	310	millivolts	SM	Oxidation Reduction Potential	10	1
C7-0-5 pH 5.5	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-27	02/19/21	02/19/21	347139	SM 2580B	TRG	STL00289	320	millivolts	SM	Oxidation Reduction Potential	10	1
C7-0-5 pH 4	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-28	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	490	millivolts	SM	Oxidation Reduction Potential	10	1
C7-0-5 pH 2	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-29	02/19/21	02/19/21	347139	SM 2580B	TRG	STL00289	560	millivolts	SM	Oxidation Reduction Potential	10	1
C7-0-5 pH NATURAL	01/24/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-30	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	200	millivolts	SM	Oxidation Reduction Potential	10	1
BLANK LOW	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-31	02/17/21	02/17/21	347000	SM 2580B	TRG	STL00289	560	millivolts	SM	Oxidation Reduction Potential	10	1
BLANK MEDIUM	01/25/21	EUROFINS TESTAMERICA, PITTSBURGH	SOLID	180-116605-32	02/12/21	02/12/21	346440	SM 2580B	TRG	STL00289	390	millivolts	SM	Oxidation Reduction Potential	10	1

