

**HAZARDOUS WASTE SECTION - COMPLIANCE BRANCH
FILE TRANSMITTAL & DATA ENTRY FORM**

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Facility Name: FORTRESS WOOD PRODUCTS, INC

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File Description/Comments: Supplemental RCRA Subpart W Drip Pad Soil Sampling and Analysis

Date of Document: 11/8/2014

Author(s) of Document: David Kerschner

Inspector Name: N/A

Suborganization:

County (if not on report): Guilford



November 18, 2014

Harvi Cooper
NCDENR
Division of Waste Management
PO Box 4488
Cary, NC 27519

VIA EMAIL AND US MAIL

Subject: Supplemental RCRA Subpart W Drip Pad Soil Sampling and Analysis
Fortress Wood Products
Greensboro, North Carolina
ID No. NCD981920648

Dear Ms. Cooper:

In response to your November 6, 2014 (emailed) initial thoughts regarding our November 4, 2014 supplemental soil sampling/analysis letter report, the analytical laboratory was directed to extract the retained background soil samples and analyze those samples for hexavalent chromium to provide a comparison with the hexavalent chromium results obtained for the drip pad perimeter soil samples FW-10, FW-11, FW-12, and FW-13.

I have attached the summary table (Table 1) from the letter report showing the hexavalent chromium results for those four drip pad perimeter samples, and an updated background soil quality summary table (Table 2) that includes the newly acquired hexavalent chromium data. The laboratory analytical report for the background hexavalent chromium analyses is also attached. It should be noted that the laboratory report shows an "H" qualifier for the new analyses, reflecting a slight exceedance of the sample holding time.

The initial soil sampling letter report (dated March 18, 2014) concluded that, based on the generally low arsenic, chromium, and copper concentrations in soil samples collected from beneath and around the drip pad, and based on the absence of elevated concentrations of two of these constituents in several samples where the concentration of the third constituent was apparently elevated, there is no indication of a release of chromated copper arsenate (CCA) wood preservative to the environment. The November 4, 2014 supplemental letter report further concluded that arsenic concentrations in soil beneath and around the drip pad are similar to the background arsenic concentration, and that chromium in soil beneath and around the drip pad is predominantly trivalent in nature. The chromium present in CCA is predominantly hexavalent in nature.

The most recent background sample results indicate that hexavalent chromium is present at low concentrations. No correlation between the magnitude of total chromium concentration and the magnitude of hexavalent chromium concentration is apparent. Background hexavalent chromium concentrations are generally lower than the hexavalent chromium concentrations in the four drip pad perimeter samples where hexavalent chromium was an analyte. However, the hexavalent chromium concentration exceeded the NCDENR PSRG for the protection of groundwater of 0.3 mg/kg in three of the four background samples where hexavalent chromium was detected ("J" qualified results included).

Although the data do not suggest that the hexavalent chromium concentrations in the drip pad perimeter soil samples are similar to the background hexavalent chromium concentration, there is no indication that the hexavalent chromium concentrations in the drip pad perimeter samples are associated with a release of CCA wood preservative, for the following reasons:

- None of the soil samples showed elevated concentrations of all three constituents of CCA, as would be expected with a release of CCA.
- The arsenic concentrations in the drip pad soil samples are representative of background soil quality, which would not be expected in an area affected by a release of CCA.
- The chromium detected in the drip pad soil samples is predominantly trivalent in nature, while the chromium in CCA is predominantly hexavalent in nature. A much higher proportion of hexavalent chromium would be expected with a release of CCA.
- Hexavalent chromium is present in background soil samples.

In addition to the above evidence that suggests the hexavalent chromium is not associated with a release of CCA, the historical industrial uses of the property represent potential sources of elevated inorganics concentrations in soil in the vicinity of the RCRA Subpart W drip pad.

In conclusion, we continue to believe that the initial and supplemental soil sampling results, in conjunction with the prior post-cleaning rinseate sampling results submitted with the October 18, 2013 "RCRA Subpart W Generator Drip Pad Closure Report," have demonstrated that the RCRA Subpart W drip pad closure is complete.

Please let us know if you have any questions or comments regarding these data and this evaluation.

Sincerely,



David R. Kerschner, CPG
Principal
dkerschner@kuresources.com



Harold A. McCutcheon, PE
Chief Engineer
hmcutcheon@kuresources.com



cc: Jenny Patterson – NCDENR
Dillard Jones – Lester Group/Fortress Wood Preserving



TABLE 1
DRIP PAD PERIMETER SOIL SAMPLE
CHROMIUM SPECIATION SUMMARY
Fortress Wood Products
Greensboro, North Carolina

	UNITS	FW-10	FW-11	FW-12	FW-13
Total Chromium	mg/kg	45	250	110	13
Hexavalent Chromium	mg/kg	0.87	2	2.8	0.24J



TABLE 2
BACKGROUND SAMPLE SOIL QUALITY SUMMARY
Fortress Wood Products
Greensboro, North Carolina

	UNITS	BG-01	BG-02	BG-03	BG-04	BG-05	BG-06	BG-07	BG-08	BG-09	BG-10
Arsenic	mg/kg	21	7	5	7.8	8.6	4.5	6	8.3	6.4	6.4
Chromium (Total)	mg/kg	65	96	58	61	75	67	63	350	54	53
Chromium (Hexavalent)	mg/kg	<0.44	<0.46	0.13 J	0.32 J	<0.44	0.55	<0.50	0.34 J	<0.44	<0.44
Copper	mg/kg	160	160	130	190	400	130	60	250	52	220



TestAmerica

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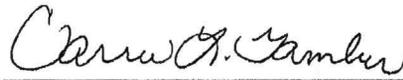
ANALYTICAL REPORT

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

TestAmerica Job ID: 180-38637-1
Client Project/Site: Fortress Greensboro Drip Pad Closure

For:
KU Resources Inc
22 South Linden Street
Duquesne, Pennsylvania 15110

Attn: Dave Kerschner



Authorized for release by:
11/14/2014 11:44:41 AM

Carrie Gamber, Senior Project Manager
(412)963-2428
carrie.gamber@testamericainc.com

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

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

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Case Narrative

Client: KU Resources Inc
Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Job ID: 180-38637-1

Laboratory: TestAmerica Pittsburgh

Narrative

CASE NARRATIVE

Client: KU Resources Inc

Project: Fortress Greensboro Drip Pad Closure

Report Number: 180-38637-1

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 10/13/2014; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.2 C.

GENERAL CHEMISTRY

The following samples were analyzed outside of analytical holding time due to the request from the client being past the holding time.

Definitions/Glossary

Client: KU Resources Inc
Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

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Certification Summary

Client: KU Resources Inc
Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Laboratory: TestAmerica Pittsburgh

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-15
California	State Program	9	2891	03-31-15
Connecticut	State Program	1	PH-0688	09-30-16
Florida	NELAP	4	E871008	06-30-15
Illinois	NELAP	5	002602	06-30-15
Kansas	NELAP	7	E-10350	01-31-15
Louisiana	NELAP	6	04041	06-30-15
New Hampshire	NELAP	1	203011	04-04-15
New Jersey	NELAP	2	PA005	06-30-15
New York	NELAP	2	11182	03-31-15
North Carolina (WW/SW)	State Program	4	434	12-31-14
Pennsylvania	NELAP	3	02-00416	04-30-15
South Carolina	State Program	4	89014	04-30-15
Texas	NELAP	6	T104704528	03-31-15
US Fish & Wildlife	Federal		LE94312A-1	11-30-14
USDA	Federal		P330-10-00139	05-23-16
Utah	NELAP	8	STLP	05-31-15
Virginia	NELAP	3	460189	09-14-15
West Virginia DEP	State Program	3	142	01-31-15

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TestAmerica Pittsburgh

Sample Summary

Client: KU Resources Inc
Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-38637-1	BG-01	Solid	10/06/14 14:10	10/13/14 17:00
180-38637-2	BG-02	Solid	10/06/14 14:15	10/13/14 17:00
180-38637-3	BG-03	Solid	10/06/14 14:20	10/13/14 17:00
180-38637-4	BG-04	Solid	10/06/14 14:25	10/13/14 17:00
180-38637-5	BG-05	Solid	10/06/14 14:27	10/13/14 17:00
180-38637-6	BG-06	Solid	10/06/14 14:30	10/13/14 17:00
180-38637-7	BG-07	Solid	10/06/14 14:32	10/13/14 17:00
180-38637-8	BG-08	Solid	10/06/14 14:37	10/13/14 17:00
180-38637-9	BG-09	Solid	10/06/14 14:40	10/13/14 17:00
180-38637-10	BG-10	Solid	10/06/14 14:45	10/13/14 17:00

TestAmerica Pittsburgh

Method Summary

Client: KU Resources Inc
Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Method	Method Description	Protocol	Laboratory
2540G	SM 2540G	SM22	TAL PIT
7196A	Chromium, Hexavalent	SW846	TAL PIT

Protocol References:

SM22 = SM22

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

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15236, TEL (412)963-7058

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Lab Chronicle

Client: KU Resources Inc
 Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Client Sample ID: BG-01

Date Collected: 10/06/14 14:10

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.51 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.51 g	100 mL	124883	11/13/14 10:24	NAK	TAL PIT
Instrument ID: GENESYS10S										

Client Sample ID: BG-02

Date Collected: 10/06/14 14:15

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.47 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.47 g	100 mL	124883	11/13/14 10:25	NAK	TAL PIT
Instrument ID: GENESYS10S										

Client Sample ID: BG-03

Date Collected: 10/06/14 14:20

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.49 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.49 g	100 mL	124883	11/13/14 10:26	NAK	TAL PIT
Instrument ID: GENESYS10S										

Client Sample ID: BG-04

Date Collected: 10/06/14 14:25

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.54 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.54 g	100 mL	124883	11/13/14 10:27	NAK	TAL PIT
Instrument ID: GENESYS10S										

TestAmerica Pittsburgh

Lab Chronicle

Client: KU Resources Inc
 Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Client Sample ID: BG-05

Date Collected: 10/06/14 14:27

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.49 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.49 g	100 mL	124883	11/13/14 10:28	NAK	TAL PIT
Instrument ID: GENESYS10S										

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Client Sample ID: BG-06

Date Collected: 10/06/14 14:30

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.50 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.50 g	100 mL	124883	11/13/14 10:29	NAK	TAL PIT
Instrument ID: GENESYS10S										

Client Sample ID: BG-07

Date Collected: 10/06/14 14:32

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.55 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.55 g	100 mL	124883	11/13/14 10:32	NAK	TAL PIT
Instrument ID: GENESYS10S										

Client Sample ID: BG-08

Date Collected: 10/06/14 14:37

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.54 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.54 g	100 mL	124883	11/13/14 10:33	NAK	TAL PIT
Instrument ID: GENESYS10S										

TestAmerica Pittsburgh

Lab Chronicle

Client: KU Resources Inc
 Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Client Sample ID: BG-09

Lab Sample ID: 180-38637-9

Date Collected: 10/06/14 14:40

Matrix: Solid

Date Received: 10/13/14 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.54 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.54 g	100 mL	124883	11/13/14 10:34	NAK	TAL PIT
Instrument ID: GENESYS10S										

8

Client Sample ID: BG-10

Lab Sample ID: 180-38637-10

Date Collected: 10/06/14 14:45

Matrix: Solid

Date Received: 10/13/14 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			124366	11/07/14 17:04	AB1	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Prep	3060A			2.46 g	100 mL	124692	11/11/14 11:09	NAK	TAL PIT
Total/NA	Analysis	7196A		1	2.46 g	100 mL	124883	11/13/14 10:35	NAK	TAL PIT
Instrument ID: GENESYS10S										

Laboratory References:

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

Analyst References:

Lab: TAL PIT

Batch Type: Prep

NAK = Neil Klingman

Batch Type: Analysis

AB1 = Ashwin Baikadi

NAK = Neil Klingman

TestAmerica Pittsburgh

Client Sample Results

Client: KU Resources Inc
 Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Client Sample ID: BG-01

Date Collected: 10/06/14 14:10

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-1

Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Percent Moisture	9.8		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	ND	H	0.44	0.11	mg/Kg	*	11/11/14 11:09	11/13/14 10:24	1

Client Sample ID: BG-02

Date Collected: 10/06/14 14:15

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-2

Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Percent Moisture	11		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	ND	H	0.46	0.11	mg/Kg	*	11/11/14 11:09	11/13/14 10:25	1

Client Sample ID: BG-03

Date Collected: 10/06/14 14:20

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-3

Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Percent Moisture	11		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	0.13	J H	0.45	0.11	mg/Kg	*	11/11/14 11:09	11/13/14 10:26	1

Client Sample ID: BG-04

Date Collected: 10/06/14 14:25

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-4

Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Percent Moisture	8.7		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	0.32	J H	0.43	0.11	mg/Kg	*	11/11/14 11:09	11/13/14 10:27	1

Client Sample ID: BG-05

Date Collected: 10/06/14 14:27

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-5

Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Percent Moisture	8.0		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	ND	H	0.44	0.11	mg/Kg	*	11/11/14 11:09	11/13/14 10:28	1

Client Sample ID: BG-06

Date Collected: 10/06/14 14:30

Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-6

Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Percent Moisture	11		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	0.55	H	0.45	0.11	mg/Kg	*	11/11/14 11:09	11/13/14 10:29	1

TestAmerica Pittsburgh

Client Sample Results

Client: KU Resources Inc
 Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Client Sample ID: BG-07
 Date Collected: 10/06/14 14:32
 Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-7
 Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	ND	H	0.50	0.12	mg/Kg	⊛	11/11/14 11:09	11/13/14 10:32	1

Client Sample ID: BG-08
 Date Collected: 10/06/14 14:37
 Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-8
 Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	0.34	J H	0.45	0.11	mg/Kg	⊛	11/11/14 11:09	11/13/14 10:33	1

Client Sample ID: BG-09
 Date Collected: 10/06/14 14:40
 Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-9
 Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	ND	H	0.44	0.11	mg/Kg	⊛	11/11/14 11:09	11/13/14 10:34	1

Client Sample ID: BG-10
 Date Collected: 10/06/14 14:45
 Date Received: 10/13/14 17:00

Lab Sample ID: 180-38637-10
 Matrix: Solid

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.5		0.10	0.10	%			11/07/14 17:04	1
Cr (VI)	ND	H	0.44	0.11	mg/Kg	⊛	11/11/14 11:09	11/13/14 10:35	1

QC Sample Results

Client: KU Resources Inc
 Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

Method: 2540G - SM 2540G

Lab Sample ID: 180-38637-1 DU						Client Sample ID: BG-01			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 124366									
Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD	Limit
Percent Moisture	9.8		9.9		%		1		20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 180-124692/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 124883						Prep Batch: 124692			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.40	0.10	mg/Kg		11/11/14 11:09	11/13/14 10:09	1

Lab Sample ID: LCS1 180-124692/3-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 124883						Prep Batch: 124692			
Analyte	Spike Added	LCSI Result	LCSI Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)	708	733		mg/Kg		104	80 - 120		

Lab Sample ID: LCSS 180-124692/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 124883						Prep Batch: 124692			
Analyte	Spike Added	LCSS Result	LCSS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)	20.0	17.8		mg/Kg		89	80 - 120		

TestAmerica Pittsburgh

QC Association Summary

Client: KU Resources Inc
 Project/Site: Fortress Greensboro Drip Pad Closure

TestAmerica Job ID: 180-38637-1

General Chemistry

Analysis Batch: 124366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-38637-1	BG-01	Total/NA	Solid	2540G	
180-38637-1 DU	BG-01	Total/NA	Solid	2540G	
180-38637-2	BG-02	Total/NA	Solid	2540G	
180-38637-3	BG-03	Total/NA	Solid	2540G	
180-38637-4	BG-04	Total/NA	Solid	2540G	
180-38637-5	BG-05	Total/NA	Solid	2540G	
180-38637-6	BG-06	Total/NA	Solid	2540G	
180-38637-7	BG-07	Total/NA	Solid	2540G	
180-38637-8	BG-08	Total/NA	Solid	2540G	
180-38637-9	BG-09	Total/NA	Solid	2540G	
180-38637-10	BG-10	Total/NA	Solid	2540G	

Prep Batch: 124692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-38637-1	BG-01	Total/NA	Solid	3060A	
180-38637-2	BG-02	Total/NA	Solid	3060A	
180-38637-3	BG-03	Total/NA	Solid	3060A	
180-38637-4	BG-04	Total/NA	Solid	3060A	
180-38637-5	BG-05	Total/NA	Solid	3060A	
180-38637-6	BG-06	Total/NA	Solid	3060A	
180-38637-7	BG-07	Total/NA	Solid	3060A	
180-38637-8	BG-08	Total/NA	Solid	3060A	
180-38637-9	BG-09	Total/NA	Solid	3060A	
180-38637-10	BG-10	Total/NA	Solid	3060A	
LCSI 180-124692/3-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSS 180-124692/2-A	Lab Control Sample	Total/NA	Solid	3060A	
MB 180-124692/1-A	Method Blank	Total/NA	Solid	3060A	

Analysis Batch: 124883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-38637-1	BG-01	Total/NA	Solid	7196A	124692
180-38637-2	BG-02	Total/NA	Solid	7196A	124692
180-38637-3	BG-03	Total/NA	Solid	7196A	124692
180-38637-4	BG-04	Total/NA	Solid	7196A	124692
180-38637-5	BG-05	Total/NA	Solid	7196A	124692
180-38637-6	BG-06	Total/NA	Solid	7196A	124692
180-38637-7	BG-07	Total/NA	Solid	7196A	124692
180-38637-8	BG-08	Total/NA	Solid	7196A	124692
180-38637-9	BG-09	Total/NA	Solid	7196A	124692
180-38637-10	BG-10	Total/NA	Solid	7196A	124692
LCSI 180-124692/3-A	Lab Control Sample	Total/NA	Solid	7196A	124692
LCSS 180-124692/2-A	Lab Control Sample	Total/NA	Solid	7196A	124692
MB 180-124692/1-A	Method Blank	Total/NA	Solid	7196A	124692

TestAmerica Pittsburgh

TestAmerica Pittsburgh
381 Alpha Drive

Pittsburgh, PA 15238
Phone: 412.963.7652 Fax: 412.963.1



180-38637 Chain of Custody

Chain of Custody Record

050636

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

DES RCRA Other:

Client Contact		Project Manager: <u>D. REISCHNER</u>		Site Contact:		Date:		COC No:		
Company Name: <u>KO RESOURCES</u>		Tell/Fax:		Lab Contact:		Carrier:		1 of 1 COCs		
Address: <u>22 S. LINDEN</u>		Analysis Turnaround Time:								
City/State/Zip: <u>DUQUESNE PA 15110</u>		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below:								
Phone:		<input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day								
Fac:		Filled Sample (Y/N) Perform MS / MBD (Y/N) <u>ARSENIC</u> <u>CHROMIUM</u> <u>COPPER</u>								
Project Name: <u>FORTRESS WOOD PRODUCTS</u>										
Site: <u>GREENSBORO NC</u>										
PO#:										
Sample Identification		Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Sample Specific Notes:			
<u>BG-01</u>		<u>1406/14</u>	<u>1410</u>	<u>G</u>	<u>S</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>HOLD EXCESS</u>
<u>BG-02</u>			<u>1415</u>			<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>SAMPLES FOR</u>
<u>BG-03</u>			<u>1420</u>			<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>POTENTIAL</u>
<u>BG-04</u>			<u>1425</u>			<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>HEX CHROMIUM</u>
<u>BG-05</u>			<u>1427</u>			<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>ANALYSIS</u>
<u>BG-06</u>			<u>1430</u>			<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>BG-07</u>			<u>1432</u>			<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>BG-08</u>			<u>1437</u>			<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>BG-09</u>			<u>1440</u>			<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>BG-10</u>			<u>1445</u>			<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months				
Special Instructions/QC Requirements & Comments: <u>TEMP 3.2 CFO 3.2 Ther # 7</u>										
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temp. (°C): Obs'd:		Cor'd:		Therm ID No.:		
Retinquished by: <u>[Signature]</u>		Company: <u>KO RESOURCES</u>		Date/Time: _____		Received by: <u>[Signature]</u>		Company: <u>JAP H</u>		
Retinquished by: <u>[Signature]</u>		Company: <u>JAP H</u>		Date/Time: <u>10/13/14 1700</u>		Received by: <u>[Signature]</u>		Company: <u>JAP H</u>		
Retinquished by: _____		Company: _____		Date/Time: _____		Received in Laboratory by: _____		Company: _____		

DUQUESNE

Login Sample Receipt Checklist

Client: KU Resources Inc

Job Number: 180-38637-1

Login Number: 38637

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Lonzo, Michael A

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

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