# **Former Karg Brothers Tannery**

# FULTON COUNTY, NEW YORK

# **Final Engineering Report**

NYSDEC Site Number: E518022

## **Prepared for:**

The City of Johnstown Johnstown, New York

# **Prepared by:**

Arcadis CE, Inc. 855 Route 146, Suite 210 Clifton Park, New York

### **SEPTEMBER 2016**

# **CERTIFICATIONS**

I, Daniel J. Loewenstein, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Interim Remedial Measures Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved Interim Remedial Measures Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Interim Remedial Measures Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, and that such plan has been approved by the Department.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Daniel J. Loewenstein, of Arcadis CE, Inc., 855 Route 146, Suite 210, Clifton Park, NY 12065, am certifying as Owner's Designated Site Representative for the site.



eelplu Signature Date

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# LIST OF ACRONYMS

Acronym	Definition
AA	Alternatives Analysis
CAMP	Community Air Monitoring Plan
CPP	Community Participation Plan
DPW	Department of Public Works
DSW	Department of Solid Waste
EC	Engineering Control
ERP	Environmental Restoration Program
FER	Final Engineering Report
HASP	Health and Safety Plan
IC	Institutional Control
IRM	Interim Remedial Measures
NYSDEC	New York State Department of Environmental Conservation
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
SAC	State Assistance Contract
SCO	Soil Cleanup Objective
SMP	Site Management Plan

# FINAL ENGINEERING REPORT

#### **1.0 BACKGROUND AND SITE DESCRIPTION**

The City of Johnstown, New York (City) entered into a State Assistance Contract (SAC) with the New York State Department of Environmental Conservation (NYSDEC) in January 2005, to investigate and remediate a 5.3-acre property located in the City of Johnstown, New York. The property was remediated to restricted residential use.

The site is located in the County of Fulton, New York and is identified as Block 11 and Lot 6.11 on the Fulton County Tax Map 162.20. The site is situated on an approximately 5.3-acre area bounded by Crescendoe Road and residential and commercial properties of North Perry Street to the north, the Cayadutta Creek to the south and east, and residential and commercial properties of North Perry Street to the site are fully described in Appendix A: Survey Map, Metes and Bounds.

An electronic copy of this FER with all supporting documentation is included as Appendix B.

### 2.0 SUMMARY OF SITE REMEDY

### **2.1 REMEDIAL ACTION OBJECTIVES**

The Remediation Action Objectives for the Site, as listed in the Record of Decision (ROD) dated March 30, 2015, are listed below.

#### 2.1.1 Groundwater RAOs

RAOs for Public Health Protection

• Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards.

#### **RAOs** for Environmental Protection

- Restore ground water aquifer, to the extent practicable, to pre-disposal/prerelease conditions.
- Prevent the discharge of contaminants to surface water.

#### 2.1.2 Soil RAOs

**RAOs for Public Health Protection** 

• Prevent ingestion/direct contact with contaminated soil.

#### **RAOs** for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota due to ingestion/direct contact with contaminated soil that would cause toxicity or bioaccumulation through the terrestrial food chain.
- •

### **2.2 DESCRIPTION OF SELECTED REMEDY**

The site was remediated in accordance with the remedy selected by the NYSDEC in the Interim Remedial Measures (IRM) Work Plan dated September 2013.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

- Construction and maintenance of a soil cover system consisting of a demarcation layer in areas of the site not previously covered by concrete or asphalt overlain by a minimum of two feet of clean soil to prevent human exposure to remaining contaminated soil/fill remaining at the site;
- 2. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site.
- Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;
- 4. Periodic certification of the institutional and engineering controls listed above.

# 3.0 INTERIM REMEDIAL MEASURES, OPERABLE UNITS AND REMEDIAL CONTRACTS

#### **3.1 INTERIM REMEDIAL MEASURES**

The City's Department of Public Works (DPW) performed the majority of the remedial activities at the site. A demarcation layer consisting of orange construction fencing was placed over the approximately 1.9 acres of the site previously covered by grass and/or soil, as shown on Figure 2. Fill material was received from the Fulton County Department of Solid Waste virgin soil pit and City DPW crews provided equipment and labor for soil transportation and grading. Additional assistance with soil transportation was provided by the City's Department of Solid Waste (DSW), the City of Gloversville, the Fulton County Highway Department, and the Gloversville-Johnstown Wastewater Facility. A layer of at least two feet of clean general fill (approximately 6,000 cubic yards) was placed above the demarcation layer. Confirmation of soil cover thickness was conducted in the field using a combination of survey and direct measurement techniques. While not required by NYSDEC, the City at its own cost also placed at least two feet of clean soil (approximately 11,000 cubic yards) over the approximately 3.4 acres of the site covered by concrete and asphalt to fully cover the site and bring all areas of the site to similar grade to facilitate redevelopment. The soil cover extended as close to Cayadutta Creek as practicable and allowable by floodplain development permitting. As the City's representative, Arcadis periodically observed the remedial work, in conjunction with City representatives. Remedial activity at the site began on October 15, 2013. Final grading of the site was completed on June 9, 2014. Final restoration was completed on June 25, 2014.

Based on the observations made by Arcadis and the field and laboratory test data collected by Arcadis or the City, the remedial activities were completed in accordance with the NYSDEC-approved IRM Work Plan without significant deviation. Based on site conditions the following deviations from the IRM Work Plan were implemented with the approval of the NYSDEC:

 The approximately 2,000 square foot portion of the site north of East Canal Street (Figure 2) was capped with asphalt instead of two feet of clean general fill.

The information and certifications made in the June 2015 (revised August 2015)

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IRM Report were relied upon to prepare this report and certify that the remediation requirements for the site have been met.

#### 4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved IRM Work Plan for the Former Karg Brothers Tannery site (September 2013). Deviations from the IRM Work Plan are noted below.

#### 4.1 GOVERNING DOCUMENTS

#### 4.1.1 Site Specific Health & Safety Plan (HASP)

The HASP was included as part of the Remedial Investigation/Alternatives Analysis (RI/AA) Work Plan (January 2009) approved by the NYSDEC. Remedial work performed under this Remedial Action was in compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

The Health and Safety Plan (HASP) was complied with for all remedial and invasive work performed at the Site.

#### 4.1.2 Quality Assurance Project Plan (QAPP)

The QAPP was included as Appendix A of the RI/AA Work Plan approved by the NYSDEC. The QAPP describes the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities designed to achieve the project data quality objectives.

#### 4.1.3 Community Air Monitoring Plan (CAMP)

The CAMP was included as part of the RI/AA Work Plan approved by the NYSDEC. The CAMP describes the monitoring approach, instruments, action levels, and response measures designed to protect potential downwind receptors.

The CAMP was complied with for remedial and invasive work performed at the Site.

#### 4.1.4 Community Participation Plan

The Community Participation Plan (CPP) was included as part of the Remedial RI/AA Work Plan approved by the NYSDEC. Mechanisms that the City used to involve the community in the project included: fact sheets, public meetings, compilation of a list

of interested parties and the establishment of document repositories for project information and documents.

#### **4.2 REMEDIAL PROGRAM ELEMENTS**

#### 4.2.1 Contractors and Consultants

- Arcadis: Consultant for the City of Johnstown, responsible for implementation of the City's ERP grant.
- City of Johnstown DPW: Provided equipment and labor for clean soil transportation and grading.
- Chemtech: subcontract laboratory

#### 4.2.2 Site Preparation

Prior to remedial activities, required permits and approvals were obtained from the NYSDEC and the City of Johnstown. Monitoring wells were abandoned on October 16, 2013. A pre-construction meeting was held with Arcadis and City DPW on October 21, 2013.

Documentation of agency approvals required by the IRM Work Plan is included in Appendix C.

#### 4.2.3 General Site Controls

During the IRM temporary silt fencing was installed around the perimeter of the site leaving controlled ingress/egress points. Work was overseen by Arcadis. Daily site notes were maintained in the project field log book which included daily activities, on-site visitors, contractors, and deviations from the Work Plan as related to the remedial activities.

#### 4.2.4 Nuisance controls

- No odors were generated during remedial activities which required odor control.
- Site access was controlled by temporary silt fencing around the perimeter of the site.
- No nuisance complaints from the public were received during the remedial activities.

#### 4.2.6 Reporting

Arcadis completed notes during periodic oversight of the IRM from October 21, 2013 through June 25, 2014. Copies of the field log book from these dates are provided in electronic format in Appendix D. The digital photo log of remedial activities is included in electronic format in Appendix E.

#### **4.3 IMPORTED BACKFILL**

Clean, graded fill was used to create a soil cover at least two feet in thickness above the previous grade. As summarized in Table 1, a total of approximately 23,040 tons (18,200 cubic yards) of soil were brought to the site during the remedial action. Periodically during the remedial action Arcadis and City personnel verified the thickness of fill using a combination of direct depth and ground surface elevation measurements. Fill materials were compacted to minimize settling. Fill material was received from the Fulton County Department of Solid Waste virgin soil pit. Analytical data for this material are included in Appendix F and summarized in Table 2, and the material was approved for use by NYSDEC. A figure showing the site locations where backfill was used at the site is shown in Figure 2.

#### 4.6 CONTAMINATION REMAINING AT THE SITE

Following the conclusion of IRM activities, metals-impacted soil (generally within the upper four to five feet of subsurface soil) was left in place below either preexisting concrete and asphalt, or an orange construction fencing demarcation layer and at least two feet of clean soil.

Tables 3 through 5 and Figures 3 and 4 summarize the results of all soil samples remaining at the site after completion of Remedial Action that meet or exceed the Track 1 (unrestricted) SCOs.

Since contaminated soil remains beneath the site after completion of the Remedial Action, Institutional and Engineering Controls are required to protect human health and the environment. These Engineering and Institutional Controls (ECs/ICs) are described in the following sections. Long-term management of these EC/ICs and residual contamination will be performed under the Site Management Plan (SMP) approved by the NYSDEC.

#### 4.7 SOIL COVER SYSTEM

Exposure to remaining contamination in soil/fill at the site is prevented by a soil cover system placed over the site. This cover system is comprised of a minimum of 24 inches of clean soil and asphalt pavement. Figure 2 shows the location of each cover type built at the Site. An Excavation Work Plan, which outlines the procedures required in the event the cover system and/or underlying residual contamination are disturbed, is provided in Appendix A of the SMP.

#### **4.8 OTHER ENGINEERING CONTROLS**

The remedy for the site did not require the construction of any other engineering control systems.

#### **4.9 INSTITUTIONAL CONTROLS**

The site remedy requires that an environmental easement be placed on the property to (1) implement, maintain and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to restricted residential uses only.

The environmental easement for the site was executed by the Department on April 25, 2016, and filed with the Fulton County Clerk on June 3, 2016. The County Recording Identifier number for this filing is 2016-38120. A copy of the easement and proof of filing is provided in Appendix G.

#### 4.9 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

The approximately 2,000 square foot portion of the site north of East Canal Street (Figure 2) was capped with asphalt instead of two feet of clean general fill. This change, which was approved by the NYSDEC, was implemented in order to maintain consistent elevation with the existing street and facilitate reuse.

#### LIST OF TABLES

- 1. Summary of Fill Placement
- 2. Summary of Soil Sampling Results IRM Imported Fill
- 3. Summary of On-Site Surface Soil Sampling Results Metals
- 4. Summary of On-Site Subsurface Soil Sampling Results Metals
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- 2. Previous Ground Surface and Location of Cover System
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#### LIST OF APPENDICES

- A. Survey Map, Metes and Bounds
- B. Digital Copy of the FER (CD)
- C. NYSDEC Approvals of Substantive Technical Requirements
- D. Remedial Action Field Notes
- E. Project Photo Log
- F. Imported Materials Analytical Documentation
- G. Environmental Easement





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GRASS AREAS WHICH RECEIVED DEMARCATION LAYER

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K-00-SS-73	9/15/20	10
Chromium	113	J
Copper	53.1	
Lead	192	
Mercury	1.1	D
Nickel	56.8	
Silver	2.43	
Zinc	246	

K-00-SS-80	9/15/2010
Chromium	310 J
Lead	488
Mercury	0.232
Zinc	175
	K-00-SS-80 Chromium Lead Mercury Zinc

K-00-SS-65	9/15/2010
Arsenic	16.1
Chromium	147 J
Lead	106
Mercury	0.439
Zinc	156

NOTE: Soil metals concentrations for detected compounds given in mg/kg.

Concentration exceeds corresponding
 6 NYCRR Part 375 Restricted Residential
 Soil Cleanup Objective (SCO).

Concentration exceeds corresponding 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objective (SCO).

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AUGUST 2013 FIGURE 3



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	FIGURE 4					

#### Table 1 Summary of Fill Placement Former Karg Brothers Tannery Johnstown, NY ERP # E 518022

		NUMBER OF	
DATE	MUNICIPALITY HAULING	LOADS	TONS
9/16/2013	CITY OF JOHNSTOWN	5	87.5
9/24/2013	CITY OF JOHNSTOWN	13	227.5
9/26/2013	CITY OF JOHNSTOWN	11	192.5
9/27/2013	CITY OF JOHNSTOWN	4	70
10/9/2013	CITY OF JOHNSTOWN	11	192.5
10/10/2013	CITY OF JOHNSTOWN	11	192.5
10/11/2013	CITY OF JOHNSTOWN	14	245
10/15/2013	CITY OF JOHNSTOWN	11	192.5
10/17/2013	CITY OF JOHNSTOWN	15	262.5
10/18/2013	CITY OF JOHNSTOWN	14	245
10/28/2013	CITY OF JOHNSTOWN	14	245
10/29/2013	CITY OF JOHNSTOWN	15	262.5
10/30/2013	CITY OF JOHNSTOWN	15	262.5
10/31/2013	CITY OF JOHNSTOWN	21	367.5
11/1/2013	CITY OF JOHNSTOWN	2	35
11/4/2013	CITY OF JOHNSTOWN	7	122.5
11/7/2013	CITY OF JOHNSTOWN	2	35
11/8/2013	CITY OF JOHNSTOWN	9	157.5
11/19/2013	CITY OF JOHNSTOWN	6	105
11/25/2013	CITY OF JOHNSTOWN	6	105
11/26/2013	CITY OF JOHNSTOWN	6	105
12/4/2013	CITY OF JOHNSTOWN	14	245
12/5/2013	CITY OF JOHNSTOWN	9	157.5
12/9/2013	CITY OF JOHNSTOWN	9	157.5
12/10/2013	CITY OF JOHNSTOWN	11	192.5
12/11/2013	CITY OF JOHNSTOWN	24	420
12/12/2013	CITY OF JOHNSTOWN	19	332.5
12/19/2013	CITY OF JOHNSTOWN	13	227.5
1/21/2014	CITY OF JOHNSTOWN	7	122.5
1/22/2014	CITY OF JOHNSTOWN	22	385
1/22/2014	CITY OF GLOVERSVILLE	19	332.5
1/22/2014	FC HIGHWAY	4	96
1/23/2014	CITY OF JOHNSTOWN	25	437.5
1/23/2014	CITY OF GLOVERSVILLE	17	297.5
1/23/2014	FC HIGHWAY	6	144
1/24/2014	CITY OF JOHNSTOWN	10	175
1/24/2014	CITY OF GLOVERSVILLE	10	175
1/27/2014	CITY OF GLOVERSVILLE	5	87.5
1/27/2014	CITY OF JOHNSTOWN	8	140
1/27/2014	FC HIGHWAY	1	24

#### Table 1 Summary of Fill Placement Former Karg Brothers Tannery Johnstown, NY ERP # E 518022

		NUMBER OF	
DATE	MUNICIPALITY HAULING	LOADS	TONS
1/28/2014	CITY OF JOHNSTOWN	23	402.5
1/28/2014	FC HIGHWAY	4	96
1/28/2014	CITY OF GLOVERSVILLE	8	140
1/29/2014	CITY OF GLOVERSVILLE	9	157.5
1/29/2014	FC HIGHWAY	4	96
1/29/2014	GJWWTF	10	175
1/29/2014	CITY OF JOHNSTOWN	23	402.5
1/30/2014	CITY OF JOHNSTOWN	21	367.5
1/30/2014	CITY OF GLOVERSVILLE	16	280
1/30/2014	GJWWTF	8	140
1/30/2014	FC HIGHWAY	6	144
1/31/2014	CITY OF JOHNSTOWN	13	227.5
1/31/2014	CITY OF GLOVERSVILLE	20	350
2/3/2014	FC HIGHWAY	4	96
2/3/2014	CITY OF JOHNSTOWN	17	297.5
2/3/2014	CITY OF GLOVERSVILLE	19	332.5
2/3/2014	GJWWTF	10	175
2/4/2014	CITY OF JOHNSTOWN	19	332.5
2/4/2014	CITY OF GLOVERSVILLE	9	157.5
2/4/2014	GJWWTF	10	175
2/4/2014	FC HIGHWAY	6	144
2/12/2014	CITY OF JOHNSTOWN	14	245
2/12/2014	GJWWTF	9	157.5
2/25/2014	CITY OF JOHNSTOWN	23	402.5
2/26/2014	FC HIGHWAY	7	168
2/26/2014	GJWWTF	8	140
2/26/2014	CITY OF JOHNSTOWN	16	280
2/27/2014	CITY OF JOHNSTOWN	23	402.5
2/27/2014	FC HIGHWAY	6	144
2/27/2014	GJWWTF	10	175
2/28/2014	GJWWTF	3	52.5
2/28/2014	CITY OF JOHNSTOWN	23	402.5
3/3/2014	FC HIGHWAY	6	144
3/3/2014	CITY OF JOHNSTOWN	25	437.5
3/4/2014	FC HIGHWAY	7	168
3/5/2014	FC HIGHWAY	3	72
3/5/2014	GJWWTF	10	175
3/5/2014	CITY OF JOHNSTOWN	25	437.5
3/6/2014	FC HIGHWAY	7	168
3/6/2014	GJWWTF	11	192.5

#### Table 1 Summary of Fill Placement Former Karg Brothers Tannery Johnstown, NY ERP # E 518022

		NUMBER OF		
DATE	MUNICIPALITY HAULING	LOADS	TONS	
3/6/2014	CITY OF JOHNSTOWN	19	332.5	
3/6/2014	DSW	9	157.5	
3/7/2014	FC HIGHWAY	7	168	
3/7/2014	CITY OF JOHNSTOWN	15	262.5	
3/7/2014	DSW	10	175	
3/10/2014	DSW	10	175	
3/11/2014	FC HIGHWAY	7	168	
3/11/2014	GJWWTF	9	157.5	
3/11/2014	CITY OF JOHNSTOWN	25	437.5	
3/14/2014	CITY OF JOHNSTOWN	21	367.5	
3/17/2014	CITY OF JOHNSTOWN	25	437.5	
3/17/2014	GJWWTF	10	175	
3/18/2014	GJWWTF	10	175	
3/18/2014	CITY OF JOHNSTOWN	26	455	
3/19/2014	CITY OF JOHNSTOWN	19	332.5	
3/24/2014	CITY OF JOHNSTOWN	5	87.5	
3/25/2014	CITY OF JOHNSTOWN	21	367.5	
3/27/2014	CITY OF JOHNSTOWN	15	262.5	
4/4/2014	CITY OF JOHNSTOWN	6	105	
4/7/2014	CITY OF JOHNSTOWN	9	157.5	
4/10/2014	CITY OF JOHNSTOWN	7	122.5	
4/11/2014	CITY OF JOHNSTOWN	10	175	
4/14/2014	CITY OF JOHNSTOWN	8	140	
4/22/2014	CITY OF JOHNSTOWN	16	280	
5/12/2014	CITY OF JOHNSTOWN	6	105	
6/2/2014	CITY OF JOHNSTOWN	13	227.5	
6/3/2014	CITY OF JOHNSTOWN	7	122.5	
	TOTAL	1,285	23,040	TONS
			18,202	CUBIC YAR

#### TABLE 2 SUMMARY OF SOIL SAMPLING RESULTS INTERIM REMEDIAL MEASURE IMPORTED FILL FORMER KARG BROTHERS TANNERY ENVIRONMENTAL RESTORATION PROGRAM JOHNSTOWN, NEW YORK

			FCLFKARG	FCLF-KARG	FCLF-KARG	FCLF-KARG	FCLF-KARG
Sample ID	6 NYCRR Part 375	6 NYCRR Part 375	08-02-13	02	03	04	05
	Unrestricted Use	Protection of Groundwater					
Sampling Date	Soil Cleanup	Soil Cleanup	8/2/13	10/4/13	10/4/13	10/4/13	10/4/13
Matrix	Objective	Objective	SOIL	SOIL	SOIL	SOIL	SOIL
Units	µg/kg	µg/kg	μg/kg	μg/kg	μg/kg	μg/kg	μg/kg
VOCs							
Methylene Chloride	50	50	0.54 U	1.4 J	6.3 U	1.5 J	1.3 J
Tetrachloroethene	1,300	1,300	1.9 J	6 U	6.3 U	6.2 U	6.2 U
SVOCs							
Diethylphthalate			36 UQ	140 J	NS	410 U	NS
Dimethylphthalate			380	510	NS	1,400	NS
Organochlorine Pesticides			ND	ND	NS	ND	NS
Polychlorinated Biphenyls			ND	ND	NS	ND	NS

TAL Metals							
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum			3,520	4,100	NS	4,300	NS
Antimony			0.58 UN	2.53 U	NS	2.65 U	NS
Arsenic	13	16	2.32 N	1.91	NS	1.87	NS
Barium	350	820	13.8	15.6	NS	15.7	NS
Beryllium	7.2	47	0.18 N	0.204 J	NS	0.2 J	NS
Cadmium	2.5	7.5	0.18	0.303 U	NS	0.319 U	NS
Calcium			24,400	15,800	NS	17,700	NS
Chromium	30	-	3.95 N	4.15	NS	4.35	NS
Cobalt			3.52	4.06	NS	4.06	NS
Copper	50	1,720	6.36 N	6.25	NS	6.05	NS
Iron			9,680	10,500	NS	10,700	NS
Lead	63	450	2.59	4.19	NS	3.65	NS
Magnesium			2,560	1,900	NS	2,300	NS
Manganese	1,600	2,000	173	177	NS	180	NS
Mercury	0.18	0.73	0.007 J	0.01 J	NS	0.012 J	NS
Nickel	30	130	8.27	8.16	NS	8.22	NS
Potassium			295	340	NS	369	NS
Selenium	3.9	4	0.21 J	0.846 J	NS	0.777 J	NS
Silver	2	8	0.115 U	0.634	NS	0.665	NS
Sodium			99.9	44.6	NS	48 J	NS
Thallium			0.465 U	2.02 U	NS	2.12 U	NS
Vanadium			13.1 N	14.5	NS	14.8	NS
Zinc	109	2,480	24.3 N	27.5	NS	26.5	NS

1 of 1

Notes

U - The compound was not detected at the indicated concentration.

J - The concentration given is an estimated value.

ND - Not detected.

NS - Not sampled.

N - The matrix spike recovery was outside control limits

Q - LCS did not meet control limit rquirements.

#### TABLE 3 SUMMARY OF ON-SITE SURFACE SOIL SAMPLING RESULTS METALS + CYANIDE REMEDIAL INVESTIGATION FORMER KARG BROTHERS TANNERY ENVIRONMENTAL RESTORATION PROGRAM JOHNSTOWN, NEW YORK

Sample ID	Part 375	Part 375	K-00	)-SS-08	K-SS-X1	K-SS-X1 (SS-08 Dup)		p) K-00-SS-10		K-00-SS-14				K-00-SS-27		
Sample Depth (ft)	Unrestricted Use	Restricted	Su	Irface	Su	urface		Si	urface		Sı	urface		S	urface	
Sampling Date	Soil Cleanup	Residential Use	9/15	5/2010	9/1	5/2010		9/1	5/2010		9/1	5/2010		9/1	5/2010	
Matrix	Objective	Soil Cleanup	S	OIL	5	SOIL			SOIL			SOIL			SOIL	
Method		Objective	XRF LAB		XRF	LAB		XRF	LAB		XRF	LAB		XRF	LAB	
Units	mg/kg	mg/kg	ppm	mg/Kg	ppm	mg/Kg		ppm	mg/Kg		ppm	mg/Kg		ppm	mg/Kg	
METALS																
Aluminum				3,890		4,100			2,550			8,350			2,130	
Antimony				3.08 U		2.79	U		2.11	U		2.28	U		2.79	U
Arsenic	13	16	29.59	19.5		20.3			12.9			5.65			3.02	
Barium	350	400		43.8		44.9			39.8			60.3			23.6	
Beryllium	7.2	72		0.34 J		0.36			0.35			0.69			0.25	J
Cadmium	2.5	4.3		0.37 U		0.34	U		0.25	U		0.27	U		0.34	U
Calcium				17,400		17,300			76,100			64,700			68,900	
Chromium	30	180		165 J		171	J		39.8	J		39.4	J		241	J
Cobalt				3.16		3.46		2.45	3.56			5.88			2.4	
Copper	50	270		24.7		26		1.5	12.3			14.6			12.5	
Cyanide	27	27		0.659 U		0.645	U		0.645	U		0.642	U		0.609	U
Iron			17,153	10,100		10,400		12,023	9,620		20,889	14,800		9,763	11,600	
Lead	63	400	61	70		78		48	28		19	26		60	50	
Magnesium				4,900		4,810			25,600			4,720			19,800	
Manganese	1,600	2,000	436	229		239		308	214		308	471		423	425	
Mercury	0.18	0.81		0.299		0.351		0.2	0.085			0.062			0.047	
Nickel	30	310		8.2		9.03		1.83	10.2			10.5			7.61	
Potassium				496		530			464			1080			459	
Selenium	3.9	180		1.45 N		1.39	Ν		0.86	Ν		1.12	Ν		0.95	JN
Silver	2	180		1.03		1.09			0.85			1.31			1.04	
Sodium				127		129			139			284			176	
Thallium				2.46 U		2.23	U		1.69	U		1.82	U		2.23	U
Vanadium				18.3		18.5			11.5			26.6			11.7	
Zinc	109	10,000	121	104		105		86	43		87	67		299	216	

Notes

Highlighted cells exceed corresponding Soil Cleanup Objective (SCO)

NS - Not sampled

U - The compound was not detected at the indicated concentration.

J - The concentration given is an estimated value.

N - Spike sample recovery is not within control limits.

\* - Duplicate not within control limits.

#### TABLE 3 SUMMARY OF ON-SITE SURFACE SOIL SAMPLING RESULTS METALS + CYANIDE REMEDIAL INVESTIGATION FORMER KARG BROTHERS TANNERY ENVIRONMENTAL RESTORATION PROGRAM JOHNSTOWN, NEW YORK

Sample ID	Part 375	Part 375	K-00-SS-34		K-0	D-SS-38		K-0	0-SS-40		K-0	0-SS-42		K-00-SS-48		
Sample Depth (ft)	Unrestricted Use	Restricted	S	urface	Su	urface		Sı	irface		Su	urface		S	urface	
Sampling Date	Soil Cleanup	Residential Use	9/1	15/2010	9/1	5/2010		9/1	5/2010		9/1	5/2010		9/1	5/2010	
Matrix	Objective	Soil Cleanup		SOIL		SOIL		5	SOIL			SOIL		:	SOIL	
Method		Objective	XRF	XRF LAB		LAB		XRF	LAB		XRF	LAB		XRF	LAB	
Units	mg/kg	mg/kg	ppm	mg/Kg	ppm	mg/Kg		ppm	mg/Kg		ppm	mg/Kg		ppm	mg/Kg	J
METALS																
Aluminum				3,660		1,970			5,570			6,560			2,480	ĺ
Antimony				3.74 U		1.64	U		3.14	U		1.6	J		3.89	U
Arsenic	13	16	56.52	14		3.36		88.16	68.6			20.3			16.7	
Barium	350	400		89.3		23.3			98.8			143			43.5	
Beryllium	7.2	72		0.31 J		0.23			0.45			0.64			0.37	J
Cadmium	2.5	4.3		0.18 J		0.31			0.38	U		0.49	U		0.47	U
Calcium				61,900		59,400			12,000			64,200			142,000	
Chromium	30	180		166 J		87.7	J		229	J		236	J		160	J
Cobalt				2.29		2.6			4.01			4.92			9.75	
Copper	50	270	56.74	44.5		15.3			29.9			38			24.5	
Cyanide	27	27		0.756 U		0.646	U		0.64	U		1.04	U		0.847	U
Iron			12,279	10,800	13,350	8,560		16,571	11,200		16,158	27,500		4,929	10,900	
Lead	63	400	650	500	56	48		263	269		127	210		35	43	
Magnesium				16,300		27,100			3,130			9,830			71,500	
Manganese	1,600	2,000	180	202	248	142		317	198		896	1,550		152	434	
Mercury	0.18	0.81		0.304		0.215			0.47			0.297			0.028	
Nickel	30	310		12.9		19.4			9.79			16.3			17.4	
Potassium				860		348			854			1140			726	
Selenium	3.9	180		0.79 JN		0.88	Ν		2.13	Ν		2.77	Ν		1.2	JN
Silver	2	180		1.17		0.83			1.28			2.61			0.95	
Sodium				244		166			204			373			323	
Thallium				2.99 U		1.31	U		2.51	U		3.24	U		3.11	U
Vanadium				35.9		44.3			22.4			40.1			49.7	
Zinc	109	10,000	323	293	213	125		644	557		176	298		306	345	

Notes

Highlighted cells exceed corresponding Soil Cleanup Objective (SCO)

NS - Not sampled

U - The compound was not detected at the indicated concentration.

J - The concentration given is an estimated value.

N - Spike sample recovery is not within control limits.

\* - Duplicate not within control limits.

#### TABLE 3 SUMMARY OF ON-SITE SURFACE SOIL SAMPLING RESULTS METALS + CYANIDE REMEDIAL INVESTIGATION FORMER KARG BROTHERS TANNERY ENVIRONMENTAL RESTORATION PROGRAM JOHNSTOWN, NEW YORK

Sample ID	Part 375	Part 375	K-00-SS-56 K-00-SS-65		K-0	0-SS-73		K-00	)-SS-80	K-00-SS-87			K-00-SS-93			
Sample Depth (ft)	Unrestricted Use	Restricted	Su	urface	Sı	urface	S	urface		Sı	ırface	S	urface		S	urface
Sampling Date	Soil Cleanup	<b>Residential Use</b>	9/1	5/2010	9/1	5/2010	9/1	5/2010		9/1	5/2010	9/1	15/2010		9/1	5/2010
Matrix	Objective	Soil Cleanup	.,	SOIL		SOIL		SOIL		5	SOIL		SOIL		:	SOIL
Method		Objective	XRF	LAB	XRF	XRF LAB		LAB		XRF	LAB	XRF	LAB		XRF	LAB
Units	mg/kg	mg/kg	ppm	mg/Kg	ppm	mg/Kg	ppm	mg/Kg		ppm	mg/Kg	ppm	mg/Kg		ppm	mg/Kg
METALS																
Aluminum				5,020		4,660		3,200			3,480		1,510			3,390
Antimony				2.19 U		3.2 U		5.69			2.3 U		2.44	U		1.59 U
Arsenic	13	16	50.42	14.4		16.1	47.95	5.96			6.93		1.74			1.32
Barium	350	400		247		42.6		81.3			104		29			17
Beryllium	7.2	72		0.6		0.35 J		0.39			0.34		0.3			0.29
Cadmium	2.5	4.3		0.26 U		0.38 U		1.14			0.28 U		0.29	U		0.19 U
Calcium				39,300		16,800		93,300			42,900		70,000			14,300
Chromium	30	180		707 J		147 J		113	J		310 J		18.9	J		31 J
Cobalt				6.15		4.25	250.17	5.1			2.87		2.43			3.16
Copper	50	270	43.74	89.8		24.7	98.55	53.1			34.9		9.92			8.7
Cyanide	27	27		0.64 U		0.742 U		0.581	U		0.695 U		1.55	U		0.619 U
Iron			43,453	36,700	18,471	11,700	20,871	15,300		15,671	12,300	12,535	14,300		15,265	8,810
Lead	63	400	753	1,520	99	106	177	192		492	488	17	15			9
Magnesium				6,810		4,710		33,700			9,730		27,800			3,340
Manganese	1,600	2,000	404	353	318	236	295	231		262	209	214	189		287	173
Mercury	0.18	0.81		2.3 D		0.439		1.1	D		0.232		0.034			0.023
Nickel	30	310		23.5		12.5	86.97	56.8			14.5		7.9			7.59
Potassium				609		901		535			617		382			399
Selenium	3.9	180		2.32 N		1.64 N		1.01	JN		1.08 N		0.93	JN		0.61 JN
Silver	2	180		3.66		1.18		2.43			1.47		1.27			0.77
Sodium				221		150		299			197		188			92.2
Thallium				1.75 U		2.56 U		1.29	J		1.84 U		1.95	U		1.28 U
Vanadium				38.7		29		169			39.6		13.4			15.6
Zinc	109	10,000	723	817	200	156	337	246		214	175	299	142		54	45

Notes

Highlighted cells exceed corresponding Soil Cleanup Objective (SCO)

NS - Not sampled

U - The compound was not detected at the indicated concentration.

J - The concentration given is an estimated value.

N - Spike sample recovery is not within control limits.

\* - Duplicate not within control limits.

Boring ID	Part 375	Part 375	K-00-SB-1 K-00-SB-2		K-00-	SB-3	K-00-SB-4	K-00-SB-5	K-00-SB-6	
Sample Depth (ft)	Unrestricted Use	Restricted	3-4	0-1	0-1	3-4	0-1	4-5	4-8	
Sampling Date	Soil Cleanup	Residential Use	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011	
Matrix	Objective	Soil Cleanup	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	mg/kg	Objective mg/kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	
METALS										
Aluminum			15,500	2,270	3,830	14,700	2,550	5,670	3,880	
Antimony			2.04 J	2.27 UJ	2.35 UJ	3.23 UJ	1.85 UJ	0.488 J	2.38 UJ	
Arsenic	13	16	361	7.96	2.25	26.3	2.77	52.3	2.11	
Barium	350	400	213	14.9	17.1	170	17.2	70.5	39.7	
Beryllium	7.2	72	0.971	0.164 J	0.273 J	0.848	0.216 J	0.383	0.614	
Cadmium	2.5	4.3	1.53	0.272 U	0.089 J	0.565	0.116 J	0.225 J	0.136 J	
Calcium			46,900 J	15,200 J	16,600 J	13,600 J	51,600 J	21,400 J	29,200 J	
Chromium	30	180	1520 NJ	6.39 NJ	31.7 NJ	34.1 NJ	106 NJ	116 NJ	59.1 NJ	
Cobalt			9.26	2.04	3.98	4.87	3.57	3.68	4.59	
Copper	50	270	125 J	3.94 J	8.35 J	23.9 J	566 J	25.3	14.4 J	
Cyanide	27	27	0.414 U	0.281 U	0.65	0.365 U	0.261 U	0.285 U	1.9	
Iron			21,900	6,050	9,810	12,300	15,900	9,340	14,200	
Lead	63	400	388	1.47	4.96	90.9	5.31	55	6.44	
Magnesium			4,320	4,050	4,070	4,460	19,000	6,200	3,080	
Manganese	1,600	2,000	286 J	87 J	189 J	164 J	233 J	115 J	103 J	
Mercury	0.18	0.81	8.4 D	0.005 J	0.017	0.487	0.008 J	0.642 D	0.031	
Nickel	30	310	20.6 J	4.08 J	7.76 J	14.2 J	8.61 J	7.03 J	12 J	
Potassium			1380	296	472	939	602	400	1160	
Selenium	3.9	180	1.25 J	0.906 U	0.939 U	1.29 U	0.741 U	0.863 U	0.953 U	
Silver	2	180	2.2	0.453 U	0.47 U	0.646 U	0.371 U	0.431 U	0.477 U	
Sodium			706 J	183 J	162 J	254 J	212 J	455 J	333 J	
Thallium			1.21 J	1.81 U	1.88 U	2.58 U	1.48 U	1.73 U	1.91 U	
Vanadium			32.9 J	8.95 J	13.3 J	17.4 J	12.8 J	15.8 J	17.4 J	
Zinc	109	10,000	809 N	16 N	35 N	137 N	42 N	89 N	38 N	

Notes

Highlighted cells exceed corresponding Soil Cleanup Objective (SCO)

NS - Not sampled

U - The compound was not detected at the indicated concentration.

J - The concentration given is an estimated value.

N - Spike sample recovery is not within control limits.

\* For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

Boring ID	Part 375	Part 375	K-00-SB-7	K-00-SB-8	K-0-SB-9	K-00-SB-10	K-00-SB-11	K-00-SB-12	K-00-SB-13
Sample Depth (ft)	Unrestricted Use	Restricted	3-4	0.5-2.5	2-3	1-3	2-4	3-4	3-5
Sampling Date	Soil Cleanup	Residential Use	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011	7/20/2011
Matrix	Objective	Soil Cleanup	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	mg/kg	Objective mg/kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
METALS									
Aluminum			4,410	3,510	8,800	8,220	8,270	8,910	10,900
Antimony			2.59 UJ	4.11 J	6.64 J	2.14 UJ	3.13 UJ	3.21 UJ	2.58 UJ
Arsenic	13	16	16.6	12.6	14.8	60.6	7.37	13.5	3.88
Barium	350	400	53.1	83.4	75	78.5	77.1	221	60.8
Beryllium	7.2	72	0.375	0.392	0.548	0.489	0.439	0.756	0.547
Cadmium	2.5	4.3	0.311 U	0.797	0.379	0.394	0.196 J	0.138 J	0.174 J
Calcium			6,460 J	45,400 J	7,660 J	6,260 J	9,360 J	8,320 J	4,320 J
Chromium	30	180	160 NJ	80.1 NJ	43 NJ	126 NJ	29.4 NJ	40.2 NJ	11.4 NJ
Cobalt			6.28	4.98	6.73	4.37	4.75	6.91	8
Copper	50	270	18.1 J	78.9 J	13.7 J	19.6 J	35.3 J	97 J	11.7 J
Cyanide	27	27	0.29 U	0.278 U	0.301 U	0.294 U	0.332 U	0.344 U	0.309 U
Iron			10,900	21,200	20,200	12,000	12,800	16,700	16,600
Lead	63	400	51.4	329	45.5	107	118	354	33.7
Magnesium			1,740	10,300	1,550	1,860	1,430	1,450	2,570
Manganese	1,600	2,000	59 J	324 J	208 J	184 J	70 J	225 J	224 J
Mercury	0.18	0.81	0.046	0.178	0.092	0.559 D	0.728 D	4.86 D	0.229
Nickel	30	310	11.7 J	38 J	10.2 J	9.89 J	12 J	12.7 J	10.5 J
Potassium			363	484	913	611	745	948	1010
Selenium	3.9	180	0.586 J	1.03 U	1.16 U	0.858 U	1.25 U	0.669 J	1.03 U
Silver	2	180	0.519 U	0.514 U	0.579 U	0.429 U	0.626 U	0.643 U	0.515 U
Sodium			220 J	330 J	543 J	191 J	430 J	1470 J	371 J
Thallium			2.07 U	2.06 U	2.31 U	1.72 U	2.51 U	2.57 U	2.06 U
Vanadium			11.6 J	20.7 J	22.6 J	17.3 J	21.9 J	27 J	25.2 J
Zinc	109	10,000	61 N	113 N	67 N	134 N	110 N	141 N	56 N

Notes

Highlighted cells exceed corresponding Soil Cleanup Objective (SCO)

NS - Not sampled

U - The compound was not detected at the indicated concentration.

J - The concentration given is an estimated value.

N - Spike sample recovery is not within control limits.

 $^{\ast}$  For dual column analysis, the lowest quantitated concentration is being reporte

Boring ID	Part 375	Part 375	K-00-SB-14		K-	00-	SB-15		K-00-SB-16	K-00-SB-17		K-00-SB-18	K-00-SB-19
Sample Depth (ft)	Unrestricted Use	Restricted	1-2		5-7		K-00-SB-X		0-1	0-2		0-2	2-3
Sampling Date	Soil Cleanup	Residential Use	7/20/2011		7/20/2011		7/20/2011		7/20/2011	7/20/2011		7/20/2011	7/21/2011
Matrix	Objective	Soil Cleanup	SOIL		SOIL		SOIL		SOIL	SOIL		SOIL	SOIL
Units	mg/kg	Objective mg/kg	mg/Kg		mg/Kg		mg/Kg		mg/Kg	mg/Kg		mg/Kg	mg/Kg
METALS													
Aluminum			9,460		18,900		21,700		2,380	3,110		12,100	9,700
Antimony			3.05 l	UJ	3.13	UJ	2.81	UJ	1.98 U.	J 2.64 L	JJ	2.19 UJ	2.56 UJ
Arsenic	13	16	7.16		4.83		6.13		3.38	11.6		2.73	39.6
Barium	350	400	138		129		149		19.8	42.3		49.3	102
Beryllium	7.2	72	0.567		1.15		1.32		0.281	0.381		0.654	0.673 N
Cadmium	2.5	4.3	0.218	J	0.151	J	0.142	J	0.082 J	0.104	J	0.1 J	0.747
Calcium			52,300	J	29,700	J	15,000	J	72,700 J	103,000	J	5,430 J	13,500
Chromium	30	180	18.2	NJ	20.4	NJ	21.6	NJ	9.67 N.	۱ <u>52.2</u> ۱	٩J	12.9 NJ	95.3 NJ*
Cobalt			5.71		16		18		3.19	4.66		9.09	2.85
Copper	50	270	27.3	J	22.2	J	23.6	J	8.79 J	12.6	J	9.47 J	18.4 NJ*
Cyanide	27	27	0.118	J	0.103	J	0.111	J	0.119 J	0.148	J	0.14 J	3
Iron			13,100		30,900		35,000		7,480	10,300		21,100	7,340 J
Lead	63	400	1,920		9.77		10.6		8.14	10.9		7.4	101.0 N*
Magnesium			10,900		13,800		9,640		13,700	30,000		2,880	4,840
Manganese	1,600	2,000	203	J	510	J	475	J	253 J	289	J	388 J	239 J
Mercury	0.18	0.81	0.093		0.01	J	0.012	J	0.024	0.015		0.018	0.29
Nickel	30	310	9.76	J	23.6	J	27.6		7.87 J	11.2	J	10.8 J	5.46
Potassium			1030		3090		3910		670	898		1230	301
Selenium	3.9	180	1.22 l	U	1.25	U	1.13	U	0.792 U	1.06 l	J	0.875 U	0.496 J
Silver	2	180	0.61 l	U	0.626	U	0.563	U	0.396 U	0.528 l	J	0.437 U	0.512 U
Sodium			560	J	718	J	739	J	190 J	374	J	452 J	296 J
Thallium			2.44 l	U	2.5	U	2.25	U	1.58 U	2.11 l	J	1.75 U	0.292 J
Vanadium			21 .	J	41	J	41.7		9.33 J	9.3	J	34.6 J	10.7 NJ*
Zinc	109	10,000	193	N	79	Ν	96	Ν	30 N	40 1	N	49 N	139 J

Notes

Highlighted cells exceed corresponding Soil Cleanup Objective (SCO)

NS - Not sampled

U - The compound was not detected at the indicated concentration.

J - The concentration given is an estimated value.

N - Spike sample recovery is not within control limits.

 $^{\ast}$  For dual column analysis, the lowest quantitated concentration is being reporte

Boring ID	Part 375	Part 375	K-00-SB-20	K-00-SB-21	K-00-SB-22	22 K-00-SB-23				K-00-SB-24	
Sample Depth (ft)	Unrestricted Use	Restricted	1-2	3-3.5	0-1		4-5	11-12		K-00-X-2	2-3
Sampling Date	Soil Cleanup	Residential Use	7/21/2011	7/21/2011	7/21/2011		7/21/2011	7/21/2011		7/21/2011	7/21/2011
Matrix	Objective	Soil Cleanup	SOIL	SOIL	SOIL		SOIL	SOIL		SOIL	SOIL
Units	mg/kg	Objective mg/kg	mg/Kg	mg/Kg	mg/Kg		mg/Kg	mg/Kg		mg/Kg	mg/Kg
METALS											
Aluminum			2,740	3,310	4,070		4,560	2,150		2,200	3,710
Antimony			1.96 UJ	0.763 J	2.14 L	JJ	1.86 UJ	2	UJ	2.1 UJ	0.486 J
Arsenic	13	16	8.05	21.6	6.45		1.76	1.22		0.94	5.64
Barium	350	400	25.8	139	42.2		29	16.7		16.9	41.9
Beryllium	7.2	72	0.192 JN	0.269 N	0.355 N	N	0.154 JN	0.182	JN	0.19 JN	0.347 N
Cadmium	2.5	4.3	0.164 J	0.58	0.123 J	J	0.117 J	0.24	U	0.251 U	0.619
Calcium			30,200	38,600	28,600		6,240	28,900		33,100	53,200
Chromium	30	180	17.2 NJ*	140 N*	11.4 N	٧J*	19.5 NJ	* 3.81	NJ*	4.34 NJ*	29.4 NJ*
Cobalt			3.96	5.61	4.43		4.78	2.64		2.69	5.64
Copper	50	270	7.55 NJ*	69.1 NJ*	9.32 N	٧J*	10.1 NJ	* 3.76	NJ*	3.73 NJ*	13.1 NJ*
Cyanide	27	27	0.439	0.288 U	0.275 L	J	0.257 U	1.3		0.287 U	0.288 U
Iron			8,730 J	10,400 J	11,000 J	J	9,870 J	7,000	J	7,370 J	8,680 J
Lead	63	400	12.1 NJ*	102.0 N*	19.6 N	٧*	17.5 N*	1.6	N*	1.9 N*	78.3 N*
Magnesium			8,420	5,300	2,550		3,160	4,320		6,890	3,900
Manganese	1,600	2,000	165 J	122 J	156 J	J	102 J	90	J	103 J	146 J
Mercury	0.18	0.81	0.046	0.281	0.043		0.121	0.01	U	0.011 U	0.168
Nickel	30	310	6.52	9.81	12.2		7.71	3.99		4.13	9.47
Potassium			617	326	508		1180	363		373	560
Selenium	3.9	180	0.783 U	0.769 U	0.856 L	J	0.746 U	0.8	U	0.838 U	0.848 U
Silver	2	180	0.392 U	0.384 U	0.428 L	J	0.373 U	0.4	U	0.419 U	0.424 U
Sodium			220 J	258 J	266 J	J	220 J	250	J	291 J	291 J
Thallium			1.57 U	1.54 U	1.71 L	J	1.49 U	1.6	U	1.68 U	1.7 U
Vanadium			10.7 NJ*	11.9 NJ*	24.6 N	۶J*	19.4 NJ	* 12	NJ*	12.7 NJ*	12.4 NJ*
Zinc	109	10,000	55 J	171 J	39 J	J	56 J	15	J	16 J	43 J

Notes

Highlighted cells exceed corresponding Soil Cleanup Objective (SCO)

NS - Not sampled

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 $^{\ast}$  For dual column analysis, the lowest quantitated concentration is being reporte

Boring ID	Part 375	Part 375	K-00-SB-1	K-00-SB-2	K-00-SB-3	K-00-SB-3	K-00-SB-4	K-00-SB-5	K-00-SB-6
Sample Depth (feet) Sampling Date Matrix Units	Unrestricted Use Soil Cleanup Objective ug/kg	Restricted Residential Use Soil Cleanup Objective ug/kg	3-4 7/20/2011 SOIL ug/kg	0-1 7/20/2011 SOIL ug/kg	0-1 7/20/2011 SOIL ug/kg	3-4 7/20/2011 SOIL ug/kg	0-1 7/20/2011 SOIL ug/kg	4-5 7/20/2011 SOIL ug/kg	4-8 7/20/2011 SOIL ug/kg
VOCs									
Acetone	50	100,000	41 U	28 U	27 U	36 U	26 U	28 U	31 U
Carbon Disulfide			8.3 U	5.6 U	5.4 U	7.3 U	5.2 U	5.6 U	14
Chlorobenzene	1,100	100,000	8.3 U	5.6 U	5.4 U	7.3 U	5.2 U	5.6 U	6.2 U
Cyclohexane			8.3 U	5.6 U	5.4 U	7.3 U	5.2 U	5.6 U	6.2 U
Ethylbenzene	1,000	41,000	8.3 U	5.6 U	5.4 U	7.3 U	5.2 U	5.6 U	6.2 U
Isopropylbenzene			8.3 UJ	5.6 U	5.4 U	7.3 U	5.2 UJ	5.6 U	6.2 UJ
Methylcyclohexane			8 U	6 U	5 U	7 U	5 U	6 U	6 U
Methylene Chloride	50	100,000	24	18 BU	5.4 U	13	8.8	9.3	17
Toluene	700	100,000	8.3 U	5.6 U	5.4 U	7.3 U	5.2 U	5.6 U	6.2 U
Total TICs									
SVOCs									
Acenaphthene	20,000	100,000	550 U	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Acenaphthylene	100,000	100,000	110 J	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Anthracene	100,000	100,000	95 J	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Benzo(a)anthracene	1,000	1,000	390 J	370 U	89 J	83 J	6,900 U	1,900 U	410 U
Benzo(a)pyrene	1,000	1,000	500 J	370 U	78 J	83 J	6,900 U	1,900 U	410 U
Benzo(b)fluoranthene	1,000	1,000	490 J	370 U	110 J	94 J	6,900 U	1,900 U	410 U
Benzo(g,h,i)perylene	100,000	100,000	350 J	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Benzo(k)fluoranthene	800	3,900	200 J	370 U	350 U	480 U	6,900 U	1,900 U	410 U
bis(2-Ethylhexyl)phthalate			550 U	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Carbazole			550 U	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Chrysene	1,000	3,900	450 J	370 U	91 J	90 J	6,900 U	1,900 U	410 U
Dibenzo(a,h)anthracene	330	330	550 U	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Dibenzofuran			550 U	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Di-n-butylphthalate			550 U	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Fluoranthene	100,000	100,000	550	370 U	180 J	160 J	6,900 U	1,900 U	54 J
Fluorene	30,000	100,000	550 U	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Indeno(1,2,3-cd)pyrene	500	500	260 J	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Naphthalene	12,000	100,000	460 J	370 U	350 U	480 U	6,900 U	1,900 U	410 U
Phenanthrene	100,000	100,000	270 J	370 U	110 J	110 J	6,900 U	1,900 U	410 U
Pyrene	100,000	100,000	560	370 U	150 J	140 J	6,900 U	1,900 U	410 U

Notes

Higlighted cells correspond to highest Soil Cleanup Objective exceeded.

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

N - The analysis indicates the presence of an analyte that has been "tentatively identified".

D - Concentration obtained from a dilution.

B - The compound was detected in the associated trip blank.

Boring ID	Part 375	Part 375	K-00-SB-7	K-00-SB-8	K-0-SB-9	K-00-SB-10	K-00-SB-11	K-00-SB-12	K-00-SB-13
Sample Depth (feet) Sampling Date Matrix Units	Unrestricted Use Soil Cleanup Objective ug/kg	Restricted Residential Use Soil Cleanup Objective ug/kg	3-4 7/20/2011 SOIL ug/kg	0.5-2.5 7/20/2011 SOIL ug/kg	2-3 7/20/2011 SOIL ug/kg	1-3 7/20/2011 SOIL ug/kg	2-4 7/20/2011 SOIL ug/kg	3-4 7/20/2011 SOIL ug/kg	3-5 7/20/2011 SOIL ug/kg
VOCs									
Acetone	50	100,000	29 U	28 U	30 U	29 U	33 U	35 U	31 U
Carbon Disulfide			2.9 J	5.6 U	6.1 U	5.9 U	6.6 U	6.9 U	6.1 U
Chlorobenzene	1,100	100,000	5.8 UJ	5.6 UJ	6.1 U	5.9 U	6.6 U	6.9 UJ	6.1 U
Cyclohexane			5.8 U	5.6 U	6.1 U	5.9 U	6.6 U	48 J	6.1 U
Ethylbenzene	1,000	41,000	5.8 UJ	5.6 UJ	6.1 U	5.9 U	6.6 U	450 J	6.1 U
Isopropylbenzene			5.8 R	5.6 R	6.1 U	5.9 U	6.6 U	2700 DNJ	6.1 U
Methylcyclohexane			6 U	6 U	6 U	6 U	7 U	1,600 DJ	6 U
Methylene Chloride	50	100,000	19	14	20 BU	6.8	27 BU	17 BU	7.9
Toluene	700	100,000	5.8 U	5.6 U	6.1 U	5.9 U	6.6 U	6.9 U	6.1 U
Total TICs									
SVOCs									
Acenaphthene	20,000	100,000	380 U	580 J	400 U	390 U	440 U	450 U	410 U
Acenaphthylene	100,000	100,000	380 U	1,800 U	400 U	65 J	440 U	450 U	410 U
Anthracene	100,000	100,000	380 U	1,600 J	56 J	60 J	440 U	450 U	410 U
Benzo(a)anthracene	1,000	1,000	380 U	4,200	110 J	260 J	110 J	450 U	130 J
Benzo(a)pyrene	1,000	1,000	380 U	3,800	96 J	310 J	100 J	450 U	220 J
Benzo(b)fluoranthene	1,000	1,000	380 U	4,600	130 J	380 J	110 J	450 U	230 J
Benzo(g,h,i)perylene	100,000	100,000	380 U	2,100	53 J	180 J	440 U	450 U	150 J
Benzo(k)fluoranthene	800	3,900	380 U	1,800 J	400 U	110 J	440 U	450 U	66 J
bis(2-Ethylhexyl)phthalate			380 U	1,800 U	400 U	390 U	440 U	450 U	410 U
Carbazole			380 U	700 J	400 U	390 U	440 U	450 U	410 U
Chrysene	1,000	3,900	380 U	4,000	99 J	270 J	100 J	450 U	130 J
Dibenzo(a,h)anthracene	330	330	380 U	540 J	400 U	390 U	440 U	450 U	410 U
Dibenzofuran			380 U	370 J	400 U	390 U	440 U	450 U	410 U
Di-n-butylphthalate			380 U	1,800 U	400 U	390 U	440 U	450 U	410 U
Fluoranthene	100,000	100,000	380 U	7,400	200 J	400	250 J	450 U	220 J
Fluorene	30,000	100,000	380 U	730 J	400 U	390 U	440 U	450 U	410 U
Indeno(1,2,3-cd)pyrene	500	500	380 U	1,800 J	400 U	150 J	440 U	450 U	110 J
Naphthalene	12,000	100,000	380 U	440 J	300 J	76 J	440 U	250 J	410 U
Phenanthrene	100,000	100,000	380 U	6,000	190 J	180 J	170 J	450 U	74 J
Pyrene	100,000	100,000	380 U	6,700	170 J	370 J	200 J	450 U	180 J

Notes

Higlighted cells correspond to highest Soil Cleanup Objective exceeded.

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J - The concentration given is an approximate value.

N - The analysis indicates the presence of an analyte that has been "tentatively identified".

D - Concentration obtained from a dilution.

B - The compound was detected in the associated trip blank.

Boring ID	Part 375	Part 375	K-00-SB-14	K-00	-SB-15	K-00-SB-16	K-00-SB-17	K-00-SB-18	K-00-SB-19
Sample Depth (feet) Sampling Date Matrix Units	Unrestricted Use Soil Cleanup Objective ug/kg	Restricted Residential Use Soil Cleanup Objective ug/kg	1-2 7/20/2011 SOIL ug/kg	5-7 7/20/2011 SOIL ug/kg	K-00-SB-X 7/20/2011 SOIL ug/kg	0-1 7/20/2011 SOIL ug/kg	0-2 7/20/2011 SOIL ug/kg	0-2 7/20/2011 SOIL ug/kg	2-3 7/21/2011 SOIL ug/kg
VOCs									
Acetone	50	100,000	120	35 U	35 U	26 U	26 U	31 U	70
Carbon Disulfide			4.6 J	7 U	7 U	5.2 U	5.2 U	6.2 U	6.5 U
Chlorobenzene	1,100	100,000	6.7 U	7 U	7 U	5.2 U	5.2 U	6.2 U	56
Cyclohexane			6.7 U	7 U	7 U	5.2 U	5.2 U	6.2 U	6.5 U
Ethylbenzene	1,000	41,000	6.7 U	7 U	7 U	5.2 U	5.2 U	6.2 U	6.5 U
Isopropylbenzene			2.5 J	7 U	7 U	5.2 U	5.2 U	6.2 U	6.5 U
Methylcyclohexane			7 U	7 U	7 U	5 U	5 U	6 U	7 U
Methylene Chloride	50	100,000	23 BU	7 U	7 U	5.2 U	19 BU	6.2 U	8.1 J
Toluene	700	100,000	1.3 J	7 U	7 U	5.2 U	5.2 U	6.2 U	2.8 J
Total TICs									460
SVOCs									
Acenaphthene	20,000	100,000	450 U	460 U	460 U	340 U	350 U	410 U	980
Acenaphthylene	100,000	100,000	450 U	460 U	460 U	340 U	350 U	410 U	190 J
Anthracene	100,000	100,000	450 U	460 U	460 U	340 U	350 U	410 U	2,600
Benzo(a)anthracene	1,000	1,000	830	460 U	460 U	340 U	350 U	410 U	5,400
Benzo(a)pyrene	1,000	1,000	1,500	460 U	460 U	340 U	350 U	410 U	3,900
Benzo(b)fluoranthene	1,000	1,000	1,700	460 U	460 U	340 U	350 U	410 U	4,800
Benzo(g,h,i)perylene	100,000	100,000	880	460 U	110 J	340 U	350 U	410 U	1,000
Benzo(k)fluoranthene	800	3,900	600	460 U	460 U	340 U	350 U	410 U	2,200
bis(2-Ethylhexyl)phthalate			450 U	460 U	460 U	340 U	350 U	410 U	870 U
Carbazole			450 U	460 U	460 U	340 U	350 U	410 U	1,000
Chrysene	1,000	3,900	940	460 U	460 U	340 U	350 U	410 U	5,000
Dibenzo(a,h)anthracene	330	330	200 J	460 U	460 U	340 U	350 U	410 U	360 J
Dibenzofuran			450 U	460 U	460 U	340 U	350 U	410 U	540 J
Di-n-butylphthalate			450 U	460 U	460 U	340 U	350 U	410 U	130 J
Fluoranthene	100,000	100,000	800	460 U	460 U	340 U	350 U	410 U	8,500 D
Fluorene	30,000	100,000	450 U	460 U	460 U	340 U	350 U	410 U	1,200
Indeno(1,2,3-cd)pyrene	500	500	710	460 U	460 U	340 U	350 U	410 U	990
Naphthalene	12,000	100,000	450 U	460 U	460 U	340 U	350 U	410 U	700 J
Phenanthrene	100,000	100,000	150 J	460 U	460 U	340 U	350 U	410 U	8,500 D
Pyrene	100,000	100,000	830	460 U	460 U	340 U	350 U	410 U	8,300 D

Notes

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D - Concentration obtained from a dilution.

B - The compound was detected in the associated trip blank.

Boring ID	Part 375	Part 375	K-00-SB-20	K-00-SB-21	K-00-SB-22	2 K-00-SB-23			K-00-SB-24
Sample Depth (feet) Sampling Date Matrix Units	Unrestricted Use Soil Cleanup Objective ug/kg	Restricted Residential Use Soil Cleanup Objective ug/kg	1-2 7/21/2011 SOIL ug/kg	3-3.5 7/21/2011 SOIL ug/kg	0-1 7/21/2011 SOIL ug/kg	4-5 7/21/2011 SOIL ug/kg	11-12 7/21/2011 SOIL ug/kg	K-00-X-2 7/21/2011 SOIL ug/kg	2-3 7/21/2011 SOIL ug/kg
VOCs									
Acetone	50	100,000	26 U	45	27 U	26 U	28 UJ	29 UJ	29 U
Carbon Disulfide			5.2 U	5.7 U	5.5 U	5.1 U	5.7 UJ	5.7 UJ	5.7 U
Chlorobenzene	1,100	100,000	5.2 U	5.7 U	5.5 U	5.1 U	5.7 UJ	5.7 UJ	5.7 U
Cyclohexane			5.2 U	5.7 U	5.5 U	5.1 U	5.7 U	5.7 UJ	5.7 U
Ethylbenzene	1,000	41,000	5.2 U	5.7 U	5.5 U	5.1 U	5.7 UJ	5.7 UJ	5.7 U
Isopropylbenzene			5.2 U	5.7 U	5.5 U	5.1 U	5.7 UJ	5.7 UJ	5.7 UJ
Methylcyclohexane			5 U	6 U	6 U	5 U	6 U	6 UJ	6 U
Methylene Chloride	50	100,000	3.9 J	2.7 J	5.5 U	3.8 J	16 J	80 J	10 J
Toluene	700	100,000	1.4 J	5.7 U	5.5 U	5.1 U	1.9 J	2 J	5.7 U
Total TICs				89		10			
SVOCs									
Acenaphthene	20,000	100,000	350 U	130 J	360 U	1,500 J	370 U	380 U	380 U
Acenaphthylene	100,000	100,000	350 U	750 U	360 U	1,700 U	370 U	380 U	380 U
Anthracene	100,000	100,000	350 U	340 J	97 J	2,400	370 U	380 U	380 U
Benzo(a)anthracene	1,000	1,000	70 J	670 J	290 J	7,100	370 U	380 U	380 U
Benzo(a)pyrene	1,000	1,000	62 J	540 J	260 J	5,700	370 U	380 U	80 J
Benzo(b)fluoranthene	1,000	1,000	85 J	710 J	340 J	6,000	370 U	380 U	57 J
Benzo(g,h,i)perylene	100,000	100,000	350 U	280 J	120 J	1,700	370 U	380 U	200 J
Benzo(k)fluoranthene	800	3,900	350 U	310 J	130 J	2,200	370 U	380 U	380 U
bis(2-Ethylhexyl)phthalate			350 U	750 U	360 U	1,700 U	370 U	380 U	550
Carbazole			350 U	160 J	47 J	1,500 J	370 U	380 U	380 U
Chrysene	1,000	3,900	67 J	730 J	290 J	7,900	370 U	380 U	380 U
Dibenzo(a,h)anthracene	330	330	350 U	750 U	360 U	530 J	370 U	380 U	380 U
Dibenzofuran			350 U	750 U	360 U	1,200 J	370 U	380 U	380 U
Di-n-butylphthalate			350 U	750 U	360 U	1,700 U	370 U	380 U	380 U
Fluoranthene	100,000	100,000	120 J	1,400	560	10,000	370 U	380 U	63 J
Fluorene	30,000	100,000	350 U	150 J	360 U	1,900	370 U	380 U	380 U
Indeno(1,2,3-cd)pyrene	500	500	350 U	190 J	85 J	1,400 J	370 U	380 U	110 J
Naphthalene	12,000	100,000	350 U	750 U	360 U	420 J	370 U	380 U	380 U
Phenanthrene	100,000	100,000	64 J	1,500	410	11,000	370 U	380 U	380 U
Pyrene	100,000	100,000	110 J	1,300	520	9,700	370 U	380 U	65 J

Notes

Higlighted cells correspond to highest Soil Cleanup Objective exceeded.

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J - The concentration given is an approximate value.

N - The analysis indicates the presence of an analyte that has been "tentatively identified".

D - Concentration obtained from a dilution.

B - The compound was detected in the associated trip blank.

## APPENDIX A

# SURVEY MAP, METES AND BOUNDS

#### Schedule "B" Title Exceptions

The encumbrances listed hereon are based on a title report prepared by United General Title Insurance Company, Commitment Number CU-3748, dated May 1, 2007.

Items not listed below are standard title exceptions and/or are not matters that pertain to this survey.

Subject to a 30-foot sewer right-of-way and easement granted by The Johnstown Cemetery Association to the City of Johnstown by instrument dated June 5, 1903 and recorded in the Fulton County Clerk's Office on June 5, 1903 in Liber 111 of Deeds at Page 543. Does not encumber the surveyed premises.

Subject to sewer and water rights reserved by the City of Johnstown by instrument dated March 12, 1996 and recorded in the Fulton County Clerk's Office on March 12, 1926 in Liber 182 of Deeds at Page 184. <u>Encumbers the property and is shown hereon.</u>

Subject to a 20-foot sewer right-of-way and easement granted by Peter Spore to the City of Johnstown by instrument dated June 12, 1963 and recorded in the Fulton County Clerk's Office on October 4, 1963 in Liber 476 of Deeds at Page 217. <u>The description is ambiguous and this easement is presumed to encumber the surveyed premises.</u>

Subject to a 20-foot sewer right-of-way and easement granted by The Johnstown Cemetery Association to the City of Johnstown by instrument dated June 13, 1963 and recorded in the Fulton County Clerk's Office on March 16, 1964 in Liber 476 of Deeds at Page 220. The description is ambiguous and this easement is presumed to encumber the surveyed premises.

Subject to a 20-foot sewer right-of-way and easement granted by Karg Brothers, Inc. to the City of Johnstown by instrument dated February 26, 1964 and recorded in the Fulton County Clerk's Office on March 2, 1964 in Liber 477 of Deeds at Page 935. The description is ambiguous and this easement is presumed to encumber the surveyed premises.

Subject to an easement modification agreement between the City of Johnstown to Karg Brothers, Inc. and Karg Brothers Realty Corp., and an easement granted by Karg Brothers, Inc. and Karg Brothers Realty Corp. to the City of Johnstown by instrument dated June 19, 1967 and recorded in the Fulton County Clerk's Office on June 22, 1967 in Liber 493 of Deeds at Page 429. The easement encumbers the surveyed premises, but is not shown hereon (unplottable).

The easement and right of way encumbers the surveyed premises. However, is no longer necessary as the City of Johnstown owns the parcel the easement and right of way was intended to benefit.

Subject to an easement modification agreement between the City of Johnstown to Karg Brothers, Inc. and Karg Brothers Realty Corp. by instrument dated July 29, 1977 and recorded in the Fulton County Clerk's Office on August 8, 1977 in Liber 547 of Deeds at Page 598. The easement encumbers the surveyed premises, but is not shown hereon (unplottable).

The easement and right of way encumbers the surveyed premises. However, is no longer necessary as the City of Johnstown owns the parcel the easement and right of way was intended to benefit.

Subject to an easement modification agreement between the City of Johnstown to Karg Brothers, Inc. and Karg Brothers Realty Corp. by instrument dated December 17, 1991 and recorded in the Fulton County Clerk's Office on January 8, 1992 in Liber 697 of Deeds at Page 201. The easement encumbers the surveyed premises, but is not shown hereon (unplottable).

The easement and right of way encumbers the surveyed premises. However, is no longer necessary as the City of Johnstown owns the parcel the easement and right of way was intended to benefit.

15 Subject to an access agreement and rights granted by John Stewart to the Johnstown, Gloversville and Fonda Rail Company by instrument dated May 16, 1873 and recorded in the Fulton County Clerk's Office on September 30, 1874 in Liber 45 of Deeds at Page 546. <u>Presumably does not encumber the surveyed premises and is not plottable. (Much of the document is illegible.)</u>

Subject to a 30-foot sewer right-of-way and easement granted by The Johnstown Cemetery Association to the City of Johnstown by instrument dated June 5, 1903 and recorded in the Fulton County Clerk's Office on June 5, 1903 in Liber 111 of Deeds at Page 543. Does not encumber the surveyed premises.

Subject to sewer and water rights reserved by the City of Johnstown by instrument dated March 12, 1996 and recorded in the Fulton County Clerk's Office on March 12, 1926 in Liber 182 of Deeds at Page 184. <u>Encumbers the property and is shown hereon.</u>

Subject to a sewer right-of-way and easement granted by The Johnstown Cemetery Association to the City of Johnstown referenced in an instrument dated October 14, 1950 and recorded in the Fulton County Clerk's office on October 17, 1950 in Liber 349 of Deeds at Page 295. Does not encumber the surveyed premises.

Subject to a Right of Way referenced in an instrument dated October 14, 1950 and recorded in the Fulton County Clerk's office on October 17, 1950 in Liber 349 of Deeds at Page 295. Does not encumber the surveyed premises.

Subject to a 20-foot sewer right-of-way and easement granted by Peter Spore to the Subject to a 20-foot sewer right-of-way and easement granted by Peter Spore to the City of Johnstown by instrument dated June 12, 1963 and recorded in the Fulton County Clerk's Office on October 4, 1963 in Liber 476 of Deeds at Page 217. The description is ambiguous and this easement is presumed to encumber the surveyed premises.

Subject to a 20-foot sewer right-of-way and easement granted by The Johnstown Cemetery Association to the City of Johnstown by instrument dated June 13, 1963 and recorded in the Fulton County Clerk's Office on March 16, 1964 in Liber 476 of Deeds at Page 220. <u>The description is ambiguous and this easement is presumed to encumber the surveyed premises.</u>

Subject to a 20-foot sewer right-of-way and easement granted by Karg Brothers, Inc. to the City of Johnstown by instrument dated February 26, 1964 and recorded in the Fulton County Clerk's Office on March 2, 1964 in Liber 477 of Deeds at Page 935. The description is ambiguous and this easement is presumed to encumber the surveyed premises.

Subject to an easement modification agreement between the City of Johnstown to Karg Brothers, Inc. and Karg Brothers Realty Corp., and an easement granted by Karg Brothers, Inc. and Karg Brothers Realty Corp. to the City of Johnstown by instrument dated June 19, 1967 and recorded in the Fulton County Clerk's Office on June 22, 1967 in Liber 493 of Deeds at Page 429. The easement encumbers the surveyed premises, but is not shown hereon (unplottable).

The easement and right of way encumbers the surveyed premises. However, is no longer necessary as the City of Johnstown owns the parcel the easement and right of way was intended to benefit.

Boundary line agreement between Karg Bros. Realty Corporation and Gillmore Oil Company, Inc. by instrument dated August 28, 1963 and recorded in the Fulton County Clerk's Office on August 28, 1963 in Liber 475 of Deeds at Page 854. <u>This boundary line agreement establishes the property line that is 102.50 feet in length.</u>

Subject to sanitary and storm sewer maintenance or reconstruction rights, use of a roadway, and environmental demolition and testing rights reserved by the City of Johnstown by instrument dated December 31, 1999 and recorded in the Fulton County Clerk's Office on May 26, 2000 in Liber 860 of Deeds at Page 22. <u>The description is blanket in nature and encumbers the surveyed premises, but is not shown hereon.</u>

(42) Subject to sanitary and storm sewer maintenance or reconstruction rights, use of a roadway, and environmental demolition and testing rights reserved by the City of Johnstown by instrument dated December 31, 1999 and recorded in the Fulton County Clerk's Office on May 26, 2000 in Liber 860 of Deeds at Page 22. <u>The description is blanket in nature and encumbers the surveyed premises, but is not shown hereon.</u>

Surveyor notes <u>made on "Map of a Portion of the Lands of City of Johnstown,"</u> prepared by J. Christopher Foss, dated July 14, 1999 and Revised on May 5, 2000. Encumbers the property but survey map was not recovered by the City of Johnstown.

Boundary line agreement between Karg Bros. Realty Corporation and Gillmore Oil Company, Inc. by instrument dated August 28, 1963 and recorded in the Fulton County Clerk's Office on August 28, 1963 in Liber 475 of Deeds at Page 854. <u>This</u> boundary line agreement establishes the property line that is 102.50 feet in length.

#### Unauthorized alteration or addition to a survey map bearing a licensed land surveyors seal is a violation of Section 7209, Subdivision 2 of the New York State Education Law.

Only copies from the original of this survey marked with an original of the

surveyor's inked seal or his embossed seal shall be considered to be valid and true copies.

#### Environmental Easement to be Granted by the City of Johnstown to

The People of the State of New York, acting through their Commissioner of the Department of Environmental Conservation

<u>Contains:</u> 228,894 square feet or 5.255 acres

All that tract or parcel of land situate in the City of Johnstown, County of Fulton, State of New York, and being more precisely described as follows:

**Beginning** at a 5/8-inch rebar with a 1 1/4-inch diameter red plastic cap marked "THEW ASSOCIATES - UTICA NY" (herein after referred to as a 5/8-inch rebar) set on the southerly bounds of Crescendoe Street (40-foot width), said rebar being at the northwesterly corner of a parcel of land conveyed by the City of Johnstown to the Crossroads Incubator Corp. by deed dated December 31, 1999 and recorded in the Fulton County Clerk's Office on May 26, 2000 in Liber 860 of Deeds at Page 22, said rebar having New York State plane coordinates (NAD83/2011 - East Zone) of 1,522,499.33 feet North and 527,137.76 feet East;

- thence along the westerly line of Crossroads Incubator Corp., the following two courses and distances:1. South 09 degrees 30 minutes 39 seconds East, parallel to and 100 feet distant
- westerly measured at right angles from the westerly building face of Crossroads Incubator Corp., a distance of 206.66 to a set 5/8-inch rebar;
- 2. South 52 degrees 00 minutes 37 seconds East a distance of 83.72 feet to a MAG Nail set on the northerly line of a parcel of land conveyed by The People's Bank of Johnstown, N.Y. to The Johnstown Cemetery Association by deed dated August 24, 1942, and recorded in the Fulton County Clerk's Office on March 31, 1943 in Liber 244 of Deeds at Page 512, said MAG Nail being on the reputed top of bank of Cayadutta Creek;

thence along the northerly line of The Johnstown Cemetery Association and along the reputed top of bank of Cayadutta Creek, the following 14 courses and distances:
1. South 50 degrees 06 minutes 33 seconds West a distance of 37.62 feet to a point;

- South 39 degrees 06 minutes 43 seconds West a distance of 82.46 feet to a point;
- 3. South 34 degrees 21 minutes 21 seconds West a distance of 41.61 feet to a point;
- 4. South 38 degrees 57 minutes 59 seconds West a distance of 61.60 feet to a point;
- 5. South 50 degrees 43 minutes 03 seconds West a distance of 40.94 feet to a point;6. South 27 degrees 06 minutes 00 seconds West a distance of 66.99 feet to a point;
- 7. South 51 degrees 41 minutes 01 seconds West a distance of 46.51 feet to a point;
- 8. South 61 degrees 18 minutes 59 seconds West a distance of 97.44 feet to a point;

9. South 71 degrees 18 minutes 10 seconds West a distance of 119.89 feet to a point;10. South 59 degrees 43 minutes 59 seconds West a distance of 60.96 feet to a

- 11. South 58 degrees 54 minutes 15 seconds West a distance of 90.91 feet to a
- 12. South 56 degrees 56 minutes 56 seconds West a distance of 41.06 feet to a
- 13. South 49 degrees 19 minutes 24 seconds West a distance of 25.14 feet to a noint:

14. South 43 degrees 14 minutes 29 seconds west a distance of 40.65 feet to a point;

thence South 88 degrees 41 minutes 18 seconds West a distance of 42.38 feet to a 5/8-inch rebar set on the easterly bounds of North Perry Street (66-foot width), said course passing over a 1/2-inch iron pipe (extends 0.8 feet above grade) found at a distance of 2.99 feet;

thence North 00 degrees 59 minutes 55 seconds West, along the easterly bounds of North Perry Street, a distance of 100.00 feet to a point at the southwesterly corner of a parcel of land conveyed by June A. Pasquarella to Vincent D. Johansen, Sr. by deed dated September 24, 1984 and recorded in the Fulton County Clerk's Office on October 1, 1984 in Liber 582 of Deeds at Page 1005, said point being North 68 degrees 12 minutes 59 seconds East a distance of 0.77 feet from a found 5/8-inch rebar (0.1 feet below grade);

thence North 68 degrees 12 minutes 59 seconds East, in part along the southerly line of Vincent D. Johansen, Sr. and in part along the southerly line of a parcel of land conveyed by Michael C. Gifford to the City of Johnstown by deed dated September 29, 1998 and recorded in the Fulton County Clerk's Office on October 6, 1998 in Liber 815 of Deeds at Page 122, a distance of 206.34 feet to a set 5/8-inch rebar;

thence North 15 degrees 53 minutes 32 seconds West, along the easterly line of the City of Johnstown, a distance of 108.24 feet to a 5/8-inch rebar set of the southerly bounds of East Fulton Street (40-foot width);

- thence along the southerly, easterly, and northerly bounds of East Fulton Street, the following four courses and distances:
- 1. North 74 degrees 06 minutes 28 seconds East a distance of 91.22 feet to a set 5/8-inch rebar;
- 2. North 15 degrees 53 minutes 32 seconds West a distance of 40.00 feet to a set 5/8-inch rebar;
- 3. South 74 degrees 06 minutes 28 seconds West a distance of 142.21 feet to a set 5/8-inch rebar;
- 4. North 87 degrees 57 minutes 15 seconds West a distance of 18.31 feet to a 3/4-inch rebar (0.5 feet below grade) found on the easterly line of a parcel of land conveyed by Gillmore Oil Company, Inc. to J.H. Buhrmaster Co., Inc. by deed dated December 28, 1992 and recorded in the Fulton County Clerk's Office on December 29, 1992 in Liber 714 of Deeds at Page 193;

thence North 04 degrees 39 minutes 12 seconds East, along the easterly line of J.H. Buhrmaster Co., Inc., a distance of 102.50 to a set 5/8-inch rebar;

thence North 68 degrees 07 minutes 34 seconds East, in part along the easterly line of J.H. Buhrmaster Co., Inc., in part along the southerly line of a parcel of land conveyed by Dewey E. Frasier and June A. Frasier to Sandra M. Scott and Charles N. Lamphear by deed dated November 27, 1989 and recorded in the Fulton County Clerk's Office on February 19, 1992 in Liber 699 of Deeds at Page 103, and in part along the southerly line of a parcel of land conveyed by Joan Coon to James S. Lamphear by deed dated February 9, 2005 and recorded in the Fulton County Clerk's Office on February 9, 2005 in Liber 995 of Deeds at Page 333, a distance of 222.85 feet to a 5/8-inch rebar set at the southerly corner of a parcel of land conveyed by Anthony J. and Anna M. Valovic to Anthony J. III and Barbara H. Valovic by deed dated November 14, 1986 and recorded in the Fulton County Clerk's Office on November 20, 1986 in Liber 596 of Deeds at Page 7;

thence North 03 degrees 36 minutes 14 seconds East, along the easterly line of Anthony J. III and Barbara H. Valovic, a distance of 120.82 feet to a 5/8-inch rebar set at the southeasterly bounds of East Canal Street (20-foot width);

thence along the easterly and northerly bounds of East Canal Street, the following two courses and distances:

- 1. North 21 degrees 45 minutes 06 seconds West a distance of 20.00 feet to a set MAG Nail;
- 2. South 68 degrees 14 minutes 54 seconds West a distance of 67.91 feet to a MAG Nail set on the easterly line of a parcel of land conveyed by Gillmore Oil Company, Inc. to Jeffrey F. Lehner by deed dated December 21, 1992 and recorded in the Fulton County Clerk's Office on December 21, 1992 in Liber 714 of Deeds at Page 88.
- thence along the easterly line of Jeffrey F. Lehner, the following two courses and distances:
- 1. North 80 degrees 48 minutes 26 seconds West a distance of 24.00 feet to a found 3/4-inch rebar (flush with grade);
- 2. North 59 degrees 01 minutes 22 seconds East a distance of 69.86 feet to a MAG Nail set at the southeasterly corner of a parcel of land conveyed by Nicholas C. Miller to Jan Keichline and Gail Miller by deed dated December 7, 2007 and recorded in the Fulton County Clerk's Office on December 12, 2007 in Liber 1092 of Deeds at Page 226;

thence North 62 degrees 57 minutes 31 seconds East along the easterly line of Jan Keichline and Gail Miller, a distance of 122.99 feet to 3/8-inch rebar (Extends 1.0 feet above grade) found at the southeasterly corner of a parcel of land conveyed by Kenneth and Lena Taddune to Robert F. and Joan D. Frenyea by deed dated May 15, 1971 and recorded in the Fulton County Clerk's Office on May 24, 1971 in Liber 512 of Deeds at Page 862;

thence North 14 degrees 44 minutes 17 seconds East, along the easterly line of Robert F. and Joan D. Frenyea a distance of 123.67 feet to a point on the southerly bounds of Crescendoe Street, said point being South 14 degrees 44 minutes 17 seconds West a distance of 1.27 feet from a found 1-inch iron pipe (flush with grade);

thence South 75 degrees 21 minutes 18 seconds East a distance of 189.72 feet to the **Point of Beginning.** 

To contain 228,894 square feet or 5.255 acres of land, more or less.

The above-described parcel of land is intended to be the same premises conveyed by Michael C. Gifford, as City Chamberlain for the City of Johnstown to the City of Johnstown by deed dated September 29, 1998 and recorded in the Fulton County Clerk's Office on October 6, 1998 in Liber 815 of Deeds at Page 122.

The above-mentioned coordinates, bearings, and distances are referenced to the North American Datum of 1983 - 2007 adjustment (NAD83/2007), projected on the New York State Plane Coordinate System (East Zone).

A map of the above-described parcel of land, dated June 25, 2015, was prepared by Thew Associates PE-LS, PLLC, and is distinguished as Drawing No. UK475-12-13.


## APPENDIX B

DIGITAL COPY OF FER (CD)

### APPENDIX C

# NYSDEC APPROVALS OF SUBSTANTIVE TECHNICAL REQUIREMENTS

### New York State Department of Environmental Conservation

Office of Environmental Quality, Region 5 Division of Environmental Remediation 232 Golf Course Road, Warrensburg, New York 12885 Phone: (518) 623-1200 · FAX: (518) 623-1311 Website: www.dec.ny.gov



Sent via e-mail and mail

October 7, 2013

Ms. Chandra Cotter, P.E. City of Johnstown 33 – 41 East Main St, P.O. Box 160 Johnstown, NY 12095

#### Re: Interim Remedial Measure Work Plan Former Karg Brothers, Off-Site Properties, ERP Site No. E518022 City of Johnstown, Fulton Co.

Dear Ms. Cotter,

The New York State Departments of Environmental Conservation and Health have reviewed Arcadis' September 2013 Interim Remedial Measure Work Plan for the above referenced site, and find it acceptable. Please submit a copy of the approved document to the document repositories.

If you have any questions please feel free to call me at (518) 623-1272.

Sincerely,

Alicia Purzycki, P.E. Environmental Engineer 2

ec: Russell Huyck, NYSDEC Region 5 Scarlett Mclaughlin, NYSDOH Stefan Bagnato, Arcadis U.S., Inc New York State Department of Environmental Conservation Office of Environmental Quality, Region 5

Division of Environmental Remediation 232 Golf Course Road – P.O. Box 220, Warrensburg, New York 12885 Phone: (518) 623-1238 • FAX: (518) 623-4193 Website: www.dec.ny.gov



February 3, 2009

Mr. Bruce Nelson Malcolm Pirnie, Inc. 43 British American Blvd. Latham, NY 12110

### Re: Draft Remedial Investigation/Alternatives Analysis Work Plan Former Karg Brothers Tannery, ERP Site No. E518022 City of Johnstown, Fulton County

Dear Mr. Nelson:

The New York State Departments of Environmental Conservation (NYSDEC) and Health (NYSDOH) have reviewed the revised Remedial Investigation/Alternatives Analysis Work Plan dated January 2009 for the above referenced environmental restoration program (ERP) site and find it acceptable. Please submit a copy of the approved work plan to the document repositories, copying this office on the transmission.

If you have any questions, please feel free to contact me at (518) 623-1238.

Sincerely,

Olecia I

Alicia Thorne, P.E. Environmental Engineer 2

AT:lc

ec: Deanna Ripstein - NYSDOH Chad Kortz, P.E. - City of Johnstown

## APPENDIX D

# REMEDIAL ACTION FIELD NOTES

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(123/14 IRM SIR WOUK (123/14 IRM SIR WOUK 00-site City crews not yet arrived chrwis will be pairived chrwis will be pairived site. area	10:00 City arrives. Removes circler blocks off area to be paved more out areas to be powed	Note: Hydroseding gras in norm orea of site isgrowing in well. In Canter to southrein end of site the grass is taking allitle longer	10:50 cladr/chainson off treesbured outgrain over tence to clear out area for paver to mave this machine in through 11:00 start laying about asphalt	13:50 Hand poule last part of area where tourians will go 14:30 Paving complete City + ArcadisCA. (Tacdrich) offsikelsyly

on upper side and base of catch basin Went over drains - will shoot elevation also raid work will begin early Ryan asked to be youanded with PDFS Show (I the chain pipe outful and. purson, 2 people to dumarcak the stream (H35 + ease of talking the - Ryan says most of work will be 1 9:15 them alloc. oft isk net well. of site map. 9:20 KF 0ft site Veadings) area. ì daing across to other andle you boundary. Is one side sustante 8:05 Site walt begins. - Ryan says they will check w/ DPN will be on with early next week for shear demarcation 50 undoug-Have we made nighbors aware of to begin actual surreying (this or go into ruighbors proputer are they allowed to drive on Ryan Saudlon (Thew Assoc.) on austion - For Topo - Shoot Fince Was (motial num) What are the come marking? 3/12/14 hydreseeded avec? - yes Icr on sitebur surveying Tailage muting overcast, ~ 650F Por utilities Subacio. 8:00 2:50 8:00

## APPENDIX E

# PROJECT PHOTO LOG



Photo 1: Eastward view of silt fence installation – 10/21/13.



Photo 2: Eastward view of silt fence installation - 10/21/13.



AUGUST 2014



Photo 3: Southward view of silt fence – 10/21/13.



Photo 4: Westward view of silt fence - 10/21/13.



AUGUST 2014



Photo 5: Southwestward view of demarcation layer - 10/21/13.



Photo 6: Southward view of demarcation layer - 10/21/13.



AUGUST 2014



Photo 7: Northward view of demarcation layer - 10/21/13.



Photo 8: Eastward view of demarcation layer - 10/21/13.



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

AUGUST 2014



Photo 9: Eastward view of fill placement- 10/30/13.



Photo 10: Eastward view of fill placement- 10/30/13.



AUGUST 2014



Photo 11: Southward view of fill placement - 10/30/13.



Photo 12: Westward view of demarcation layer and grade stakes – 11/6/13.



AUGUST 2014



Photo 13: View of grade stake used to verify fill thickness – 11/6/13.



Photo 14: Westward view of fill placement - 11/6/13.



AUGUST 2014



Photo 15: Westward view of fill placement – 11/14/13.



Photo 16: Eastward view of fill placement and grading – 11/14/13.



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

AUGUST 2014



Photo 17: Southward view of fill placement and grading – 11/14/13.



Photo 18: Southward view of fill placement and grading – 1/22/14.



AUGUST 2014



Photo 19: Eastward view of fill placement and grading – 1/22/13.



Photo 20: Eastward view of fill placement and grading – 1/22/13.



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

AUGUST 2014



Photo 21: Northeastward view of fill placement - 1/30/14.



Photo 22: Eastward view of fill placement - 3/5/14.



AUGUST 2014



Photo 23: Northwestward view of fill placement – 3/5/14.



Photo 2: Northwestward view of fill placement - 3/5/14.



AUGUST 2014



Photo 25: Westward view of fill placement and grading – 3/18/14.



Photo 26: Northwestward view of fill placement - 3/18/14.



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

AUGUST 2014



Photo 27: Southward view of drainage pipe installed near end of East Fulton Street - 4/17/14.



Photo 28: Southward view of drainage pipe installed near end of East Fulton Street - 4/17/14.



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

SITE PHOTOGRAPHS

AUGUST 2014



Photo 29: Southward view of drainage pipe discharge – 4/17/14.



Photo 30: Southward view of fill placement - 4/17/14.



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

AUGUST 2014



Photo 31: Southeastward view of fill placement - 4/23/14.



Photo 32: Westward view of fill placement and grading – 4/23/14.



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

AUGUST 2014



Photo 33: Eastward view of fill placement - 4/23/14.



Photo 34: Southward view of fill placement - 4/23/14.



AUGUST 2014



Photo 35: Southward view of silt fence repair and replacement - 6/4/14.



Photo 36: Southward view of silt fence repair and replacement  $- \frac{6}{4}$ .



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

AUGUST 2014



Photo 37: Southward view of silt fence repair and replacement and drainage pipe - 6/4/14.



Photo 38: Southward view of hydroseeding - 6/9/14.



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

AUGUST 2014



Photo 39: Eastward view of hydroseeding - 6/9/14.



Photo 40: Westward view of hydroseeding - 6/10/14.



FORMER KARG BROTHERS TANNERY ERP JOHNSTOWN, NEW YORK INTERIM REMEDIAL MEASURES REPORT

AUGUST 2014



Photo 41: Southward view of hydroseeding - 6/10/14.



Photo 42: Westward view of site following hydroseeding - 6/10/14.



AUGUST 2014



Photo 43: Southwestward view of site following hydroseeding - 6/10/14.



Photo 44: Eastward view of site following hydroseeding – 6/10/14.



AUGUST 2014



Photo 45: Southward view of new catch basin installed immediately east of site - 6/18/14.



Photo 46: View of new catch basin installed immediately east of site - 6/18/14.



AUGUST 2014



Photo 47: Eastward view of paving along East Canal Street - 6/25/14.



Photo 48: Eastward view of paving along East Canal Street - 6/25/14.



AUGUST 2014

## APPENDIX F

# IMPORTED MATERIALS ANALYTICAL DOCUMENTATION



# **DATA PACKAGE**

METALS GC SEMI-VOLATILES SEMI-VOLATILE ORGANICS VOLATILE ORGANICS

**PROJECT NAME : KARG BROTHERS TANNERY, JOHNSTOWN** 

## ARCADIS INC.

855 Route 146, Suite 210

Clifton Park, NY - 12065

Phone No: 518-250-7300

- ORDER ID : E3191
- ATTENTION : Bruce Nelson







1) Sig	gnature Page	3				
2) Ca	se Narrative	4				
2.1) VOC-TCLVOA-10- Case Narrative						
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	2.3) Pesticide-TCL- Case Narrative	8				
	2.4) Metals-AES- Case Narrative	9				
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5) VO	OC-TCLVOA-10 Data	13				
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# **Cover Page**

- Order ID : E3191
- Project ID : Karg Brothers Tannery, Johnstown

**Client :** Arcadis Inc.

#### Lab Sample Number

E3191-01

FCLFKARG08-02-13

**Client Sample Number** 

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

Date: 8/16/2013

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

## **CASE NARRATIVE**

2.1

Arcadis Inc. Project Name: Karg Brothers Tannery, Johnstown Project # N/A Chemtech Project # E3191 Test Name: VOC-TCLVOA-10

## A. Number of Samples and Date of Receipt:

1 Solid sample was received on 08/03/2013.

## **B.** Parameters

According to the Chain of Custody document, the following analyses were requested: Mercury, Metals ICP-TAL, Pesticide-TCL, SVOC-TCL BNA -20 and VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

## **C. Analytical Techniques:**

The analysis performed on instrument MSVOA\_F were done using GC column RTX-VMS, which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by Supelco, VOCARB 3000, Tekmar 2000 Concentrator. The analysis of VOC-TCLVOA-10 was based on method 8260C.

## **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for CS-D-15MSD [1,2-Dichloroethane-d4 - 130%].

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD {E3133-26MSD} with File ID: VF038819.D recoveries met the acceptable requirements except for Bromochloromethane[131%], Bromomethane[160%],

Chloroethane[168%], Chloromethane[158%], Methyl Acetate[282%], Methyl tert-butyl Ether[135%] and Methylene Chloride[144%].

The RPD for {E3133-26MSD} with File ID: VF038819.D recoveries met criteria except for 1,4-Dioxane[36%], 2-Butanone[22%], 2-Hexanone[23%], 4-Methyl-2-

Pentanone[27%], Acetone[24%], Dibromochloromethane[22%] and Methyl Acetate[32%].

The Blank Spike for {VF0806SBS01} with File ID: VF038805.D met requirements for all samples except for Bromoform[51%].

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Tuning criteria met requirements.




#### **E. Additional Comments:**

#### **F. Manual Integration Comments:**

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature\_\_\_\_\_



#### **CASE NARRATIVE**

2.2

Arcadis Inc. Project Name: Karg Brothers Tannery, Johnstown Project # N/A Chemtech Project # E3191 Test Name: SVOC-TCL BNA -20

#### A. Number of Samples and Date of Receipt:

1 Solid sample was received on 08/03/2013.

#### **B.** Parameters

According to the Chain of Custody document, the following analyses were requested: Mercury, Metals ICP-TAL, Pesticide-TCL, SVOC-TCL BNA -20 and VOC-TCLVOA-10. This data package contains results for SVOC-TCL BNA -20.

#### **C. Analytical Techniques:**

The samples were analyzed on instrument BNA\_F using GC Column RTX-5 which is 20 meters, 0.18 mm ID, 0.36 um dfThe analysis of SVOC-TCL BNA -20 was based on method 8270D and extraction was done based on method 3541.

#### **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for PB71550BS [2-Fluorobiphenyl - 134%].

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD for {E3133-29MSD} with File ID: BF064657.D recoveries met criteria except for 2,4-Dinitrophenol[47%], 4,6-Dinitro-2-methylphenol[30%], Caprolactam[25%] and Pentachlorophenol[28%].

The Blank Spike for {PB71550BS} with File ID: BF064702.D met requirements for all samples except for 1,1-Biphenyl[112%], 2,4-Dinitrotoluene[112%], 2-

Nitroaniline[124%], 4-Chlorophenyl-phenylether[112%], Benzaldehyde[106%],

Carbazole[106%], Diethylphthalate[106%], Di-n-butylphthalate[106%], Fluorene[106%], Hexachlorocyclopentadiene[167%] and Hexachloroethane[100%].

The Blank Spike Duplicate met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration File ID BF064691.D met the requirements except for 3-Nitroaniline,Fluorene,2,4,6-Tribromophenol,Benzo(b)fluoranthene and 2-Fluorobiphenyl but they were not detected in any sample. The Continuous Calibration File ID BF064717.D met the requirements except for Hexachlorocyclopentadiene,1,1-



Biphenyl,2-Nitroaniline,4-Nitrophenol,2,4-Dinitrotoluene,4-Chlorophenyl-phenylether and 2,4,6-Trichlorophenol but they were not detected in any sample. The Tuning criteria met requirements. 2.2

#### **E. Additional Comments:**

#### **F. Manual Integration Comments:**

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature\_\_\_\_\_



#### **CASE NARRATIVE**

2.3

Arcadis Inc. Project Name: Karg Brothers Tannery, Johnstown Project # N/A Chemtech Project # E3191 Test Name: Pesticide-TCL

#### A. Number of Samples and Date of Receipt:

1 Solid sample was received on 08/03/2013.

#### **B.** Parameters

According to the Chain of Custody document, the following analyses were requested: Mercury, Metals ICP-TAL, Pesticide-TCL, SVOC-TCL BNA -20 and VOC-TCLVOA-10. This data package contains results for Pesticide-TCL.

#### **C. Analytical Techniques:**

The analysis was performed on instrument ECD\_L. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0. 5 um df,: Catalog # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 7HMG017- 11.The analysis of Pesticide-TCLs was based on method 8081B and extraction was done based on method 3541.

#### D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD recoveries met criteria.

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

#### E. Additional Comments:

#### **F. Manual Integration Comments:**

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature



#### CASE NARRATIVE

2.4

Arcadis Inc. Project Name: Karg Brothers Tannery, Johnstown Project # N/A Chemtech Project # E3191 Test Name: Mercury,Metals ICP-TAL

#### A. Number of Samples and Date of Receipt:

1 Solid sample was received on 08/03/2013.

#### **B.** Parameters:

According to the Chain of Custody document, the following analyses were requested: Mercury, Metals ICP-TAL, Pesticide-TCL, SVOC-TCL BNA -20 and VOC-TCLVOA-10. This data package contains results for Mercury, Metals ICP-TAL.

#### **C. Analytical Techniques:**

The analysis of Metals ICP-TAL was based on method 6010B, digestion based on method 3050 (soils). The analysis of Mercury was based on method 7471A and digestion was based on method 7471B (soils).

#### D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met criteria for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike analysis met criteria for all samples except for Antimony, Beryllium, Chromium, Copper, Vanadium and Zinc.

The Matrix Spike Duplicate analysis met criteria for all samples except for Antimony, Arsenic, Beryllium, Chromium, Copper and Vanadium.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

The Serial Dilution met criteria for all samples except for Aluminum, Calcium, Copper, Magnesium and Manganese.

#### **E. Additional Comments:**

LLICV & LLCCV are not required for 6010B Method.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature\_\_\_\_\_



#### DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).						
U	Indicates the analyte was analyzed for, but not detected.						
ND	Indicates the analyte was analyzed for, but not detected						
Е	Indicates the reported value is estimated because of the presence of interference						
Μ	ndicates Duplicate injection precision not met.						
Ν	Indicates the spiked sample recovery is not within control limits.						
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).						
*	Indicates that the duplicate analysis is not within control limits.						
+	Indicates the correlation coefficient for the MSA is less than 0.995.						
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.						
M OR	<ul> <li>Method qualifiers</li> <li>"P" for ICP instrument</li> <li>"PM" for ICP when Microwave Digestion is used</li> <li>"CV" for Manual Cold Vapor AA</li> <li>"AV" for automated Cold Vapor AA</li> <li>"CA" for MIDI-Distillation Spectrophotometric</li> <li>"AS" for Semi – Automated Spectrophotometric</li> <li>"C" for Manual Spectrophotometric</li> <li>"T" for Titrimetric</li> <li>"NR" for analyte not required to be analyzed</li> <li>Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.</li> </ul>						
Q	Indicates the LCS did not meet the control limits requirements						



#### DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	<ul> <li>Indicates an estimated value. This flag is used:</li> <li>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)</li> <li>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.</li> </ul>
В	Indicates the analyte was found in the blank as well as the sample report as "12 B".
Ε	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
Р	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
Ν	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
Α	This flag indicates that a Tentatively Identified Compound is a suspected aldol- condensation product.
Q	Indicates the LCS did not meet the control limits requirements

#### APPENDIX A

#### **QA REVIEW GENERAL DOCUMENTATION**

Project #: E3191

Completed

For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	<u> </u>
Check chain-of-custody for proper relinquish/return of samples	<u> </u>
Is the chain of custody signed and complete	<u> </u>
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	<u> </u>
Collect information for each project id from server. Were all requirements followed	<u> </u>
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	<u> </u>
Do lab numbers and client Ids on cover page agree with the Chain of Custody	<u> </u>
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	<u> </u>
Do requested analyses on Chain of Custody agree with the log-in page	<u> </u>
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	<u> </u>
Were the samples received within hold time	<u> </u>
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	<u> </u>
ANALYTICAL:	
Was method requirement followed?	<u> </u>
Was client requirement followed?	<u> </u>
Does the case narrative summarize all QC failure?	<u> </u>
All runlogs and manual integration are reviewed for requirements	<u>✓</u>
All manual calculations and /or hand notations verified	<u> </u>

1st	Level	QA	Review	Signature:	
-----	-------	----	--------	------------	--

HIRAL PATEL

Date:



Hit Summary Sheet SW-846

SDC N	F2101							
SDG No.:	E3191							в
Client:	Arcadis Inc.							
								C
Sample ID	Client ID	Matrix Paramete	er Concentratio	on C MDL	LOD	RDL	Units	D
Client ID:	FCLFKARG08-02-13							
E3191-01	FCLFKARG08-02-13	SOIL Tetrachloroeth	1.90 lene	J 0.54	0.54	5.4	ug/Kg	
		Total Voc	::	1.9				
		<b>Total Concen</b>	tration:	1.9				





## <u>SAMPLE</u> <u>DATA</u>

14 of 39



Α

C D

Rei	port	of An	alvsis
			<b>, , , , , , , , , , , , , , , , , , , </b>

Client:	Arcadis Inc.	Date Collected:	08/02/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	08/03/13
Client Sample ID:	FCLFKARG08-02-13	SDG No.:	E3191
Lab Sample ID:	E3191-01	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	7.6
Sample Wt/Vol:	4.99 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch	: Dilution:	Prep Date	Date A	Date Analyzed		Prep Batch ID	
VF038813.D	1		08/06/	/13		VF080613	
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	0.54	U	0.54	0.54	5.4	ug/Kg
74-87-3	Chloromethane	0.54	U	0.54	0.54	5.4	ug/Kg
75-01-4	Vinyl Chloride	0.54	U	0.54	0.54	5.4	ug/Kg
74-83-9	Bromomethane	1.1	U	1.1	1.1	5.4	ug/Kg
75-00-3	Chloroethane	0.54	U	0.54	0.54	5.4	ug/Kg
75-69-4	Trichlorofluoromethane	0.54	U	0.54	0.54	5.4	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	0.54	U	0.54	0.54	5.4	ug/Kg
75-35-4	1,1-Dichloroethene	0.54	U	0.54	0.54	5.4	ug/Kg
67-64-1	Acetone	2.7	U	2.7	2.7	27.1	ug/Kg
75-15-0	Carbon Disulfide	0.54	U	0.54	0.54	5.4	ug/Kg
1634-04-4	Methyl tert-butyl Ether	0.54	U	0.54	0.54	5.4	ug/Kg
79-20-9	Methyl Acetate	1.1	U	1.1	1.1	5.4	ug/Kg
75-09-2	Methylene Chloride	0.54	U	0.54	0.54	5.4	ug/Kg
156-60-5	trans-1,2-Dichloroethene	0.54	U	0.54	0.54	5.4	ug/Kg
75-34-3	1,1-Dichloroethane	0.54	U	0.54	0.54	5.4	ug/Kg
110-82-7	Cyclohexane	0.54	U	0.54	0.54	5.4	ug/Kg
78-93-3	2-Butanone	8.1	U	3.4	8.1	27.1	ug/Kg
56-23-5	Carbon Tetrachloride	0.54	U	0.54	0.54	5.4	ug/Kg
156-59-2	cis-1,2-Dichloroethene	0.54	U	0.54	0.54	5.4	ug/Kg
74-97-5	Bromochloromethane	0.54	U	0.54	0.54	5.4	ug/Kg
67-66-3	Chloroform	0.54	U	0.54	0.54	5.4	ug/Kg
71-55-6	1,1,1-Trichloroethane	0.54	U	0.54	0.54	5.4	ug/Kg
108-87-2	Methylcyclohexane	0.54	U	0.54	0.54	5.4	ug/Kg
71-43-2	Benzene	0.54	U	0.41	0.54	5.4	ug/Kg
107-06-2	1,2-Dichloroethane	0.54	U	0.54	0.54	5.4	ug/Kg
79-01-6	Trichloroethene	0.54	U	0.54	0.54	5.4	ug/Kg
78-87-5	1,2-Dichloropropane	0.54	U	0.28	0.54	5.4	ug/Kg
75-27-4	Bromodichloromethane	0.54	U	0.54	0.54	5.4	ug/Kg
108-10-1	4-Methyl-2-Pentanone	2.7	U	2.7	2.7	27.1	ug/Kg
108-88-3	Toluene	0.54	U	0.54	0.54	5.4	ug/Kg
10061-02-6	t-1,3-Dichloropropene	0.54	U	0.54	0.54	5.4	ug/Kg



Α

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#### **Report of Analysis**

Client:	Arcadis Inc.	Date Collected:	08/02/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	08/03/13
Client Sample ID:	FCLFKARG08-02-13	SDG No.:	E3191
Lab Sample ID:	E3191-01	Matrix:	SOIL
Analytical Method:	SW8260C	% Moisture:	7.6
Sample Wt/Vol:	4.99 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch	: Dilution:	Prep Date	Date A	Date Analyzed		Prep Batch ID	
VF038813.D	1		08/06/	13		VF080613	
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	0.54	U	0.54	0.54	5.4	ug/Kg
79-00-5	1,1,2-Trichloroethane	1.1	U	0.98	1.1	5.4	ug/Kg
591-78-6	2-Hexanone	2.7	U	2.7	2.7	27.1	ug/Kg
124-48-1	Dibromochloromethane	0.54	U	0.54	0.54	5.4	ug/Kg
106-93-4	1,2-Dibromoethane	0.54	U	0.54	0.54	5.4	ug/Kg
127-18-4	Tetrachloroethene	1.9	J	0.54	0.54	5.4	ug/Kg
108-90-7	Chlorobenzene	0.54	U	0.54	0.54	5.4	ug/Kg
100-41-4	Ethyl Benzene	0.54	U	0.54	0.54	5.4	ug/Kg
179601-23-1	m/p-Xylenes	1.1	U	0.78	1.1	10.8	ug/Kg
95-47-6	o-Xylene	0.54	U	0.54	0.54	5.4	ug/Kg
100-42-5	Styrene	0.54	U	0.49	0.54	5.4	ug/Kg
75-25-2	Bromoform	1.6	UQ	0.8	1.6	5.4	ug/Kg
98-82-8	Isopropylbenzene	0.54	U	0.52	0.54	5.4	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	0.54	U	0.5	0.54	5.4	ug/Kg
541-73-1	1,3-Dichlorobenzene	0.54	U	0.4	0.54	5.4	ug/Kg
106-46-7	1,4-Dichlorobenzene	0.54	U	0.44	0.54	5.4	ug/Kg
95-50-1	1,2-Dichlorobenzene	0.54	U	0.54	0.54	5.4	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	5.4	U	0.94	5.4	5.4	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	0.54	U	0.54	0.54	5.4	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	1.1	U	0.54	1.1	5.4	ug/Kg
123-91-1	1,4-Dioxane	110	U	110	110	110	ug/Kg
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	52.1		56 - 120	)	104%	SPK: 50
1868-53-7	Dibromofluoromethane	46.8		57 - 135	5	94%	SPK: 50
2037-26-5	Toluene-d8	48.3		67 - 123	3	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	37.9		33 - 141	l	76%	SPK: 50
INTERNAL STAN	NDARDS						
363-72-4	Pentafluorobenzene	154259	4.39				
540-36-3	1,4-Difluorobenzene	243087	5.14				
3114-55-4	Chlorobenzene-d5	218574	9.33				
3855-82-1	1,4-Dichlorobenzene-d4	74933	12.24				



VF038813.D

**CAS Number** 

1

Parameter

Conc.

	Report of An	nalysis		
Client:	Arcadis Inc.	Date Collected:	08/02/13	Α
Project:	Karg Brothers Tannery, Johnstown	Date Received:	08/03/13	В
Client Sample ID:	FCLFKARG08-02-13	SDG No.:	E3191	С
Lab Sample ID:	E3191-01	Matrix:	SOIL	D
Analytical Method:	SW8260C	% Moisture:	7.6	
Sample Wt/Vol:	4.99 Units: g	Final Vol:	5000 uL	
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10	
GC Column:	RTX-VMS ID: 0.18	Level :	LOW	
File ID/Qc Batch:	Dilution: Prep Date	Date Analyzed	Prep Batch ID	

08/06/13

MDL

LOD

Qualifier

VF080613

LOQ / CRQL

Units

5

U = Not Detected

- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range
- Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution



LAB CHRONICLE									
OrderID: Client: Contact:	E3191 Ord Arcadis Inc. Pro Bruce Nelson Loc				8/5/2013 9:56:4 Karg Brothers <sup>-</sup> L12	19 AM Tannery, Johnst	town		
LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received	
E3191-01	FCLFKARG08-02-13	SOIL		22600	08/02/13		09/06/11	08/03/13	

VOC-TCLVOA-10

8260C

08/06/13

5



#### **Hit Summary Sheet** SW-846

В
D

6

SDG No.: E3191

Client:	Arcadis Inc.									
Sample ID	Client ID	Matrix	Parameter	Con	centration	С	MDL	LOD	RDL	Units
Client ID :	FCLFKARG08-02-13									
E3191-01	FCLFKARG08-02-13	SOIL	Dimethylphthalate		380.000		9.7	36	360	ug/Kg
			Total Svoc :			380.0	00			
E3191-01	FCLFKARG08-02-13	SOIL	1-Octadecene	*	220.000	J	0		0	ug/Kg
E3191-01	FCLFKARG08-02-13	SOIL	2-Pentanone, 4-hydroxy-4-methyl-	*	590.000	AB	0		0	ug/Kg
E3191-01	FCLFKARG08-02-13	SOIL	9-Octadecenamide, (Z)-	*	1,200.000	J	0		0	ug/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Hexacosane	*	100.000	J	0		0	ug/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Hexadecanamide	*	170.000	J	0		0	ug/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Octadecanoic acid, butyl ester	*	130.000	J	0		0	ug/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Octanamide	*	630.000	J	0		0	ug/Kg
E3191-01	FCLFKARG08-02-13	SOIL	unknown14.48	*	87.400	J	0		0	ug/Kg
E3191-01	FCLFKARG08-02-13	SOIL	unknown5.47	*	2,700.000	JB	0		0	ug/Kg
			Total Tics :		5	,827.4	40			
			<b>Total Concentration:</b>		e	<b>5,207</b> .	40			



## <u>SAMPLE</u> <u>DATA</u>



A B C D

#### **Report of Analysis**

Client:	Arcadis Inc.	Date Collected:	08/02/13		
Project:	Karg Brothers Tannery, Johnstown	Date Received:	08/03/13		
Client Sample ID:	FCLFKARG08-02-13	SDG No.:	E3191		
Lab Sample ID:	E3191-01	Matrix:	SOIL		
Analytical Method:	SW8270D	% Moisture:	7.6		
Sample Wt/Vol:	30.09 Units: g	Final Vol:	1000 uL		
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20		
Extraction Type :	Decanted : N	Level :	LOW		
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :		

File ID/Qc Batch:	Dilution:	Prep Date	rep Date Date Analyzed			d	Prep Batch ID		
BF064724.D	1	08/07/13		08/14/13			PB71550		
CAS Number	Parameter	C	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units	
TARGETS									
100-52-7	Benzaldehyde	30	6	UQ	18.8	36	360	ug/Kg	
108-95-2	Phenol	30	6	U	8.3	36	360	ug/Kg	
111-44-4	bis(2-Chloroethyl)ether	30	6	U	17.3	36	360	ug/Kg	
95-57-8	2-Chlorophenol	30	6	U	19	36	360	ug/Kg	
95-48-7	2-Methylphenol	30	6	U	19.5	36	360	ug/Kg	
108-60-1	2,2-oxybis(1-Chloropropane)	30	6	U	14.9	36	360	ug/Kg	
98-86-2	Acetophenone	30	6	U	11	36	360	ug/Kg	
65794-96-9	3+4-Methylphenols	30	6	U	18.7	36	360	ug/Kg	
621-64-7	n-Nitroso-di-n-propylamine	30	6	U	18.1	36	360	ug/Kg	
67-72-1	Hexachloroethane	30	6	UQ	16.1	36	360	ug/Kg	
98-95-3	Nitrobenzene	30	6	U	13.6	36	360	ug/Kg	
78-59-1	Isophorone	30	6	U	11.9	36	360	ug/Kg	
88-75-5	2-Nitrophenol	30	6	U	17.4	36	360	ug/Kg	
105-67-9	2,4-Dimethylphenol	30	6	U	20.4	36	360	ug/Kg	
111-91-1	bis(2-Chloroethoxy)methane	30	6	U	20.7	36	360	ug/Kg	
120-83-2	2,4-Dichlorophenol	30	6	U	13.7	36	360	ug/Kg	
91-20-3	Naphthalene	30	6	U	12.4	36	360	ug/Kg	
106-47-8	4-Chloroaniline	30	6	U	25.4	36	360	ug/Kg	
87-68-3	Hexachlorobutadiene	30	6	U	13.1	36	360	ug/Kg	
105-60-2	Caprolactam	7	1.9	U	16.7	71.9	360	ug/Kg	
59-50-7	4-Chloro-3-methylphenol	30	6	U	16	36	360	ug/Kg	
91-57-6	2-Methylnaphthalene	30	6	U	9.1	36	360	ug/Kg	
77-47-4	Hexachlorocyclopentadiene	30	6	UQ	8.7	36	360	ug/Kg	
88-06-2	2,4,6-Trichlorophenol	30	6	U	11	36	360	ug/Kg	
95-95-4	2,4,5-Trichlorophenol	30	6	U	25.2	36	360	ug/Kg	
92-52-4	1,1-Biphenyl	30	6	UQ	13.6	36	360	ug/Kg	
91-58-7	2-Chloronaphthalene	30	6	U	8.2	36	360	ug/Kg	
88-74-4	2-Nitroaniline	30	6	UQ	16	36	360	ug/Kg	
131-11-3	Dimethylphthalate	38	80	-	9.7	36	360	ug/Kg	
208-96-8	Acenaphthylene	30	6	U	9.1	36	360	ug/Kg	
606-20-2	2,6-Dinitrotoluene	30	6	U	14.7	36	360	ug/Kg	



A B C D

#### **Report of Analysis**

Client:	Arcadis Inc.	Date Collected:	08/02/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	08/03/13
Client Sample ID:	FCLFKARG08-02-13	SDG No.:	E3191
Lab Sample ID:	E3191-01	Matrix:	SOIL
Analytical Method:	SW8270D	% Moisture:	7.6
Sample Wt/Vol:	30.09 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :

File ID/Qc Batch:	Dilution:	Prep Date		Date Analyzed			Prep Batch ID	
BF064724.D	1	08/07/13		08/14/13 PB71			PB71550	
CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
99-09-2	3-Nitroaniline		71.9	U	23.1	71.9	360	ug/Kg
83-32-9	Acenaphthene		36	U	10.1	36	360	ug/Kg
51-28-5	2,4-Dinitrophenol		290	U	36.6	290	360	ug/Kg
100-02-7	4-Nitrophenol		180	U	66.8	180	360	ug/Kg
132-64-9	Dibenzofuran		36	U	14	36	360	ug/Kg
121-14-2	2,4-Dinitrotoluene		36	UQ	10.8	36	360	ug/Kg
84-66-2	Diethylphthalate		36	UQ	5.6	36	360	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether		36	UQ	19.5	36	360	ug/Kg
86-73-7	Fluorene		36	UQ	13.6	36	360	ug/Kg
100-01-6	4-Nitroaniline		71.9	U	46.8	71.9	360	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol		180	U	20.6	180	360	ug/Kg
86-30-6	n-Nitrosodiphenylamine		36	U	8.6	36	360	ug/Kg
101-55-3	4-Bromophenyl-phenylether		36	U	7	36	360	ug/Kg
118-74-1	Hexachlorobenzene		36	U	14.7	36	360	ug/Kg
1912-24-9	Atrazine		36	U	19	36	360	ug/Kg
87-86-5	Pentachlorophenol		36	U	24.6	36	360	ug/Kg
85-01-8	Phenanthrene		36	U	9.7	36	360	ug/Kg
120-12-7	Anthracene		36	U	7.3	36	360	ug/Kg
86-74-8	Carbazole		36	UQ	7.9	36	360	ug/Kg
84-74-2	Di-n-butylphthalate		36	UQ	28.3	36	360	ug/Kg
206-44-0	Fluoranthene		36	U	7.2	36	360	ug/Kg
129-00-0	Pyrene		36	U	8.6	36	360	ug/Kg
85-68-7	Butylbenzylphthalate		36	U	17.3	36	360	ug/Kg
91-94-1	3,3-Dichlorobenzidine		36	U	23.1	36	360	ug/Kg
56-55-3	Benzo(a)anthracene		36	U	17.2	36	360	ug/Kg
218-01-9	Chrysene		36	U	16.3	36	360	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate		36	U	12.7	36	360	ug/Kg
117-84-0	Di-n-octyl phthalate		36	U	4.1	36	360	ug/Kg
205-99-2	Benzo(b)fluoranthene		36	U	11.8	36	360	ug/Kg
207-08-9	Benzo(k)fluoranthene		36	U	16.9	36	360	ug/Kg
50-32-8	Benzo(a)pyrene		36	U	7.8	36	360	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene		36	U	12	36	360	ug/Kg
53-70-3	Dibenzo(a,h)anthracene		36	U	10.4	36	360	ug/Kg
			22 of 3	9				



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Client:	Arcadis Inc.	Date Collected:	08/02/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	08/03/13
Client Sample ID:	FCLFKARG08-02-13	SDG No.:	E3191
Lab Sample ID:	E3191-01	Matrix:	SOIL
Analytical Method:	SW8270D	% Moisture:	7.6
Sample Wt/Vol:	30.09 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :

File ID/Qc Batch:	Dilution:	Prep Date		Dat	e Analyze	1	Prep Batch ID	
BF064724.D	1	08/07/13		08/	14/13		PB71550	
CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
191-24-2	Benzo(g,h,i)perylene		36	U	14.6	36	360	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene		36	U	14.1	36	360	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol		36	U	14.1	36	360	ug/Kg
SURROGATES								
367-12-4	2-Fluorophenol		73.1		28 - 127		49%	SPK: 150
13127-88-3	Phenol-d6		97.3		34 - 127		65%	SPK: 150
4165-60-0	Nitrobenzene-d5		46.1		31 - 132		46%	SPK: 100
321-60-8	2-Fluorobiphenyl		60.1		39 - 123		60%	SPK: 100
118-79-6	2,4,6-Tribromophenol		70.4		30 - 133		47%	SPK: 150
1718-51-0	Terphenyl-d14		57.8		37 - 115		58%	SPK: 100
INTERNAL STAN	NDARDS							
3855-82-1	1,4-Dichlorobenzene-d4		108905	5.69				
1146-65-2	Naphthalene-d8		489629	6.93				
15067-26-2	Acenaphthene-d10		252725	8.66				
1517-22-2	Phenanthrene-d10		428805	10.12				
1719-03-5	Chrysene-d12		400515	12.74				
1520-96-3	Perylene-d12		376219	14.05				
TENTATIVE IDE	NTIFIED COMPOUNDS							
000123-42-2	2-Pentanone, 4-hydroxy-4-methy	-	590	AB			4.01	ug/Kg
	unknown5.47		2700	JB			5.47	ug/Kg
000630-01-3	Hexacosane		100	J			10.03	ug/Kg
000629-54-9	Hexadecanamide		170	J			11.55	ug/Kg
000629-01-6	Octanamide		630	J			12.2	ug/Kg
000123-95-5	Octadecanoic acid, butyl ester		130	J			12.26	ug/Kg
000112-88-9	1-Octadecene		220	J			12.63	ug/Kg
000301-02-0	9-Octadecenamide, (Z)-		1200	J			13.52	ug/Kg
	unknown14.48		87.4	J			14.48	ug/Kg



C D

		<b>Report of A</b>	nalysis	
Client:	Arcadis Inc.		Date Collected:	08/02/13
Project:	Karg Brothers Ta	nnery, Johnstown	Date Received:	08/03/13
Client Sample ID:	FCLFKARG08-0	02-13	SDG No.:	E3191
Lab Sample ID:	E3191-01		Matrix:	SOIL
Analytical Method:	SW8270D		% Moisture:	7.6
Sample Wt/Vol:	30.09 Units	: g	Final Vol:	1000 uL
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20
Extraction Type :		Decanted :	N Level :	LOW
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH :
File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BF064724.D	1	08/07/13	08/14/13	PB71550
CAS Number Para	neter	Conc.	Qualifier MDL LOD	LOQ / CRQL Units

#### U = Not Detected

- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution



LAB CHRONICLE								
OrderID: Client: Contact:	E3191 Arcadis Inc. Bruce Nelson			OrderDate: Project: Location:	8/5/2013 9:56:4 Karg Brothers ⊺ L12	19 AM Fannery, Johnst	town	
LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
E3191-01	FCLFKARG08-02-13	SOIL			08/02/13			08/03/13
			SVOC-TCL BNA -20	8270D		08/07/13	08/14/13	



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#### Hit Summary Sheet SW-846

SDG No.:			Order ID:						
Client:			Project ID:						В
Sample ID	Client ID	Parameter	Concentration	С	MDL	LOD	RDL	Units	С
Client ID :									D

**Total Concentration:** 





# <u>SAMPLE</u> <u>DATA</u>

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A B C D

#### **Report of Analysis**

Client:	Arcadis Inc.		Date Collected: 08/02/13					
Project:	Karg Brothers Tannery, Johnstown		Date Recei	ved:	08/03/13			
Client Sample ID:	FCLFKARG08-02-13		SDG No.:		E3191			
Lab Sample ID:	E3101 01		Matrix		SOIL			
	E3191-01				SOIL			
Analytical Method:	SW8081B		% Moisture	2:	7.6	Decanted:		
Sample Wt/Vol:	30.07 Units: g		Final Vol:		10000			
Soil Aliquot Vol:	uL		Test:		Pesticide-T	CL		
Extraction Type:			Injection V	olume :				
GPC Factor :	1.0 PH :							
File ID/Qc Batch:	Dilution: Prep Date		Date Analyze	ed	Pre	ep Batch ID		
PL004803.D	L004803.D 1 08/06/13					371513		
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units	
TARGETS								
319-84-6	alpha-BHC	0.356	U	0.14	0.356	1.8	ug/kg	
319-85-7	beta-BHC	0.356	U	0.194	0.356	1.8	ug/kg	
319-86-8	delta-BHC	0.356	U	0.108	0.356	1.8	ug/kg	
58-89-9	gamma-BHC (Lindane)	0.356	U	0.162	0.356	1.8	ug/kg	
76-44-8	Heptachlor	0.356	U	0.151	0.356	1.8	ug/kg	
309-00-2	Aldrin	0.356	U	0.108	0.356	1.8	ug/kg	
1024-57-3	Heptachlor epoxide	0.356	U	0.173	0.356	1.8	ug/kg	
959-98-8	Endosulfan I	0.356	U	0.162	0.356	1.8	ug/kg	
60-57-1	Dieldrin	0.356	U	0.14	0.356	1.8	ug/kg	
72-55-9	4,4-DDE	0.356	U	0.216	0.356	1.8	ug/kg	
72-20-8	Endrin	0.356	U	0.194	0.356	1.8	ug/kg	
33213-65-9	Endosulfan II	0.356	U	0.151	0.356	1.8	ug/kg	
72-54-8	4,4-DDD	0.356	U	0.184	0.356	1.8	ug/kg	
1031-07-8	Endosulfan Sulfate	0.356	U	0.162	0.356	1.8	ug/kg	
50-29-3	4,4-DDT	0.356	U	0.151	0.356	1.8	ug/kg	
72-43-5	Methoxychlor	0.356	U	0.184	0.356	1.8	ug/kg	
53494-70-5	Endrin ketone	0.356	U	0.14	0.356	1.8	ug/kg	
7421-93-4	Endrin aldehyde	0.356	U	0.162	0.356	1.8	ug/kg	
5103-71-9	alpha-Chlordane	0.356	U	0.151	0.356	1.8	ug/kg	
5103-74-2	gamma-Chlordane	0.356	U	0.14	0.356	1.8	ug/kg	
8001-35-2	Toxaphene	3.6	U	3.6	3.6	18.4	ug/kg	
SURROGATES		15.0		10 1		770/	ODV (	
2051-24-3	Decachlorobiphenyl	15.3		10 - 16	99 	77%	SPK: 2	
877-09-8	Tetrachloro-m-xylene	18.8		31 - 15	51	94%	SPK: 2	



B C D

#### **Report of Analysis**

CA	AS Number	Parameter			Conc.	Qualifier	MDL	LOD	LOQ / CRQL Units
	PL004803.D	1		08/06/13	(	08/06/13		PB	71513
	File ID/Qc Batch:	Dilution:		Prep Date	I	Date Analyzed	d	Pre	p Batch ID
	GPC Factor :	1.0	PH :						
	Extraction Type:					Injection Vo	lume :		
	Soil Aliquot Vol:		uL			Test:		Pesticide-T	CL
	Sample Wt/Vol:	30.07 Units:	g			Final Vol:		10000	uL
	Analytical Method:	SW8081B				% Moisture:		7.6	Decanted:
	Lab Sample ID:	E3191-01				Matrix:		SOIL	
	Client Sample ID:	FCLFKARG08-02	-13			SDG No.:		E3191	
	Project:	Karg Brothers Tan	nery, John	stown		Date Receiv	ed:	08/03/13	
	Client:	Arcadis Inc.				Date Collect	ted:	08/02/13	

- U = Not Detected
- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range
- P = Indicates > 25% difference for detected
- concentrations between the two GC columns
- Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution

 $\mathbf{S}=\mathbf{Indicates}$  estimated value where valid five-point calibration

was not performed prior to analyte detection in sample.



LAB CHRONICLE								
OrderID: Client: Contact:	E3191 Arcadis Inc. Bruce Nelson			OrderDate:8/5/2013 9:56:49 AMProject:Karg Brothers Tannery, JohnstownLocation:L12				
LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
E3191-01	FCLFKARG08-02-13	SOIL	Pesticide-TCL	8081B	08/02/13	08/06/13	08/06/13	08/03/13



**Hit Summary Sheet** SW-846

SDG No.:	E3191			Order ID:		E3191			
Client:	Arcadis Inc.			Project ID	:	Karg Broth	ers Tannery, J	ohnstown	
Sample ID Client ID :	Client ID FCLFKARG08-02-13	Matrix	Parameter	Concentration	С	MDL	LOD	RDL	Units
E3191-01	FCLFKARG08-02-13	SOIL	Aluminum	3,520.000		0.39	1.155	2.310	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Arsenic	2.320		0.15	0.23	0.46	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Barium	13.800		0.19	1.155	2.310	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Beryllium	0.180		0.03	0.07	0.14	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Cadmium	0.180		0.03	0.07	0.14	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Calcium	24,400.000		0.49	23.15	46.3	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Chromium	3.950		0.06	0.115	0.23	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Cobalt	3.520		0.26	0.345	0.69	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Copper	6.360		0.15	0.23	0.46	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Iron	9,680.000		0.62	1.155	2.310	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Lead	2.590		0.06	0.14	0.28	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Magnesium	2,560.000		2.120	23.15	46.3	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Manganese	173.000		0.09	0.23	0.46	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Mercury	0.007	J	0.002	0.006	0.011	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Nickel	8.270		0.21	0.465	0.93	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Potassium	295.000		1.620	23.15	46.3	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Selenium	0.210	J	0.19	0.23	0.46	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Sodium	99.900		1.170	23.15	46.3	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Vanadium	13.100		0.27	0.465	0.93	mg/Kg
E3191-01	FCLFKARG08-02-13	SOIL	Zinc	24.300		0.32	0.465	0.93	mg/Kg

B C

D

8





## <u>SAMPLE</u> <u>DATA</u>

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#### Report of Analysis

				Α
Client:	Arcadis Inc.	Date Collected:	08/02/13	
Project:	Karg Brothers Tannery, Johnstown	Date Received:	08/03/13	В
Client Semula ID:		SDC No .	E2101	С
Client Sample ID:	FULFKARG08-02-13	SDG NO.:	E3191	
Lab Sample ID:	E3191-01	Matrix:	SOIL	D
Level (low/med):	low	% Solid:	92.4	

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CR	RQL Units Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	3520		1	0.39	1.155	2.31	mg/Kg 08/06/13	08/09/13	SW6010B
7440-36-0	Antimony	0.58	UN	1	0.26	0.58	1.16	mg/Kg 08/06/13	08/09/13	SW6010B
7440-38-2	Arsenic	2.32	Ν	1	0.15	0.23	0.46	mg/Kg 08/06/13	08/09/13	SW6010B
7440-39-3	Barium	13.8		1	0.19	1.155	2.31	mg/Kg 08/06/13	08/09/13	SW6010B
7440-41-7	Beryllium	0.18	Ν	1	0.03	0.07	0.14	mg/Kg 08/06/13	08/09/13	SW6010B
7440-43-9	Cadmium	0.18		1	0.03	0.07	0.14	mg/Kg 08/06/13	08/09/13	SW6010B
7440-70-2	Calcium	24400		1	0.49	23.15	46.3	mg/Kg 08/06/13	08/09/13	SW6010B
7440-47-3	Chromium	3.95	Ν	1	0.06	0.115	0.23	mg/Kg 08/06/13	08/09/13	SW6010B
7440-48-4	Cobalt	3.52		1	0.26	0.345	0.69	mg/Kg 08/06/13	08/09/13	SW6010B
7440-50-8	Copper	6.36	Ν	1	0.15	0.23	0.46	mg/Kg 08/06/13	08/09/13	SW6010B
7439-89-6	Iron	9680		1	0.62	1.155	2.31	mg/Kg 08/06/13	08/09/13	SW6010B
7439-92-1	Lead	2.59		1	0.06	0.14	0.28	mg/Kg 08/06/13	08/09/13	SW6010B
7439-95-4	Magnesium	2560		1	2.12	23.15	46.3	mg/Kg 08/06/13	08/09/13	SW6010B
7439-96-5	Manganese	173		1	0.09	0.23	0.46	mg/Kg 08/06/13	08/09/13	SW6010B
7439-97-6	Mercury	0.007	J	1	0.002	0.006	0.011	mg/Kg 08/06/13	08/07/13	SW7471A
7440-02-0	Nickel	8.27		1	0.21	0.465	0.93	mg/Kg 08/06/13	08/09/13	SW6010B
7440-09-7	Potassium	295		1	1.62	23.15	46.3	mg/Kg 08/06/13	08/09/13	SW6010B
7782-49-2	Selenium	0.21	J	1	0.19	0.23	0.46	mg/Kg 08/06/13	08/09/13	SW6010B
7440-22-4	Silver	0.115	U	1	0.07	0.115	0.23	mg/Kg 08/06/13	08/09/13	SW6010B
7440-23-5	Sodium	99.9		1	1.17	23.15	46.3	mg/Kg 08/06/13	08/09/13	SW6010B
7440-28-0	Thallium	0.465	U	1	0.12	0.465	0.93	mg/Kg 08/06/13	08/09/13	SW6010B
7440-62-2	Vanadium	13.1	Ν	1	0.27	0.465	0.93	mg/Kg 08/06/13	08/09/13	SW6010B
7440-66-6	Zinc	24.3	Ν	1	0.32	0.465	0.93	mg/Kg 08/06/13	08/09/13	SW6010B

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	No
Comments:	Mercury				
U = Not Detect LOQ = Limit o MDL = Method LOD = Limit o D = Dilution Q = indicates L	red f Quantitation d Detection Limit f Detection .CS control criteria did not meet r	equirements	J = Estimated Value B = Analyte Found in Ass * = indicates the duplicat E = Indicates the reported of interference. OR = Over Range N =Spiked sample recover	sociated Methe e analysis is a l value is estin ery not within	nod Blank not within control limits. mated because of the presence control limits



	D

#### LAB CHRONICLE

OrderID: Client: Contact:	E3191 Arcadis Inc. Bruce Nelson			OrderDate: Project: Location:	8/5/2013 9:56:4 Karg Brothers ⊺ L12	9 AM <sup>-</sup> annery, Johnst	lown	
LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
E3191-01	FCLFKARG08-02-13	SOIL			08/02/13			08/03/13
			Mercury	7471A		08/06/13	08/07/13	
			Metals ICP-TAL	6010B		08/06/13	08/09/13	



# <u>SHIPPING</u> DOCUMENTS

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#### 284 Sheffield Street, Mountainside, NJ 07092 (908) 789-8900 Fax (908) 789-8922 www.chemtech.net

CHEMTECH PROJECT NO. QUOTE NO. Q1006036 319) COC Number 030101

	CLIENT INFORMA	TION			CL	IENT P	ROJECT IN	FORM	ATION	CLIENT PROJECT INFORMATION					CLIEN	T BILLI	NG INFO	ORMATION	
COMPANY:	ARCADIS	NT TO:	PROJE		ие:	KAR	G Bri	othe	cs T	ADU	lecy	BILL T	-O:					PO#:	
ADDRESS:	855 Route	1410 Suite 210	PROJE	<u>CT NO.</u>	23	840	\5loca	TION:	Jor	hy Usto	ωn	ADDR	ESS:						
CITY: CLIF	ton Park ST	ATE:NY ZIP: 1206	5 PROJE		NAGE	R: C	bruce	N	•150'	2		CITY:					STAT		D.
ATTENTION:	Bruce N	elson	e-mail:	-mail: bruce nolson Q or colis-us com					ATTEN	NTION:	······	10		PHO	<u>. 2</u>	<u>.</u>			
PHONE: $512$	3 250 7300 FAX	250 7.301	PHONE				E	<u>ΛΥ</u> ·		<u> </u>	<u> </u>			s -		ANA	ALYSIS		
[	DATA TURNAROUND IN	FORMATION	THOME	D	ATA D	ELIVE		FORM	ATION				ALL A	A Leader	/	/	/	//	///
FAX: HARD COPY: _ EDD: PREAPPROV * STANDARD T	ED TAT: I YES I NO URNAROUND TIME IS 1	DAYS · DAYS · DAYS · DAYS · DAYS · D D D BUSINESS DAYS	LEVE LEVE LEVE LEVE LEVE EDD	LEVEL 1: Results only LEVEL 2: Results + QC LEVEL 3: Results (plus results raw data) + QC LEVEL 4: Results + QC (all raw data) EDD Format: EXCeL + EQuIS 1 2053					500- 500- 500- 500- 500- 500- 500- 500-	tures of the second sec	6	7	8	9					
CHEMTECH				SAMP	PLE	SAN	IPLE	ES				PRE	SERVA	TIVES				CO	MMENTS
SAMPLE	PR SAMPLE ID	OJECT DENTIFICATION	SAMPLE MATRIX	dwo O	GRAB T	COLLI DATE		# OF BOTTI	E 1	E 2	3	4	5	6	7	8	9	A−HCI A−HCI C−H₂SC E−ICE	y Preservatives B-HNO₃ A D-NaOH F-Other
1.	FCLF HARG	08-02-13 0802	13 Soi'L	X	x 8	3 2 13	0910	2	1	1									
2.	Temp Blan	iK	Water	-			-	1											
3.	•																		
4.																	1		
5.																			
6.									а. С										
7.																			
8.	·																		
9.																			
10.																1			· ·
RELINQUISHED BY S 1. Autur ( RELINQUISHED BY: 2.	SAMPLER: DATE/TIM B.D. () & [2] DATE/TIM	E CUSTODY MUST BE D IE: BECEIVED BY: 3 1. IE: RECEIVED BY: 2.	OCUMENTE	DBEL	OW E	ACH TI Condit MeOl Com	ME SAMP ions of bott H extractic ments:	PLES C	HANGI oolers a ires an	E POSS t receipt addition	SESSIO I: [] nal 4 oz	N INCL	UDING liant percent	i COUF	RIER DE	ELIVER npliant	Co Ice	oler Temp in Cooler?:	<u>6°C</u> <u>Y</u>
3. Fed 2	Ship bit     Control internation     Conternation     Control internation     C																		

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Fed Ex. 17K# 8034 5961 5540 SATURDAY 12:00P **PRIORITY OVERNIGHT** 07092 XØ CDWA EWR EX. NEW Package Express US Airbill Tracking 8034 5961 5540 From Date 8/2 <sup>#</sup>Sender's Name Bidwell  $\Delta \alpha$ \*\*\* Z48 500 598379 02AUG13 ALBA 519C1/AA04/93AB Emp# Company 1.71 ext business morning 5 FedEx 2Day, A.M. Second business morning.\* Saturday Delivery NOT available  $\Box$ very to se à. ; ; ; ¥ 4 . Event Structure State Structure State Structure State Structure State Structure State Structure State Address 85 FedEx 2Day Second business afternoon will be delivered on Monday Delivery is selected. 015 FedEx Standard Overnight Next business afternoon.\* Saturday Delivery NOT available I SOBY Shipme Eto Çity FedEx Express Saver Third business day,\* Saturday Delivery NOT available TY NOT a 17 NV four Internal Billing Reference 2065 5 Packaging 384 alue limit son 1 0 24 FedEx Envelope ledeg FedEx Pak FedEx Box ecipient's FedEx Tube Sa ame com Special Handling and Delivery Signature Options Phone 908 789 R9mCHem URDAY 1.800.GoFedEx 1.800.463.3339 mpany p Signature Required kage may be left without aining a signature for deleter dress Pannot del Direct Signature Someonelatraciplent's a may sign for deliverys for £ Indirect Signature HOLD Weekday EQUIRED NOT available for the second se ?ehoop 200 Iress e box must be checked. HOLD Saturday Yes As per att Shipper's his line for the HOLD Dry Icé Dry icé, 9, UN 1845 your shipping addres maistai s (including dry ice) can Ex Express Dron Boy Cargo Aircraft Only 092 Payment Bill to: 3 btain recip. Acct. No. | Recipient Third Party Credit Card Cash/Check Total Package †Our li 5961 5540 644 Rev. Date 1212 + Part #167002 + @2012 37 of 39

9 9.2



9.3

## Laboratory Certification

State	License No.
New Jersey	20012
New York	11376
Connecticut	PH-0649
Florida	E87935
Louisiana	5035
Maryland	296
Massachusetts	M-NJ503
Oldahama	0705
Okianoma	9705
Donnovlyonia	69 549
Pennsylvania	08-348
Phodo_Island	1 4 0 0 0 2 5 9
	LA000209
Virginia	460220
virginia	100220
Texas	T10470448-10-1

Other:

DOD ELAP Certified (L-A-B Accredited), ISO/IEC 17025	L2219		
Soil Permit	P330-11-00012		
CLP Inorganic Contract	EPW09038		
CLP Organic Contract	EPW11030		

QA Control Code: A2070148



### LOGIN REPORT/SAMPLE TRANSFER

Order ID: Client Name: Client Contact: Invoice Name: Invoice Contact:	E3191 Arcadis Inc. Bruce Nelson Arcadis Inc. Bruce Nelson	<u>MALC02</u>	Order Date: Project Name: Rec DateTime Purchase Order: Login Tech:	8/5/2013 Karg Brothers Tar 8/3/2013 10:55:00 proj#2384015 Nikul	nnery, Johnsto ) AM	Project Mgr: Report Type: EDD: Hard Copy Date: Date Signoff:	Reginald Results Only Equis EQNYDEC/Exc 8/5/2013 4:22:31 PM	el	
LAB ID CLIENT	ĪD	MATRIX SAMPLE DATE	SAMPLE QTY TEST TIME		TEST GROUP	METHOD	COMMENT	FAX DATE	Due Dates
E3191-01 FCLFK	ARG08-02-13	Solid 8/2/2013	9:10 2 VOC-T	CLVOA-10		8260C		10 Bus. 8/16/201	3 8/16/20
SAMPLE CC Are th Is t Relinguished B Date / Tim	Were sample were sample he volume of sa Are all sampl y:	RECORD Are samples submit imples the same as sta Are bottle caps Were all conta Were sample Were sample wes within the holding tim imple submitted sufficient sofor volatile organic a	ted with a chain of custor ted on the chain of custor tight and securely in place ainers intact when receive s submitted in an ice che ere samples received col ne for the requested test( analyses free of headspace Re	dy? Yes dy? Yes ce? Yes ed? Yes st? Yes s)? Yes s)? Yes ce? NA ceived By:	4	ORDER CO Report EDI 1PPB Ris.	DMMENT D to RLs. GW re	port VOC to	
			Sto	rage Area: VC	DA Refridgerator	Room			



### DATA PACKAGE

GC SEMI-VOLATILES

#### **PROJECT NAME : KARG BROTHERS TANNERY, JOHNSTOWN**

ARCADIS INC.

855 Route 146, Suite 210

Clifton Park, NY - 12065

Phone No: 518-250-7300

ORDER ID : E3406

ATTENTION : Bruce Nelson






#### Table Of Contents for E3406

1) Signature Page	3
2) Case Narrative	4
2.1) PCB- Case Narrative	4
3) Qualifier Page	5
4) QA Checklist	6
5) PCB Data	7
6) Shipping Document	11
6.1) CHAIN OF CUSTODY	12
6.2) ROC	13
6.3) Lab Certificate	16



## **Cover Page**

- Order ID : E3406
- Project ID : Karg Brothers Tannery, Johnstown

**Client :** Arcadis Inc.

#### Lab Sample Number

E3406-01

Client Sample Number FCLFKARG08-02-13

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

Date: 8/29/2013

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

### **CASE NARRATIVE**

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Arcadis Inc. Project Name: Karg Brothers Tannery, Johnstown Project # N/A Chemtech Project # E3406 Test Name: PCB

#### A. Number of Samples and Date of Receipt:

1 Solid sample was received on 08/03/2013.

#### **B.** Parameters

According to the Chain of Custody document, the following analyses were requested: PCB. This data package contains results for PCB.

#### **C. Analytical Techniques:**

The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25  $\mu$ m; Catalogue # 7HM-G017-11.The analysis of PCBs was based on method 8082A and extraction was done based on method 3541.

#### **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration File ID PO010695.D met the requirements except for Tetrachloro-m-xylene is failing in 2nd column but passing in 1st column.

#### **E. Additional Comments:**

#### **F. Manual Integration Comments:**

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature\_\_\_\_\_



#### DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following "Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	<ul> <li>Indicates an estimated value. This flag is used:</li> <li>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)</li> <li>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.</li> </ul>
В	Indicates the analyte was found in the blank as well as the sample report as "12 B".
Ε	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
Р	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
Α	This flag indicates that a Tentatively Identified Compound is a suspected aldol- condensation product.
Q	Indicates the LCS did not meet the control limits requirements

#### APPENDIX A

#### **QA REVIEW GENERAL DOCUMENTATION**

Project #: E3406

Completed

GENERAL:         Are all original paperwork present (chain of custody, record of communication, airbill, sample management lab chronicle, login page)         Check chain-of-custody for proper relinquish/return of samples         Is the chain of custody signed and complete         Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management	
Check chain-of-custody for proper relinquish/return of samples       ✓         Is the chain of custody signed and complete       ✓         Check internal chain-of-custody for proper relinquish/return of samples /sample extracts       ✓	
Is the chain of custody signed and complete       ✓         Check internal chain-of-custody for proper relinquish/return of samples /sample extracts       ✓	
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	
Collect information for each project id from server. Were all requirements followed	
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	
Do lab numbers and client Ids on cover page agree with the Chain of Custody	
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	
Do requested analyses on Chain of Custody agree with the log-in page	
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	
Were the samples received within hold time	
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	
ANALYTICAL:	
Was method requirement followed?	
Was client requirement followed?	
Does the case narrative summarize all QC failure?	
All runlogs and manual integration are reviewed for requirements	
All manual calculations and /or hand notations verified	

1st	Level	QA	Review	Signature:	
-----	-------	----	--------	------------	--

VANI MEHTA

Date: 08/29/2013

2nd Level QA Review Signature:

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		Hit Summary SW-84	7 Sheet 16				
SDG No.:			Order ID:				
Client:			Project ID:				E
Sample ID	Client ID	Parameter	Concentration C M	IDL LOD	RDL	Units	C
Client ID :							D

**Total Concentration:** 





# <u>SAMPLE</u> <u>DATA</u>



A B C D

Re	port	of An	alvsis
	r		

								_
Client:	Arcadis Inc.			Date Collec	cted:	08/02/13		
Project:	Karg Brothers Tannery, Jo	nnstown		Date Recei	ved:	08/03/13		
Client Sample ID:	FCLFKARG08-02-13			SDG No.:		E3406		
Lab Sample ID:	E3406-01			Matrix:		SOIL		
Analytical Method:	SW8082A			% Moisture	e:	7.6	Decanted:	
Sample Wt/Vol	30.07 Units: g			Final Vol		10000	пГ	
Sail Aliquet Vel:	JULY CINES. g			Test:		DCD	uL	
Son Anquot voi.	dL			iest.		rCD		
Extraction Type:				Injection V	olume :			
GPC Factor :	1.0 PH :							
File ID/Qc Batch:	Dilution:	Prep Date		Date Analyze	ed	Pr	ep Batch ID	
PO010703.D	1	08/06/13		08/21/13		PE	371828	
CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
12674-11-2	Aroclor-1016		3.6	U	3.6	3.6	18.4	ug/kg
11104-28-2	Aroclor-1221		3.6	U	3.6	3.6	18.4	ug/kg
11141-16-5	Aroclor-1232		3.6	U	3.6	3.6	18.4	ug/kg
53469-21-9	Aroclor-1242		3.6	U	3.6	3.6	18.4	ug/kg
12672-29-6	Aroclor-1248		3.6	U	3.6	3.6	18.4	ug/kg
11097-69-1	Aroclor-1254		3.6	U	1.6	3.6	18.4	ug/kg
11096-82-5	Aroclor-1260		3.6	U	3.6	3.6	18.4	ug/kg
SURROGATES								
877-09-8	Tetrachloro-m-xylene		21		10 - 16	56	105%	SPK: 20
2051-24-3	Decachlorobiphenyl		16.2		60 - 12	25	81%	SPK: 20

U = Not Detected

- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range
- P = Indicates > 25% difference for detected
- concentrations between the two GC columns
- Q = indicates LCS control criteria did not meet requirements

E3406

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

was not performed prior to analyte detection in sam



			LAB CHRON	ICLE							
OrderID: Client: Contact:	E3406 Arcadis Inc. Bruce Nelson			OrderDate: Project: Location:	8/20/2013 4:38:00 PM Karg Brothers Tannery, Johnstown						
LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received			
E3406-01	FCLFKARG08-02-13	SOIL			08/02/13			08/03/13			
			PCB	8082A		08/06/13	08/21/13				

A B C D



# <u>SHIPPING</u> DOCUMENTS

E3406

Copy - original in E3191

284 Sheffield Street, Mountainside, NJ 07092 (908) 789-8900 Fax (908) 789-8922 www.chemtech.net

CHEMTECH PROJECT NO.

QUOTE:NO.Q1606036 COC.Number 0301.01

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	CLIENT INFORMATION				CLIENT P	RÓJECTI	FORM	ATION			en e			CLIER	T BILL	ING INF	TAMRO	ON	
COMPANY:	ARCADIS	PROJE	<u>2T N</u>	AME:	KAR	<u>G</u> &	othe	r 23	ĩeuc	ecy	BILL	ro:					PO#		
ADDRESS:	855 Route 1410 Suit 210	PROJE	CT N	o.: 2	3840	SLOCA	TION:	Jor	of arc	wn .	ADDF	ESS:							
CITY: CLI	FON Pask STATE:NY ZIP: 12065	PROJEC	CT M	ANAC	BER: C	TUCE	N	150	n		CITY;					STA	TE:	ZIP	:
ATTENTION:	Bruce Nelson	e-mail:	6	ruc	e. nols	on@	Jose	adis	us.c	ma	ATTE	NTION:			,	PHO	WE.		
PHONE: 51	8 250 7300 FAX: 250 730)	PHONE			-	E	AX:					_			AN	ALYSIS	5		
	DATA TURNAROUND INFORMATION			DAT	DELIVE	ABLE IN	FORM	ATION			1	AL.							
FAX:	DAYS*	O LEVE	. 1: F	lasult	ts only	0	Others_			2	X	i sul	/	- /	_/		t ]		
HARD COPY:	DAYS*	O LEVE	. 2: F	lesult	s+QC				1	L. 79	<\$\$	9%	/ /	/ /	/ ./	/ /	[_]	[]	/
PREAPPROV	ED TAT D YES D NO		. 3: F . 4: F	lesult lesult	ls (plus re ls + OC (al	sults raw I raw data	dala) + N	ac /	Ê	×~			/ ,	/ ,	/ ,		/ ,	/	
* STANDARD	TURNAROUND TIME IS 10 BUSINESS DAYS	🗆 EDD I	orm	at: <u>E</u>	XCel + 1	Quis	<u>.</u>	1	$\mathbb{Y}_{2}^{t}$	1/3	14	15	6	17	8	9			
CHEMTECH		1	SAN	APLE	SAN	IPLE	8				PRE	SERVA	TIVES				ģ.	COM	MENTS
SAMPLE	PROJECT SAMPLE IDENTIFICATION	SAMPLE	<u></u>	PE	COLLI	CTION	E	E	F		ļ	ľ						Decify F	Preservative:
0		MACHIA	NO3	GRAE	DATE	TIME	OF	1	2	з	4	5	6	7	- A	1.	- <u>°</u> -	HSO.	D-NaOH
1.	FCLF KARG 08-02-13 080213	Soil	۲	×	8213	0910	2	1	N			1			1		+		
FYE	Temp Blark	water	-	L			1							1		1			
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RELINGUEUED DV	SAMPLE CUSTODY MUST BE DOC	UMENTER	) BE	LOW	EACH TH	IE SAMP	LES C	HANG	E POSS	ESSIQ	N INCL	UDING	COUF	IER D	ELIVER	₹¥.			
1. Actin ( RELINQUISHED BY: 2.	AMPLET: DATE/INE: AECEIVED BY:				Conditi MeOł Comr	ons of bott I extractio nents:	les or o n requ	oolers a ires an	t receipt addition	al 4 oz	L Comp Jar for j	liant Sercent	C) solid.	Non Co	mpliant	Co	ooler Ten e in Cool	ip  er?:	<u>6°C</u> -14
AELINQUISHED BY: 3. Fed 2	DATEFTING: JOSS RECEIVED FOR LAB	8Y;			Page	,	of		SH	IPPED	VIA: CL CH	ent: I Emteci		d deliv Picked		BOVERN	RNIGHT VIGHT.	Shipm ASL VI	ient Complete; ES 🔲 NO

Revision 8/2007

CHEMTECH

CHAIN OF CUSTODY RECORD

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

#### **Reginald St-Juste**

From: Sent: To: Cc: Subject: Bagnato, Stefan <Stefan.Bagnato@arcadis-us.com> Tuesday, August 20, 2013 4:37 PM Reginald@chemtech.net 'Kurt Hummler' RE: Karg Brothers Tannery - E3191

NYSDEC is OK with that, please proceed. Thanks.

From: Reginald St-Juste [mailto:Reginald@chemtech.net]
Sent: Tuesday, August 20, 2013 5:30 PM
To: Bagnato, Stefan
Cc: 'Kurt Hummler'
Subject: RE: Karg Brothers Tannery - E3191

Following our conversation, we do have the extract we used for the Pesticide analysis and the holding time on that is 40 days. We can run the PCB analysis out of that extract.

Let me know if you guys are ok with that.

Regards, Reginald St-Juste Project Manager Tel. 908 728 3147 Email: <u>Reginald@chemtech.net</u>



284 Sheffield Street, Mountainside, New Jersey 07092 Phone: (908) 789 8900 Fax: (908) 789 8922







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Environmental

Laboratory SINCE 1967

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6.2

From: Bagnato, Stefan [mailto:Stefan.Bagnato@arcadis-us.com]
Sent: Tuesday, August 20, 2013 4:19 PM
To: Reginald@chemtech.net
Cc: 'Kurt Hummler'
Subject: RE: Karg Brothers Tannery - E3191

Reggie-NYSDEC wants us to collect a new sample, so we'll ship that to you guys ASAP. Thanks for the info. -Stefan

From: Reginald St-Juste [mailto:Reginald@chemtech.net]
Sent: Tuesday, August 20, 2013 5:05 PM
To: Bagnato, Stefan
Cc: 'Kurt Hummler'
Subject: RE: Karg Brothers Tannery - E3191

Yes we do. Let me know if you want us to proceed with the analysis.

Regards, **Reginald St-Juste Project Manager** Tel. 908 728 3147 Email: Reginald@chemtech.net A Full Service Environmental 284 Sheffield Street. Laboratory SINCE 1967 Mountainside, New Jersey 07092 Phone: (908) 789 8900 **MBE CERTIFIED** Fax: (908) 789 8922 ABORATORY CREDITATION DITED ISO/IEC 17025

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From: Bagnato, Stefan [mailto:Stefan.Bagnato@arcadis-us.com]
Sent: Tuesday, August 20, 2013 3:56 PM
To: Reginald@chemtech.net; Kurt Hummler (khummler@chemtech.net)
Subject: Karg Brothers Tannery - E3191

Reggie-Do you guys have enough remaining sample volume for this sample to run PCBs by Method 8082?

#### 14 of 16

Please advise. Thanks, -Stefan

#### Stefan Bagnato, P.G. | Project Geologist | stefan.bagnato@arcadis-us.com

ARCADIS U.S., Inc. I 855 Route 146, Suite 210 I Clifton Park, NY 12065 518.250.7300 (office) I 518.250.7334 (direct) I 518.250.7301 (fax) www.arcadis-us.com

ARCADIS, Imagine the result

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6.2



# Laboratory Certification

State	License No.
New Jersey	20012
New York	11376
Connecticut	PH-0649
Florida	E87935
Louisiana	5035
Maryland	296
Massachusetts	M-NJ503
Oklahoma	9705
Pennsylvania	68-548
Rhode Island	LAO00259
	400000
Virginia	460220
Texas	T10470448-10-1

Other:

DOD ELAP Certified (L-A-B Accredited), ISO/IEC 17025	L2219
Soil Permit	P330-11-00012
CLP Inorganic Contract	EPW09038
CLP Organic Contract	EPW11030

QA Control Code: A2070148



# DATA FOR

# VOLATILE ORGANICS SEMI-VOLATILE ORGANICS GC SEMI-VOLATILES METALS

#### **PROJECT NAME : KARG BROTHERS TANNERY, JOHNSTOWN**

ARCADIS INC.

855 Route 146, Suite 210

Clifton Park, NY - 12065

Phone No: 518-250-7300

ORDER ID : E4004

ATTENTION : Bruce Nelson







Date : 10/10/2013

Dear Bruce Nelson,

4 soil samples for the **Karg Brothers Tannery**, **Johnstown** project were received on **10/05/2013**. The analytical fax results for those samples requested for an expedited turn around time may be seen in this report. Please contact me if you have any questions or concerns regarding this report.

The invoice for this workorder is also attached to the e-mail.

Regards,

Reginald St-Juste 908-728-3147 Reginald@chemtech.net

				20 V V		integni.l	IGL								linear (	126	511
	CLIENT INFORMATION				CLIENT	PROJECT	NFORM	ATTON						CLIEN	T BILLI	NG INF	ORMATION
COMPANY:	ARCADES U.S. M.	PA	OJEC		FORMEI	2 KARF	3727	HERS	TANA	ETY	BILL	TO:	ARC	ADI	5		PO#AT3RYAIS
DDRESS:	855 TOUTE 146 SUITE ZIO	PR	OJEC	T NO.:0	238401	5 LOC	ATION	: JOH	USTON.	JNY	ADDF	ESS.					104.00000000
TY: CU	FON PARK STATE:NY ZIP: 1206:	5 PR	OJEC	TMANA	GER: 5	TEFAN	BA	andT	5		CITY	HIG	HLAN	75 1	LANG	I STAT	TECO 710.
ATTENTION: STEFAN BAGNATO				stefan	.bagnat	o @ arc	12:3-	14.00.	~		ATTE	NTION	Accor	VAGL	E		
PHONE 518-250-7300 FAX: 518-250-7301 PHONI				518-2	50-73	00 1	AX						, , , ,		ANA	LYSIS	NE:
	DATA TURNAROUND INFORMATION			DAT	A DELIVE	RABLE IN	FORM	ATION			/	/	/	/	/	/	///
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HEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAN MAT	IPLE TRIX	SAMPLE TYPE dwn	SA COLL	MPLE ECTION TIME	OF BOTTLES	E	E 2	E	PRE	E	TIVES				COMMENTS 
	FELF KARG 02 (1004B)	501	L	xx	10/4/13	0800	2	X	X	X	X	X				3	
	FLLF KARG 03 (100413)	1		X	1	0801	1	X					1				
	FUF KARG OY (100413)			xx		0802	2	×	×	X	x	x					
	FLLF KARGOS (100413)			X		0803	1	X									
	FUE KARE 06 (100413)		1	V		0804	L		×	×	X.	X	ľ				HOLD
	FUF KARG 07 (100413)		_	X		0805	1	X	4								HOLD
-	FULF KARC 08 (100413)		_	1		0906	1	X	-								HOLD
	FULF KARE 09 (100413)	++	-	X		0807	1	X	-	-	_			()			HOL D
	FULF KARG 10 (100413)	+	-	X		0809	1	X				-2		1			HOLD
	(147 LARC 1) (100 413)	V		X	V	0810		X								6.2	HOLD
OUISHED BY	SAMPLER: DATE/TIME: RECEIVED BY:	JOUMEN	TED	BELUW	Condit MeO	Ions of bottl	LES C les or c n requ	oolers at	= POSS		Compl	UDING		IER DE	LIVER)	Coc	ler Temp6(



Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG02(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	83.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CI	RQL Units Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	4100		1	0.849	2.53	5.05	mg/Kg 10/08/13	10/08/13	SW6010
7440-36-0	Antimony	2.53	U	1	0.566	1.26	2.53	mg/Kg 10/08/13	10/08/13	SW6010
7440-38-2	Arsenic	1.91		1	0.334	0.505	1.01	mg/Kg 10/08/13	10/08/13	SW6010
7440-39-3	Barium	15.6		1	0.404	2.53	5.05	mg/Kg 10/08/13	10/08/13	SW6010
7440-41-7	Beryllium	0.204	J	1	0.061	0.152	0.303	mg/Kg 10/08/13	10/08/13	SW6010
7440-43-9	Cadmium	0.303	U	1	0.061	0.152	0.303	mg/Kg 10/08/13	10/08/13	SW6010
7440-70-2	Calcium	15800		1	1.08	50.5	101	mg/Kg 10/08/13	10/08/13	SW6010
7440-47-3	Chromium	4.15		1	0.131	0.253	0.505	mg/Kg 10/08/13	10/08/13	SW6010
7440-48-4	Cobalt	4.06		1	0.576	0.758	1.52	mg/Kg 10/08/13	10/08/13	SW6010
7440-50-8	Copper	6.25		1	0.323	0.505	1.01	mg/Kg 10/08/13	10/08/13	SW6010
7439-89-6	Iron	10500		1	1.34	2.53	5.05	mg/Kg 10/08/13	10/08/13	SW6010
7439-92-1	Lead	4.19		1	0.121	0.303	0.606	mg/Kg 10/08/13	10/08/13	SW6010
7439-95-4	Magnesium	1900		1	4.63	50.5	101	mg/Kg 10/08/13	10/08/13	SW6010
7439-96-5	Manganese	177		1	0.192	0.505	1.01	mg/Kg 10/08/13	10/08/13	SW6010
7439-97-6	Mercury	0.01	J	1	0.006	0.006	0.011	mg/Kg 10/07/13	10/07/13	SW7471A
7440-02-0	Nickel	8.16		1	0.465	1.01	2.02	mg/Kg 10/08/13	10/08/13	SW6010
7440-09-7	Potassium	340		1	3.54	50.5	101	mg/Kg 10/08/13	10/08/13	SW6010
7782-49-2	Selenium	0.846	J	1	0.414	0.505	1.01	mg/Kg 10/08/13	10/08/13	SW6010
7440-22-4	Silver	0.634		1	0.152	0.253	0.505	mg/Kg 10/08/13	10/08/13	SW6010
7440-23-5	Sodium	44.6	J	1	2.55	50.5	101	mg/Kg 10/08/13	10/08/13	SW6010
7440-28-0	Thallium	2.02	U	1	0.273	1.01	2.02	mg/Kg 10/08/13	10/08/13	SW6010
7440-62-2	Vanadium	14.5		1	0.596	1.01	2.02	mg/Kg 10/08/13	10/08/13	SW6010
7440-66-6	Zinc	27.5		1	0.707	1.01	2.02	mg/Kg 10/08/13	10/08/13	SW6010

-							
Color Before:	Gray	Clarity Before:		Texture:	Medium		
Color After:	Yellow	Clarity After:		Artifacts:	No		
Comments:	Mercury						
U = Not Detect LOQ = Limit o MDL = Method LOD = Limit o D = Dilution	red f Quantitation l Detection Limit f Detection		J = Estimated Value B = Analyte Found in Associated Method Blank * = indicates the duplicate analysis is not within control limits. E = Indicates the reported value is estimated because of the presence of interference.				
Q = indicates LCS control criteria did not meet requirements			OR = Over Range N =Spiked sample recovery not within control limits				



Client:	Arcadis Inc.			Date Collec	cted:	10/04/13		
Project:	Karg Brothers Tannery, J	ohnstown		Date Recei	ved:	10/05/13		
Client Sample ID:	FCLF-KARG02(100413)	)		SDG No.:		E4004		
Lab Sample ID:	E4004-01			Matrix:		SOIL		
Analytical Method	SW8082A			% Moisture	<b>.</b> .	16.5	Decanted:	
marytical method.	51000211			/0 Wielstury		10.5	Decunted.	
Sample Wt/Vol:	30.07 Units: g			Final Vol:		10000	uL	
Soil Aliquot Vol:	uL			Test:		PCB		
Extraction Type:				Injection V	olume :			
GPC Factor :	1.0 PH :							
File ID/Qc Batch:	Dilution:	Prep Date		Date Analyzed P			ep Batch ID	
PB007810.D	1	10/07/13		10/07/13		PE	372704	J
CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARCETS								
12674-11-2	Aroclor-1016		20.3	U	4	4	20.3	ug/kg
11104-28-2	Aroclor-1221		20.3	U	4	4	20.3	ug/kg
11141-16-5	Aroclor-1232		20.3	U	4	4	20.3	ug/kg
53469-21-9	Aroclor-1242		20.3	U	4	4	20.3	ug/kg
12672-29-6	Aroclor-1248		20.3	U	4	4	20.3	ug/kg
11097-69-1	Aroclor-1254		20.3	U	1.8	4	20.3	ug/kg
11096-82-5	Aroclor-1260		20.3	U	4	4	20.3	ug/kg
SURROGATES								
877-09-8	Tetrachloro-m-xylen	2	194		10 - 16	56	97%	SPK: 20
	Tett defilior 0 - III - A y tetta		17.1				>1/0	

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates > 25% difference for detected

concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration

was not performed prior to analyte detection in sample.



							1
Client:	Arcadis Inc.		Date Collec	cted:	10/04/13		
Project:	Karg Brothers Tannery, Johnstown		Date Receiv	ved:	10/05/13		
Client Sample ID:	FCLF-KARG02(100413)		SDG No.:		E4004		
Lab Sample ID:	F4004-01		Matrix.		SOIL		
And Gal Mathed					16.5	During	
Analytical Method:	Sw8081B		% Moisture	2:	16.5	Decanted:	
Sample Wt/Vol:	30.07 Units: g		Final Vol:		10000	uL	
Soil Aliquot Vol:	uL		Test:		Pesticide-T	CL	
Extraction Type:			Injection Ve	olume :			
GPC Factor :	1.0 PH :						
File ID/Qc Batch:	Dilution: Prep Dat	te	Date Analyze	ed	Pre	p Batch ID	
PL005743.D	1 10/07/13	3	10/07/13		PB	72705	J
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS 319-84-6	alpha-BHC	2	I	0 155	0 394	2	ug/kg
319-85-7	beta-BHC	2	U	0.135	0.394	2	ug/kg 110/kg
319-86-8	delta-BHC	2	U	0.119	0.394	2	ug/kg
58-89-9	gamma-BHC (Lindane)	2	U	0.179	0.394	2	ug/kg
76-44-8	Heptachlor	2	U	0.167	0.394	2	ug/kg
309-00-2	Aldrin	2	U	0.119	0.394	2	ug/kg
1024-57-3	Heptachlor epoxide	2	U	0.191	0.394	2	ug/kg
959-98-8	Endosulfan I	2	U	0.179	0.394	2	ug/kg
60-57-1	Dieldrin	2	U	0.155	0.394	2	ug/kg
72-55-9	4,4-DDE	2	U	0.239	0.394	2	ug/kg
72-20-8	Endrin	2	U	0.215	0.394	2	ug/kg
33213-65-9	Endosulfan II	2	U	0.167	0.394	2	ug/kg
72-54-8	4,4-DDD	2	U	0.203	0.394	2	ug/kg
1031-07-8	Endosulfan Sulfate	2	U	0.179	0.394	2	ug/kg
50-29-3	4,4-DDT	2	U	0.167	0.394	2	ug/kg
72-43-5	Methoxychlor	2	U	0.203	0.394	2	ug/kg
53494-70-5	Endrin ketone	2	U	0.155	0.394	2	ug/kg
7421-93-4	Endrin aldehyde	2	U	0.179	0.394	2	ug/kg
5103-71-9	alpha-Chlordane	2	U	0.167	0.394	2	ug/kg
5103-74-2	gamma-Chlordane	2	U	0.155	0.394	2	ug/kg
8001-35-2	Toxaphene	20.3	U	4	4	20.3	ug/kg
SURROGATES							
2051-24-3	Decachlorobiphenyl	16.3		10 - 16	59	81%	SPK: 20
877-09-8	Tetrachloro-m-xylene	18.7		31 - 15	1	94%	SPK: 20



CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ/CRQL Uni	its
PL005743.D	1	10/07/13		10/07/13		PB72705		
File ID/Qc Batch:	Dilution:	Prep Date		Date Analyzed	1	Pre	ep Batch ID	
GPC Factor :	1.0 PH :							
Extraction Type:				Injection Vo	lume :			
Soil Aliquot Vol:	uL			Test:		Pesticide-T	TCL	
Sample Wt/Vol:	30.07 Units: g			Final Vol:		10000	uL	
Analytical Method:	SW8081B			% Moisture:		16.5	Decanted:	
Lab Sample ID:	E4004-01			Matrix:		SOIL		
Client Sample ID:	FCLF-KARG02(100413)			SDG No.:		E4004		
Project:	Karg Brothers Tannery, Jo	ohnstown		Date Receiv	ed:	10/05/13		
Client:	Arcadis Inc.			Date Collect	ted:	10/04/13		

- U = Not Detected
- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range
- P = Indicates > 25% difference for detected
- concentrations between the two GC columns
- Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution
- $\mathbf{S}=\mathbf{Indicates}$  estimated value where valid five-point calibration
- was not performed prior to analyte detection in sample.



Client:	Arcadis Inc.	Date Collected:	10/04/13		
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13		
Client Sample ID:	FCLF-KARG02(100413)	SDG No.:	E4004		
Lab Sample ID:	E4004-01	Matrix:	SOIL		
Analytical Method:	SW8270	% Moisture:	16.5		
Sample Wt/Vol:	30.07 Units: g	Final Vol:	1000 uL		
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20		
Extraction Type :	Decanted : N	Level :	LOW		
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :		

File ID/Qc Batch:	Dilution:	Prep Date		Date Analyzed		d	Prep Batch ID	
BF065951.D	1	10/07/13		10/	08/13		PB72687	
CAS Number	Parameter	С	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS								
100-52-7	Benzaldehyde	39	90	U	20.8	39.8	390	ug/Kg
108-95-2	Phenol	39	90	U	9.2	39.8	390	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	39	90	U	19.1	39.8	390	ug/Kg
95-57-8	2-Chlorophenol	39	90	U	21	39.8	390	ug/Kg
95-48-7	2-Methylphenol	39	90	U	21.6	39.8	390	ug/Kg
108-60-1	2.2-oxybis(1-Chloropropane)	39	90	U	16.5	39.8	390	ug/Kg
98-86-2	Acetophenone	39	90	U	12.2	39.8	390	ug/Kg
65794-96-9	3+4-Methylphenols	39	90	U	20.7	39.8	390	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	39	90	U	20.1	39.8	390	ug/Kg
67-72-1	Hexachloroethane	39	90	U	17.8	39.8	390	ug/Kg
98-95-3	Nitrobenzene	39	90	U	15.1	39.8	390	ug/Kg
78-59-1	Isophorone	39	90	U	13.1	39.8	390	ug/Kg
88-75-5	2-Nitrophenol	39	90	U	19.2	39.8	390	ug/Kg
105-67-9	2,4-Dimethylphenol	39	90	U	22.6	39.8	390	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	39	90	U	22.9	39.8	390	ug/Kg
120-83-2	2,4-Dichlorophenol	39	90	U	15.2	39.8	390	ug/Kg
91-20-3	Naphthalene	39	90	U	13.7	39.8	390	ug/Kg
106-47-8	4-Chloroaniline	39	90	U	28.1	39.8	390	ug/Kg
87-68-3	Hexachlorobutadiene	39	90	U	14.5	39.8	390	ug/Kg
105-60-2	Caprolactam	39	90	U	18.5	79.7	390	ug/Kg
59-50-7	4-Chloro-3-methylphenol	39	90	U	17.7	39.8	390	ug/Kg
91-57-6	2-Methylnaphthalene	39	90	U	10	39.8	390	ug/Kg
77-47-4	Hexachlorocyclopentadiene	39	90	U	9.7	39.8	390	ug/Kg
88-06-2	2,4,6-Trichlorophenol	39	90	U	12.2	39.8	390	ug/Kg
95-95-4	2,4,5-Trichlorophenol	39	90	U	28	39.8	390	ug/Kg
92-52-4	1,1-Biphenyl	39	90	U	15.1	39.8	390	ug/Kg
91-58-7	2-Chloronaphthalene	39	90	U	9.1	39.8	390	ug/Kg
88-74-4	2-Nitroaniline	39	90	U	17.7	39.8	390	ug/Kg
131-11-3	Dimethylphthalate	5	10		10.8	39.8	390	ug/Kg
208-96-8	Acenaphthylene	39	90	U	10	39.8	390	ug/Kg
606-20-2	2,6-Dinitrotoluene	39	90	U	16.2	39.8	390	ug/Kg

# CHEIMITECH

193-39-5

53-70-3

Indeno(1,2,3-cd)pyrene

Dibenzo(a,h)anthracene

#### **Report of Analysis**

Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG02(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-01	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	16.5
Sample Wt/Vol:	30.07 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :

File ID/Qc Batch:	Dilution:	Prep Date		Date Analyzed		d	Prep Batch ID	
BF065951.D	1	10/07/13		10/	/08/13		PB72687	
CAS Number	Parameter	C	onc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
99-09-2	3-Nitroaniline	39	90	U	25.6	79.7	390	ug/Kg
83-32-9	Acenaphthene	39	90	U	11.2	39.8	390	ug/Kg
51-28-5	2,4-Dinitrophenol	39	90	U	40.5	320	390	ug/Kg
100-02-7	4-Nitrophenol	39	90	U	74	200	390	ug/Kg
132-64-9	Dibenzofuran	39	90	U	15.5	39.8	390	ug/Kg
121-14-2	2,4-Dinitrotoluene	39	90	U	11.9	39.8	390	ug/Kg
84-66-2	Diethylphthalate	14	40	J	6.2	39.8	390	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether	39	90	U	21.6	39.8	390	ug/Kg
86-73-7	Fluorene	39	90	U	15.1	39.8	390	ug/Kg
100-01-6	4-Nitroaniline	39	90	U	51.9	79.7	390	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol	39	90	U	22.8	200	390	ug/Kg
86-30-6	n-Nitrosodiphenylamine	39	90	U	9.6	39.8	390	ug/Kg
101-55-3	4-Bromophenyl-phenylether	39	90	U	7.8	39.8	390	ug/Kg
118-74-1	Hexachlorobenzene	39	90	U	16.2	39.8	390	ug/Kg
1912-24-9	Atrazine	39	90	U	21	39.8	390	ug/Kg
87-86-5	Pentachlorophenol	39	90	U	27.2	39.8	390	ug/Kg
85-01-8	Phenanthrene	39	90	U	10.8	39.8	390	ug/Kg
120-12-7	Anthracene	39	90	U	8.1	39.8	390	ug/Kg
86-74-8	Carbazole	39	90	U	8.7	39.8	390	ug/Kg
84-74-2	Di-n-butylphthalate	39	90	U	31.3	39.8	390	ug/Kg
206-44-0	Fluoranthene	39	90	U	8	39.8	390	ug/Kg
129-00-0	Pyrene	39	90	U	9.6	39.8	390	ug/Kg
85-68-7	Butylbenzylphthalate	39	90	U	19.1	39.8	390	ug/Kg
91-94-1	3,3-Dichlorobenzidine	39	90	U	25.6	39.8	390	ug/Kg
56-55-3	Benzo(a)anthracene	39	90	U	19	39.8	390	ug/Kg
218-01-9	Chrysene	39	90	U	18	39.8	390	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate	39	90	U	14.1	39.8	390	ug/Kg
117-84-0	Di-n-octyl phthalate	39	90	U	4.5	39.8	390	ug/Kg
205-99-2	Benzo(b)fluoranthene	39	90	U	13	39.8	390	ug/Kg
207-08-9	Benzo(k)fluoranthene	39	90	U	18.8	39.8	390	ug/Kg
50-32-8	Benzo(a)pyrene	39	90	U	8.6	39.8	390	ug/Kg

390

390

U

U

13.3

11.5

39.8

39.8

390

390

ug/Kg

ug/Kg



Client:	Arcadis Inc.	Date Collected:	10/04/13		
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13		
Client Sample ID:	FCLF-KARG02(100413)	SDG No.:	E4004		
Lab Sample ID:	E4004-01	Matrix:	SOIL		
Analytical Method:	SW8270	% Moisture:	16.5		
Sample Wt/Vol:	30.07 Units: g	Final Vol:	1000 uL		
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20		
Extraction Type :	Decanted : N	Level :	LOW		
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :		

File ID/Qc Batch:	Dilution:	Prep Date		Dat	e Analyze	1	Prep Batch ID	
BF065951.D	1	10/07/13		10/	08/13		PB72687	
CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
191-24-2	Benzo(g,h,i)perylene		390	U	16.1	39.8	390	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene		390	U	15.7	39.8	390	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol		390	U	15.7	39.8	390	ug/Kg
SURROGATES								
367-12-4	2-Fluorophenol		110		28 - 127		73%	SPK: 150
13127-88-3	Phenol-d6		99.1		34 - 127		66%	SPK: 150
4165-60-0	Nitrobenzene-d5		71.5		31 - 132		71%	SPK: 100
321-60-8	2-Fluorobiphenyl		71.1		39 - 123		71%	SPK: 100
118-79-6	2,4,6-Tribromophenol		110		30 - 133		74%	SPK: 150
1718-51-0	Terphenyl-d14		68.6		37 - 115		69%	SPK: 100
INTERNAL STAN	NDARDS							
3855-82-1	1,4-Dichlorobenzene-d4		46642	5.54				
1146-65-2	Naphthalene-d8		174858	6.79				
15067-26-2	Acenaphthene-d10		125730	8.51				
1517-22-2	Phenanthrene-d10		226374	9.98				
1719-03-5	Chrysene-d12		179436	12.59				
1520-96-3	Perylene-d12		181843	13.9				
TENTATIVE IDE	NTIFIED COMPOUNDS							
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	-	210	А			3.84	ug/Kg
	unknown5.31		3600	J			5.31	ug/Kg
000112-95-8	Eicosane		92.4	J			9.91	ug/Kg
000506-52-5	1-Hexacosanol		100	J			12.5	ug/Kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

# CHEMITECH

Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG02(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	16.5
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch	: Dilution:	Prep Date	Date Analyzed			Prep Batch ID			
VD039294.D	1		10/08/	10/08/13		VD100813			
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units		
TARGETS									
75-71-8	Dichlorodifluoromethane	6	U	0.6	0.6	6	ug/Kg		
74-87-3	Chloromethane	6	U	0.6	0.6	6	ug/Kg		
75-01-4	Vinyl Chloride	6	U	0.6	0.6	6	ug/Kg		
74-83-9	Bromomethane	6	U	1.2	1.2	6	ug/Kg		
75-00-3	Chloroethane	6	U	0.6	0.6	6	ug/Kg		
75-69-4	Trichlorofluoromethane	6	U	0.6	0.6	6	ug/Kg		
76-13-1	1,1,2-Trichlorotrifluoroethane	6	U	0.6	0.6	6	ug/Kg		
75-35-4	1,1-Dichloroethene	6	U	0.6	0.6	6	ug/Kg		
67-64-1	Acetone	29.9	U	3	3	29.9	ug/Kg		
75-15-0	Carbon Disulfide	6	U	0.6	0.6	6	ug/Kg		
1634-04-4	Methyl tert-butyl Ether	6	U	0.6	0.6	6	ug/Kg		
79-20-9	Methyl Acetate	6	U	1.2	1.2	6	ug/Kg		
75-09-2	Methylene Chloride	1.4	J	0.6	0.6	6	ug/Kg		
156-60-5	trans-1,2-Dichloroethene	6	U	0.6	0.6	6	ug/Kg		
75-34-3	1,1-Dichloroethane	6	U	0.6	0.6	6	ug/Kg		
110-82-7	Cyclohexane	6	U	0.6	0.6	6	ug/Kg		
78-93-3	2-Butanone	29.9	U	3.7	9	29.9	ug/Kg		
56-23-5	Carbon Tetrachloride	6	U	0.6	0.6	6	ug/Kg		
156-59-2	cis-1,2-Dichloroethene	6	U	0.6	0.6	6	ug/Kg		
74-97-5	Bromochloromethane	6	U	0.6	0.6	6	ug/Kg		
67-66-3	Chloroform	6	U	0.6	0.6	6	ug/Kg		
71-55-6	1,1,1-Trichloroethane	6	U	0.6	0.6	6	ug/Kg		
108-87-2	Methylcyclohexane	6	U	0.6	0.6	6	ug/Kg		
71-43-2	Benzene	6	U	0.45	0.6	6	ug/Kg		
107-06-2	1,2-Dichloroethane	6	U	0.6	0.6	6	ug/Kg		
79-01-6	Trichloroethene	6	U	0.6	0.6	6	ug/Kg		
78-87-5	1,2-Dichloropropane	6	U	0.31	0.6	6	ug/Kg		
75-27-4	Bromodichloromethane	6	U	0.6	0.6	6	ug/Kg		
108-10-1	4-Methyl-2-Pentanone	29.9	U	3	3	29.9	ug/Kg		
108-88-3	Toluene	6	U	0.6	0.6	6	ug/Kg		
10061-02-6	t-1,3-Dichloropropene	6	U	0.6	0.6	6	ug/Kg		

# CHEMILECH

Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG02(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-01	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	16.5
Sample Wt/Vol:	5.01 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch	Dilution:	Prep Date	Date A	Analyzed		Prep Batch ID	
VD039294.D	1		10/08/13			VD100813	
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	6	U	0.6	0.6	6	ug/Kg
79-00-5	1,1,2-Trichloroethane	6	U	1.1	1.2	6	ug/Kg
591-78-6	2-Hexanone	29.9	U	3	3	29.9	ug/Kg
124-48-1	Dibromochloromethane	6	U	0.6	0.6	6	ug/Kg
106-93-4	1,2-Dibromoethane	6	U	0.6	0.6	6	ug/Kg
127-18-4	Tetrachloroethene	6	U	0.6	0.6	6	ug/Kg
108-90-7	Chlorobenzene	6	U	0.6	0.6	6	ug/Kg
100-41-4	Ethyl Benzene	6	U	0.6	0.6	6	ug/Kg
179601-23-1	m/p-Xylenes	12	U	0.86	1.2	12	ug/Kg
95-47-6	o-Xylene	6	U	0.6	0.6	6	ug/Kg
100-42-5	Styrene	6	U	0.54	0.6	6	ug/Kg
75-25-2	Bromoform	6	U	0.88	1.8	6	ug/Kg
98-82-8	Isopropylbenzene	6	U	0.57	0.6	6	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	6	U	0.55	0.6	6	ug/Kg
541-73-1	1,3-Dichlorobenzene	6	U	0.44	0.6	6	ug/Kg
106-46-7	1,4-Dichlorobenzene	6	U	0.49	0.6	6	ug/Kg
95-50-1	1,2-Dichlorobenzene	6	U	0.6	0.6	6	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	6	U	1	6	6	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	6	U	0.6	0.6	6	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	6	U	0.6	1.2	6	ug/Kg
123-91-1	1,4-Dioxane	120	U	120	120	120	ug/Kg
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	45.7		56 - 120	)	91%	SPK: 50
1868-53-7	Dibromofluoromethane	51.3		57 - 135	5	102%	SPK: 50
2037-26-5	Toluene-d8	53.7		67 - 123	3	107%	SPK: 50
460-00-4	4-Bromofluorobenzene	53.7		33 - 14	1	107%	SPK: 50
INTERNAL STAN	NDARDS						
363-72-4	Pentafluorobenzene	537277	6.52				
540-36-3	1,4-Difluorobenzene	656284	7.63				
3114-55-4	Chlorobenzene-d5	647069	11.82				
3855-82-1	1.4-Dichlorobenzene-d4	394170	14.18				



CAS Number Parar	neter	Conc.	Qualifier MDL LOD	LOQ / CRQL Units
VD039294.D	1		10/08/13	VD100813
File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
GC Column:	RTX-VMS ID :	0.18	Level :	LOW
Soil Aliquot Vol:	ul		Test:	VOC-TCLVOA-10
Sample Wt/Vol:	5.01 Units: g		Final Vol:	5000 uL
Analytical Method:	SW8260		% Moisture:	16.5
Lab Sample ID:	E4004-01		Matrix:	SOIL
Client Sample ID:	FCLF-KARG02(10041)	3)	SDG No.:	E4004
Project:	Karg Brothers Tannery,	Johnstown	Date Received:	10/05/13
Client:	Arcadis Inc.		Date Collected:	10/04/13

U = Not Detected

- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range
- Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution

# CHEMITECH

Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG03(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-02	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	20.1
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch	atch: Dilution: Prep Date Date Analyzed		Analyzed	red Prep Batch ID			
VD039301.D	1		10/08/	10/08/13		VD100813	
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	6.3	U	0.63	0.63	6.3	ug/Kg
74-87-3	Chloromethane	6.3	U	0.63	0.63	6.3	ug/Kg
75-01-4	Vinyl Chloride	6.3	U	0.63	0.63	6.3	ug/Kg
74-83-9	Bromomethane	6.3	U	1.3	1.3	6.3	ug/Kg
75-00-3	Chloroethane	6.3	U	0.63	0.63	6.3	ug/Kg
75-69-4	Trichlorofluoromethane	6.3	U	0.63	0.63	6.3	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	6.3	U	0.63	0.63	6.3	ug/Kg
75-35-4	1,1-Dichloroethene	6.3	U	0.63	0.63	6.3	ug/Kg
67-64-1	Acetone	31.3	U	3.1	3.1	31.3	ug/Kg
75-15-0	Carbon Disulfide	6.3	U	0.63	0.63	6.3	ug/Kg
1634-04-4	Methyl tert-butyl Ether	6.3	U	0.63	0.63	6.3	ug/Kg
79-20-9	Methyl Acetate	6.3	U	1.3	1.3	6.3	ug/Kg
75-09-2	Methylene Chloride	6.3	U	0.63	0.63	6.3	ug/Kg
156-60-5	trans-1,2-Dichloroethene	6.3	U	0.63	0.63	6.3	ug/Kg
75-34-3	1,1-Dichloroethane	6.3	U	0.63	0.63	6.3	ug/Kg
110-82-7	Cyclohexane	6.3	U	0.63	0.63	6.3	ug/Kg
78-93-3	2-Butanone	31.3	U	3.9	9.4	31.3	ug/Kg
56-23-5	Carbon Tetrachloride	6.3	U	0.63	0.63	6.3	ug/Kg
156-59-2	cis-1,2-Dichloroethene	6.3	U	0.63	0.63	6.3	ug/Kg
74-97-5	Bromochloromethane	6.3	U	0.63	0.63	6.3	ug/Kg
67-66-3	Chloroform	6.3	U	0.63	0.63	6.3	ug/Kg
71-55-6	1,1,1-Trichloroethane	6.3	U	0.63	0.63	6.3	ug/Kg
108-87-2	Methylcyclohexane	6.3	U	0.63	0.63	6.3	ug/Kg
71-43-2	Benzene	6.3	U	0.48	0.63	6.3	ug/Kg
107-06-2	1,2-Dichloroethane	6.3	U	0.63	0.63	6.3	ug/Kg
79-01-6	Trichloroethene	6.3	U	0.63	0.63	6.3	ug/Kg
78-87-5	1,2-Dichloropropane	6.3	U	0.33	0.63	6.3	ug/Kg
75-27-4	Bromodichloromethane	6.3	U	0.63	0.63	6.3	ug/Kg
108-10-1	4-Methyl-2-Pentanone	31.3	U	3.1	3.1	31.3	ug/Kg
108-88-3	Toluene	6.3	U	0.63	0.63	6.3	ug/Kg
10061-02-6	t-1,3-Dichloropropene	6.3	U	0.63	0.63	6.3	ug/Kg

# CHEMITECH

Client:	Arcadis Inc.	Date Collected:	10/04/13		
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13		
Client Sample ID:	FCLF-KARG03(100413)	SDG No.:	E4004		
Lab Sample ID:	E4004-02	Matrix:	SOIL		
Analytical Method:	SW8260	% Moisture:	20.1		
Sample Wt/Vol:	5 Units: g	Final Vol:	5000 uL		
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10		
GC Column:	RTX-VMS ID: 0.18	Level :	LOW		

File ID/Qc Batch	: Dilution:	Prep Date	Date Analyzed			Prep Batch ID	
VD039301.D	1		10/08	10/08/13		VD100813	
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	6.3	U	0.63	0.63	6.3	ug/Kg
79-00-5	1,1,2-Trichloroethane	6.3	U	1.1	1.3	6.3	ug/Kg
591-78-6	2-Hexanone	31.3	U	3.1	3.1	31.3	ug/Kg
124-48-1	Dibromochloromethane	6.3	U	0.63	0.63	6.3	ug/Kg
106-93-4	1,2-Dibromoethane	6.3	U	0.63	0.63	6.3	ug/Kg
127-18-4	Tetrachloroethene	6.3	U	0.63	0.63	6.3	ug/Kg
108-90-7	Chlorobenzene	6.3	U	0.63	0.63	6.3	ug/Kg
100-41-4	Ethyl Benzene	6.3	U	0.63	0.63	6.3	ug/Kg
179601-23-1	m/p-Xylenes	12.5	U	0.9	1.3	12.5	ug/Kg
95-47-6	o-Xylene	6.3	U	0.63	0.63	6.3	ug/Kg
100-42-5	Styrene	6.3	U	0.56	0.63	6.3	ug/Kg
75-25-2	Bromoform	6.3	U	0.93	1.9	6.3	ug/Kg
98-82-8	Isopropylbenzene	6.3	U	0.6	0.63	6.3	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	6.3	U	0.58	0.63	6.3	ug/Kg
541-73-1	1,3-Dichlorobenzene	6.3	U	0.46	0.63	6.3	ug/Kg
106-46-7	1,4-Dichlorobenzene	6.3	U	0.51	0.63	6.3	ug/Kg
95-50-1	1,2-Dichlorobenzene	6.3	U	0.63	0.63	6.3	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	6.3	U	1.1	6.3	6.3	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	6.3	U	0.63	0.63	6.3	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	6.3	U	0.63	1.3	6.3	ug/Kg
123-91-1	1,4-Dioxane	130	U	130	130	130	ug/Kg
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	44		56 - 120	)	88%	SPK: 50
1868-53-7	Dibromofluoromethane	49.7		57 - 135	;	99%	SPK: 50
2037-26-5	Toluene-d8	50.2		67 - 123		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	52		33 - 141		104%	SPK: 50
INTERNAL STAN	NDARDS						
363-72-4	Pentafluorobenzene	572067	6.52				
540-36-3	1,4-Difluorobenzene	676034	7.63				
3114-55-4	Chlorobenzene-d5	675696	11.81				
3855-82-1	1,4-Dichlorobenzene-d4	412138	14.17				



Dilution: Prep Date	Date Analyzed 10/08/13	Prep Batch ID VD100813
RTX-VMS ID: 0.18	Level :	LOW
uL	Test:	VOC-TCLVOA-10
5 Units: g	Final Vol:	5000 uL
SW8260	% Moisture:	20.1
E4004-02	Matrix:	SOIL
FCLF-KARG03(100413)	SDG No.:	E4004
Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Arcadis Inc.	Date Collected:	10/04/13
	Arcadis Inc. Karg Brothers Tannery, Johnstown FCLF-KARG03(100413) E4004-02 SW8260 5 Units: g	Arcadis Inc.Date Collected:Karg Brothers Tannery, JohnstownDate Received:FCLF-KARG03(100413)SDG No.:E4004-02Matrix:SW8260% Moisture:5Units:gTart:

U = Not Detected

- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range
- Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution



Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG04(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-03	Matrix:	SOIL
Level (low/med):	low	% Solid:	79.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CI	RQL Units Prep Date	Date Ana.	Ana Met.
7429-90-5	Aluminum	4300		1	0.892	2.65	5.31	mg/Kg 10/08/13	10/08/13	SW6010
7440-36-0	Antimony	2.65	U	1	0.595	1.33	2.65	mg/Kg 10/08/13	10/08/13	SW6010
7440-38-2	Arsenic	1.87		1	0.35	0.531	1.06	mg/Kg 10/08/13	10/08/13	SW6010
7440-39-3	Barium	15.7		1	0.425	2.65	5.31	mg/Kg 10/08/13	10/08/13	SW6010
7440-41-7	Beryllium	0.2	J	1	0.064	0.159	0.319	mg/Kg 10/08/13	10/08/13	SW6010
7440-43-9	Cadmium	0.319	U	1	0.064	0.159	0.319	mg/Kg 10/08/13	10/08/13	SW6010
7440-70-2	Calcium	17700		1	1.14	53.1	106	mg/Kg 10/08/13	10/08/13	SW6010
7440-47-3	Chromium	4.35		1	0.138	0.265	0.531	mg/Kg 10/08/13	10/08/13	SW6010
7440-48-4	Cobalt	4.06		1	0.605	0.796	1.59	mg/Kg 10/08/13	10/08/13	SW6010
7440-50-8	Copper	6.05		1	0.34	0.531	1.06	mg/Kg 10/08/13	10/08/13	SW6010
7439-89-6	Iron	10700		1	1.41	2.65	5.31	mg/Kg 10/08/13	10/08/13	SW6010
7439-92-1	Lead	3.65		1	0.127	0.319	0.637	mg/Kg 10/08/13	10/08/13	SW6010
7439-95-4	Magnesium	2300		1	4.86	53.1	106	mg/Kg 10/08/13	10/08/13	SW6010
7439-96-5	Manganese	180		1	0.202	0.531	1.06	mg/Kg 10/08/13	10/08/13	SW6010
7439-97-6	Mercury	0.012	J	1	0.006	0.006	0.012	mg/Kg 10/07/13	10/07/13	SW7471A
7440-02-0	Nickel	8.22		1	0.489	1.06	2.12	mg/Kg 10/08/13	10/08/13	SW6010
7440-09-7	Potassium	369		1	3.72	53.1	106	mg/Kg 10/08/13	10/08/13	SW6010
7782-49-2	Selenium	0.777	J	1	0.435	0.531	1.06	mg/Kg 10/08/13	10/08/13	SW6010
7440-22-4	Silver	0.665		1	0.159	0.265	0.531	mg/Kg 10/08/13	10/08/13	SW6010
7440-23-5	Sodium	48	J	1	2.68	53.1	106	mg/Kg 10/08/13	10/08/13	SW6010
7440-28-0	Thallium	2.12	U	1	0.287	1.06	2.12	mg/Kg 10/08/13	10/08/13	SW6010
7440-62-2	Vanadium	14.8		1	0.627	1.06	2.12	mg/Kg 10/08/13	10/08/13	SW6010
7440-66-6	Zinc	26.5		1	0.743	1.06	2.12	mg/Kg 10/08/13	10/08/13	SW6010

-							
Color Before:	Gray	Clarity Before:	Т	exture:	Medium		
Color After:	Yellow	Clarity After:	А	artifacts:	No		
Comments:	Mercury						
U = Not Detected LOQ = Limit of Quantitation MDL = Method Detection Limit LOD = Limit of Detection D = Dilution			<ul> <li>J = Estimated Value</li> <li>B = Analyte Found in Associated Method Blank</li> <li>* = indicates the duplicate analysis is not within control limits.</li> <li>E = Indicates the reported value is estimated because of the presence of interference.</li> </ul>				
Q = indicates L	CS control criteria did not meet re	equirements	OR = Over Range				

N =Spiked sample recovery not within control limits



Client:	Arcadis Inc.			Date Collec	cted:	10/04/13		
Project:	Karg Brothers Tannery, Joh	nstown		Date Recei	ved:	10/05/13		
Client Sample ID:	FCLF-KARG04(100413)			SDG No.:		E4004		
Lab Sample ID:	E4004-03			Matrix:		SOIL		
Analytical Method	SW8082A			% Moisture	<i>.</i> .	20.2	Decanted.	
				5 11/1		10000	Documera.	
Sample Wt/Vol:	30.09 Units: g			Final Vol:		10000	uL	
Soil Aliquot Vol:	uL			Test:		PCB		
Extraction Type:				Injection V	olume :			
GPC Factor :	1.0 PH :							
File ID/Qc Batch:	Dilution:	Prep Date		Date Analyze	ed	Pro	ep Batch ID	
PB007812.D	1	10/07/13		10/07/13		PE	372704	
CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARCETS								
12674-11-2	Aroclor-1016		21.2	U	4.2	4.2	21.2	ug/kg
11104-28-2	Aroclor-1221		21.2	U	4.2	4.2	21.2	ug/kg
11141-16-5	Aroclor-1232		21.2	U	4.2	4.2	21.2	ug/kg
53469-21-9	Aroclor-1242		21.2	U	4.2	4.2	21.2	ug/kg
12672-29-6	Aroclor-1248		21.2	U	4.2	4.2	21.2	ug/kg
11097-69-1	Aroclor-1254		21.2	U	1.9	4.2	21.2	ug/kg
11096-82-5	Aroclor-1260		21.2	U	4.2	4.2	21.2	ug/kg
SURROGATES								
877-09-8	Tetrachloro-m-xylene		18.5		10 - 16	56	93%	SPK: 20
2051-24-3	Decachlorobiphenyl		15.7		60 - 12	25	79%	SPK: 20

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates > 25% difference for detected

concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration

was not performed prior to analyte detection in sample.



							1
Client:	Arcadis Inc.		Date Collec	cted:	10/04/13		
Project:	Karg Brothers Tannery, Johnstown		Date Recei	ved:	10/05/13		
Client Sample ID:	FCLF-KARG04(100413)		SDG No.:		E4004		
Lab Sample ID:	E4004-03		Matrix:		SOIL		
Analytical Mathady	CW/0001D		0/ Moistur		20.2	Decented	
Analytical Method:	Sw8081B		% MOISTUR		20.2	Decanted	
Sample Wt/Vol:	30.03 Units: g		Final Vol:		10000	uL	
Soil Aliquot Vol:	uL		Test:		Pesticide-T	CL	
Extraction Type:			Injection V	olume :			
GPC Factor :	1.0 PH :						
File ID/Qc Batch:	Dilution: Prep Date		Date Analyze	ed	Pre	ep Batch ID	
PL005744.D	1 10/07/13		10/07/13		PB	72705	
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
			_				
TARGETS		2.1		0.160	0.412	2.1	a
319-84-6	alpha-BHC	2.1	U	0.163	0.413	2.1	ug/kg
319-85-7	beta-BHC	2.1	U	0.225	0.413	2.1	ug/kg
519-80-8	della-BHC	2.1	U	0.125	0.413	2.1	ug/kg
58-89-9 76 11 8	gamma-BHC (Lindane)	2.1	U	0.188	0.413	2.1	ug/kg
309 00 2		2.1	U	0.175	0.413	2.1	ug/kg ug/kg
309-00-2 1024 57 3	Alulli Hentachlor enovide	2.1	U	0.123	0.413	2.1	ug/kg
050 08 8	Endogulfon I	2.1	U	0.2	0.413	2.1	ug/kg
9J9-90-0 60 57 1	Dialdrin	2.1	U	0.160	0.413	2.1	ug/kg
72 55 0	4 4 DDE	2.1	U	0.103	0.413	2.1	ug/kg
72-33-9	Fndrin	2.1	U	0.25	0.413	2.1	ug/kg
72-20-8	Endosulfan II	2.1	U	0.223	0.413	2.1	ug/kg ug/kg
72 54 8		2.1	U	0.175	0.413	2.1	ug/kg
1031-07-8	Fndosulfan Sulfate	2.1	U	0.188	0.413	2.1	ug/kg 110/kg
50_29_3	4 4-DDT	2.1	U	0.100	0.413	2.1	ug/kg ug/kg
72-43-5	Methoxychlor	2.1	U	0.175	0.413	2.1	ug/kg 110/kg
53494-70-5	Endrin ketone	2.1	U	0.163	0.413	2.1	ug/kg 110/kg
7421-93-4	Endrin aldebyde	2.1	U	0.105	0.413	2.1	ug/kg 110/kg
5103-71-9	alpha-Chlordane	2.1	U	0.100	0.113	2.1	110/kg
5103-74-2	gamma-Chlordane	2.1	U	0.173	0.113	2.1	119/kg
8001-35-2	Toxaphene	21.3	Ŭ	4.2	4.2	21.3	ug/kg
	-				-		
SURROGATES	Dagashlarahinharvi	17		10 17	50	<u>800/</u>	SDV. 20
2031-24-3	Tetrachloro mloro	10		10 - 10	על 1	0070 000/	SPK: 20
0//-09-0	Tetrachioro-m-xylene	19.0		51 - 13	01	98%0	SPK: 20



CAS Number	Parameter		Conc.	Qualifier M	IDL LOD	LOQ / CRQL Units	
PL005744.D	1	10/07/13		10/07/13	PB	372705	J
File ID/Qc Batch:	Dilution:	Prep Date		Date Analyzed	Pre	ep Batch ID	٦
GPC Factor :	1.0 P	H :					J
Extraction Type:				Injection Volun	ne :		
Soil Aliquot Vol:		uL		Test:	Pesticide-T	CL	
Sample Wt/Vol:	30.03 Units:	g		Final Vol:	10000	uL	
Analytical Method:	SW8081B			% Moisture:	20.2	Decanted:	
Lab Sample ID:	E4004-03			Matrix:	SOIL		
Client Sample ID:	FCLF-KARG04(1004	-13)		SDG No.:	E4004		
Project:	Karg Brothers Tanner	y, Johnstown		Date Received:	10/05/13		
Client:	Arcadis Inc.			Date Collected:	: 10/04/13		

- U = Not Detected
- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range
- P = Indicates > 25% difference for detected
- concentrations between the two GC columns
- Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution
- $\mathbf{S}=\mathbf{Indicates}$  estimated value where valid five-point calibration
- was not performed prior to analyte detection in sample.

# CHEIMITECH

Client:	Arcadis Inc.	Date Collected:	10/04/13		
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13		
Client Sample ID:	FCLF-KARG04(100413)	SDG No.:	E4004		
Lab Sample ID:	E4004-03	Matrix:	SOIL		
Analytical Method:	SW8270	% Moisture:	20.2		
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL		
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20		
Extraction Type :	Decanted : N	Level :	LOW		
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :		

File ID/Qc Batch:	Dilution:	Prep Date		Date Analyzed		Prep Batch ID		
BF065952.D	1	10/07/13		10/08/13		PB72687		
CAS Number	Parameter	С	onc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARCETS								
100-52-7	Benzaldehvde	4	10	U	21.8	41.7	410	ug/Kg
108-95-2	Phenol	4	10	U	9.6	41.7	410	ug/Kg
111-44-4	bis(2-Chloroethyl)ether	4	10	U	20	41.7	410	ug/Kg
95-57-8	2-Chlorophenol	4	10	U	22	41.7	410	ug/Kg
95-48-7	2-Methylphenol	4	10	U	22.6	41.7	410	ug/Kg
108-60-1	2,2-oxybis(1-Chloropropane)	4	10	U	17.3	41.7	410	ug/Kg
98-86-2	Acetophenone	4	10	U	12.8	41.7	410	ug/Kg
65794-96-9	3+4-Methylphenols	4	10	U	21.6	41.7	410	ug/Kg
621-64-7	n-Nitroso-di-n-propylamine	4	10	U	21	41.7	410	ug/Kg
67-72-1	Hexachloroethane	42	10	U	18.6	41.7	410	ug/Kg
98-95-3	Nitrobenzene	4	10	U	15.8	41.7	410	ug/Kg
78-59-1	Isophorone	42	10	U	13.8	41.7	410	ug/Kg
88-75-5	2-Nitrophenol	4	10	U	20.1	41.7	410	ug/Kg
105-67-9	2,4-Dimethylphenol	42	10	U	23.6	41.7	410	ug/Kg
111-91-1	bis(2-Chloroethoxy)methane	4	10	U	24	41.7	410	ug/Kg
120-83-2	2,4-Dichlorophenol	42	10	U	15.9	41.7	410	ug/Kg
91-20-3	Naphthalene	4	10	U	14.4	41.7	410	ug/Kg
106-47-8	4-Chloroaniline	42	10	U	29.4	41.7	410	ug/Kg
87-68-3	Hexachlorobutadiene	42	10	U	15.1	41.7	410	ug/Kg
105-60-2	Caprolactam	42	10	U	19.4	83.4	410	ug/Kg
59-50-7	4-Chloro-3-methylphenol	42	10	U	18.5	41.7	410	ug/Kg
91-57-6	2-Methylnaphthalene	42	10	U	10.5	41.7	410	ug/Kg
77-47-4	Hexachlorocyclopentadiene	42	10	U	10.1	41.7	410	ug/Kg
88-06-2	2,4,6-Trichlorophenol	42	10	U	12.8	41.7	410	ug/Kg
95-95-4	2,4,5-Trichlorophenol	42	10	U	29.3	41.7	410	ug/Kg
92-52-4	1,1-Biphenyl	42	10	U	15.8	41.7	410	ug/Kg
91-58-7	2-Chloronaphthalene	42	10	U	9.5	41.7	410	ug/Kg
88-74-4	2-Nitroaniline	42	10	U	18.5	41.7	410	ug/Kg
131-11-3	Dimethylphthalate	14	400		11.3	41.7	410	ug/Kg
208-96-8	Acenaphthylene	42	10	U	10.5	41.7	410	ug/Kg
606-20-2	2,6-Dinitrotoluene	4	10	U	17	41.7	410	ug/Kg
# CHEIMITECH

Client:	Arcadis Inc.	Date Collected:	10/04/13	
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13	
Client Sample ID:	FCLF-KARG04(100413)	SDG No.:	E4004	
Lab Sample ID:	E4004-03	Matrix: SOIL		
Analytical Method:	SW8270	% Moisture:	20.2	
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL	
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20	
Extraction Type :	Decanted : N	Level :	LOW	
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :	

File ID/Qc Batch:	Dilution:	Prep Date		Da	te Analyze	ed	Prep Batch ID	
BF065952.D	1	10/07/13		10/	10/08/13		PB72687	
CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
99-09-2	3-Nitroaniline		410	U	26.8	83.4	410	ug/Kg
83-32-9	Acenaphthene		410	U	11.8	41.7	410	ug/Kg
51-28-5	2,4-Dinitrophenol		410	U	42.4	330	410	ug/Kg
100-02-7	4-Nitrophenol		410	U	77.4	210	410	ug/Kg
132-64-9	Dibenzofuran		410	U	16.3	41.7	410	ug/Kg
121-14-2	2,4-Dinitrotoluene		410	U	12.5	41.7	410	ug/Kg
84-66-2	Diethylphthalate		410	U	6.5	41.7	410	ug/Kg
7005-72-3	4-Chlorophenyl-phenylether		410	U	22.6	41.7	410	ug/Kg
86-73-7	Fluorene		410	U	15.8	41.7	410	ug/Kg
100-01-6	4-Nitroaniline		410	U	54.3	83.4	410	ug/Kg
534-52-1	4,6-Dinitro-2-methylphenol		410	U	23.9	210	410	ug/Kg
86-30-6	n-Nitrosodiphenylamine		410	U	10	41.7	410	ug/Kg
101-55-3	4-Bromophenyl-phenylether		410	U	8.1	41.7	410	ug/Kg
118-74-1	Hexachlorobenzene		410	U	17	41.7	410	ug/Kg
1912-24-9	Atrazine		410	U	22	41.7	410	ug/Kg
87-86-5	Pentachlorophenol		410	U	28.5	41.7	410	ug/Kg
85-01-8	Phenanthrene		410	U	11.3	41.7	410	ug/Kg
120-12-7	Anthracene		410	U	8.5	41.7	410	ug/Kg
86-74-8	Carbazole		410	U	9.1	41.7	410	ug/Kg
84-74-2	Di-n-butylphthalate		410	U	32.8	41.7	410	ug/Kg
206-44-0	Fluoranthene		410	U	8.4	41.7	410	ug/Kg
129-00-0	Pyrene		410	U	10	41.7	410	ug/Kg
85-68-7	Butylbenzylphthalate		410	U	20	41.7	410	ug/Kg
91-94-1	3,3-Dichlorobenzidine		410	U	26.8	41.7	410	ug/Kg
56-55-3	Benzo(a)anthracene		410	U	19.9	41.7	410	ug/Kg
218-01-9	Chrysene		410	U	18.9	41.7	410	ug/Kg
117-81-7	Bis(2-ethylhexyl)phthalate		410	U	14.8	41.7	410	ug/Kg
117-84-0	Di-n-octyl phthalate		410	U	4.8	41.7	410	ug/Kg
205-99-2	Benzo(b)fluoranthene		410	U	13.6	41.7	410	ug/Kg
207-08-9	Benzo(k)fluoranthene		410	U	19.6	41.7	410	ug/Kg
50-32-8	Benzo(a)pyrene		410	U	9	41.7	410	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene		410	U	13.9	41.7	410	ug/Kg
53-70-3	Dibenzo(a,h)anthracene		410	U	12	41.7	410	ug/Kg

# CHEIMITECH

Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG04(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-03	Matrix:	SOIL
Analytical Method:	SW8270	% Moisture:	20.2
Sample Wt/Vol:	30.05 Units: g	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	SVOC-TCL BNA -20
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup : N	PH :

File ID/Qc Batch:	Dilution:	Prep Date		Dat	e Analyzeo	1	Prep Batch ID	
BF065952.D	1	10/07/13		10/0	08/13		PB72687	
CAS Number	Parameter		Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
191-24-2	Benzo(g,h,i)perylene		410	U	16.9	41.7	410	ug/Kg
95-94-3	1,2,4,5-Tetrachlorobenzene		410	U	16.4	41.7	410	ug/Kg
58-90-2	2,3,4,6-Tetrachlorophenol		410	U	16.4	41.7	410	ug/Kg
SURROGATES								
367-12-4	2-Fluorophenol		100		28 - 127		68%	SPK: 150
13127-88-3	Phenol-d6		110		34 - 127		71%	SPK: 150
4165-60-0	Nitrobenzene-d5		77.7		31 - 132		78%	SPK: 100
321-60-8	2-Fluorobiphenyl		73.8		39 - 123		74%	SPK: 100
118-79-6	2,4,6-Tribromophenol		110		30 - 133		76%	SPK: 150
1718-51-0	Terphenyl-d14		70.5		37 - 115		70%	SPK: 100
INTERNAL STAN	NDARDS							
3855-82-1	1,4-Dichlorobenzene-d4		43612	5.54				
1146-65-2	Naphthalene-d8		158616	6.79				
15067-26-2	Acenaphthene-d10		94208	8.51				
1517-22-2	Phenanthrene-d10		214568	9.98				
1719-03-5	Chrysene-d12		185078	12.59				
1520-96-3	Perylene-d12		178886	13.9				
TENTATIVE IDE	NTIFIED COMPOUNDS							
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-		190	А			3.84	ug/Kg
	unknown5.31		3900	J			5.31	ug/Kg
000112-04-9	Silane, trichlorooctadecyl-		120	J			9.91	ug/Kg
000244-40-6	2-Azafluorene		91.3	J			10.22	ug/Kg
000112-95-8	Eicosane		130	J			10.33	ug/Kg
077899-03-7	1-Heneicosyl formate		270	J			12.5	ug/Kg
	unknown14.61		95.9	J			14.61	ug/Kg
000556-71-8	Cyclononasiloxane, octadecamethy	<i>r</i> <b>l-</b>	110	J			15.6	ug/Kg
	unknown16.24		130	J			16.24	ug/Kg



CAS Number Pa	arameter	Conc.	Qualifier MDL LOD	LOQ / CRQL Units
BF065952.D	1	10/07/13	10/08/13	PB72687
File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
Injection Volume :		GPC Factor : 1.0	GPC Cleanup :	N PH:
Extraction Type :		Decanted :	N Level :	LOW
Soil Aliquot Vol:		uL	Test:	SVOC-TCL BNA -20
Sample Wt/Vol:	30.05 Units:	g	Final Vol:	1000 uL
Analytical Method:	SW8270		% Moisture:	20.2
Lab Sample ID:	E4004-03		Matrix:	SOIL
Client Sample ID:	FCLF-KARG04(	100413)	SDG No.:	E4004
Project:	Karg Brothers Tar	nnery, Johnstown	Date Received:	10/05/13
Client:	Arcadis Inc.		Date Collected:	10/04/13

## **Report of Analysis**

U = Not Detected

- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution

# CHEMILECH

Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG04(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	20.2
Sample Wt/Vol:	5.02 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch	h: Dilution:	Prep Date	Date A	Analyzed		Prep Batch ID	
VD039302.D	1		10/08/	/13		VD100813	
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	6.2	U	0.62	0.62	6.2	ug/Kg
74-87-3	Chloromethane	6.2	U	0.62	0.62	6.2	ug/Kg
75-01-4	Vinyl Chloride	6.2	U	0.62	0.62	6.2	ug/Kg
74-83-9	Bromomethane	6.2	U	1.2	1.2	6.2	ug/Kg
75-00-3	Chloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
75-69-4	Trichlorofluoromethane	6.2	U	0.62	0.62	6.2	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	6.2	U	0.62	0.62	6.2	ug/Kg
75-35-4	1,1-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
67-64-1	Acetone	31.2	U	3.1	3.1	31.2	ug/Kg
75-15-0	Carbon Disulfide	6.2	U	0.62	0.62	6.2	ug/Kg
1634-04-4	Methyl tert-butyl Ether	6.2	U	0.62	0.62	6.2	ug/Kg
79-20-9	Methyl Acetate	6.2	U	1.2	1.2	6.2	ug/Kg
75-09-2	Methylene Chloride	1.5	J	0.62	0.62	6.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
75-34-3	1,1-Dichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
110-82-7	Cyclohexane	6.2	U	0.62	0.62	6.2	ug/Kg
78-93-3	2-Butanone	31.2	U	3.9	9.4	31.2	ug/Kg
56-23-5	Carbon Tetrachloride	6.2	U	0.62	0.62	6.2	ug/Kg
156-59-2	cis-1,2-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
74-97-5	Bromochloromethane	6.2	U	0.62	0.62	6.2	ug/Kg
67-66-3	Chloroform	6.2	U	0.62	0.62	6.2	ug/Kg
71-55-6	1,1,1-Trichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
108-87-2	Methylcyclohexane	6.2	U	0.62	0.62	6.2	ug/Kg
71-43-2	Benzene	6.2	U	0.47	0.62	6.2	ug/Kg
107-06-2	1,2-Dichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
79-01-6	Trichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
78-87-5	1,2-Dichloropropane	6.2	U	0.32	0.62	6.2	ug/Kg
75-27-4	Bromodichloromethane	6.2	U	0.62	0.62	6.2	ug/Kg
108-10-1	4-Methyl-2-Pentanone	31.2	U	3.1	3.1	31.2	ug/Kg
108-88-3	Toluene	6.2	U	0.62	0.62	6.2	ug/Kg
10061-02-6	t-1,3-Dichloropropene	6.2	U	0.62	0.62	6.2	ug/Kg

# CHEMITECH

Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG04(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-03	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	20.2
Sample Wt/Vol:	5.02 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch	: Dilution:	Prep Date	Date Analyzed			Prep Batch ID		
VD039302.D	1		10/08	/13		VD100813		
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units	
10061-01-5	cis-1,3-Dichloropropene	6.2	U	0.62	0.62	6.2	ug/Kg	
79-00-5	1,1,2-Trichloroethane	6.2	U	1.1	1.2	6.2	ug/Kg	
591-78-6	2-Hexanone	31.2	U	3.1	3.1	31.2	ug/Kg	
124-48-1	Dibromochloromethane	6.2	U	0.62	0.62	6.2	ug/Kg	
106-93-4	1,2-Dibromoethane	6.2	U	0.62	0.62	6.2	ug/Kg	
127-18-4	Tetrachloroethene	6.2	U	0.62	0.62	6.2	ug/Kg	
108-90-7	Chlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg	
100-41-4	Ethyl Benzene	6.2	U	0.62	0.62	6.2	ug/Kg	
179601-23-1	m/p-Xylenes	12.5	U	0.9	1.2	12.5	ug/Kg	
95-47-6	o-Xylene	6.2	U	0.62	0.62	6.2	ug/Kg	
100-42-5	Styrene	6.2	U	0.56	0.62	6.2	ug/Kg	
75-25-2	Bromoform	6.2	U	0.92	1.9	6.2	ug/Kg	
98-82-8	Isopropylbenzene	6.2	U	0.6	0.62	6.2	ug/Kg	
79-34-5	1,1,2,2-Tetrachloroethane	6.2	U	0.57	0.62	6.2	ug/Kg	
541-73-1	1,3-Dichlorobenzene	6.2	U	0.46	0.62	6.2	ug/Kg	
106-46-7	1,4-Dichlorobenzene	6.2	U	0.51	0.62	6.2	ug/Kg	
95-50-1	1,2-Dichlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg	
96-12-8	1,2-Dibromo-3-Chloropropane	6.2	U	1.1	6.2	6.2	ug/Kg	
120-82-1	1,2,4-Trichlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg	
87-61-6	1,2,3-Trichlorobenzene	6.2	U	0.62	1.2	6.2	ug/Kg	
123-91-1	1,4-Dioxane	120	U	120	120	120	ug/Kg	
SURROGATES								
17060-07-0	1,2-Dichloroethane-d4	44.6		56 - 120	)	89%	SPK: 50	
1868-53-7	Dibromofluoromethane	49.7		57 - 135	i	99%	SPK: 50	
2037-26-5	Toluene-d8	51.8		67 - 123	i	104%	SPK: 50	
460-00-4	4-Bromofluorobenzene	50.1		33 - 141		100%	SPK: 50	
INTERNAL STAN	NDARDS							
363-72-4	Pentafluorobenzene	563625	6.51					
540-36-3	1,4-Difluorobenzene	670033	7.63					
3114-55-4	Chlorobenzene-d5	677047	11.81					
3855-82-1	1,4-Dichlorobenzene-d4	407082	14.17					



CAS Number Param	eter	Conc.	Qualifier MDL LOI	D LOQ / CRQL Units
VD039302.D	1		10/08/13	VD100813
File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
GC Column:	KIX-VMS ID: 0	.18	Level :	LOW
		10	Le el	
Soil Aliquot Vol:	υL		Test:	VOC-TCLVOA-10
Sample Wt/Vol:	5.02 Units: g		Final Vol:	5000 uL
Analytical Method:	SW8260		% Moisture:	20.2
Lab Sample ID:	E4004-03		Matrix:	SOIL
Client Sample ID:	FCLF-KARG04(100413)		SDG No.:	E4004
Project:	Karg Brothers Tannery, Jol	hnstown	Date Received:	10/05/13
Client:	Arcadis Inc.		Date Collected:	10/04/13

## **Report of Analysis**

U = Not Detected

- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range
- Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution

# CHEMILECH

Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG05(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-04	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	19.7
Sample Wt/Vol:	5.03 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batcl	n: Dilution:	Prep Date	Date A	Analyzed		Prep Batch ID	
VD039295.D	1		10/08/	13		VD100813	
CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
75-71-8	Dichlorodifluoromethane	6.2	U	0.62	0.62	6.2	ug/Kg
74-87-3	Chloromethane	6.2	U	0.62	0.62	6.2	ug/Kg
75-01-4	Vinyl Chloride	6.2	U	0.62	0.62	6.2	ug/Kg
74-83-9	Bromomethane	6.2	U	1.2	1.2	6.2	ug/Kg
75-00-3	Chloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
75-69-4	Trichlorofluoromethane	6.2	U	0.62	0.62	6.2	ug/Kg
76-13-1	1,1,2-Trichlorotrifluoroethane	6.2	U	0.62	0.62	6.2	ug/Kg
75-35-4	1,1-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
67-64-1	Acetone	30.9	U	3.1	3.1	30.9	ug/Kg
75-15-0	Carbon Disulfide	6.2	U	0.62	0.62	6.2	ug/Kg
1634-04-4	Methyl tert-butyl Ether	6.2	U	0.62	0.62	6.2	ug/Kg
79-20-9	Methyl Acetate	6.2	U	1.2	1.2	6.2	ug/Kg
75-09-2	Methylene Chloride	1.3	J	0.62	0.62	6.2	ug/Kg
156-60-5	trans-1,2-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
75-34-3	1,1-Dichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
110-82-7	Cyclohexane	6.2	U	0.62	0.62	6.2	ug/Kg
78-93-3	2-Butanone	30.9	U	3.8	9.3	30.9	ug/Kg
56-23-5	Carbon Tetrachloride	6.2	U	0.62	0.62	6.2	ug/Kg
156-59-2	cis-1,2-Dichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
74-97-5	Bromochloromethane	6.2	U	0.62	0.62	6.2	ug/Kg
67-66-3	Chloroform	6.2	U	0.62	0.62	6.2	ug/Kg
71-55-6	1,1,1-Trichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
108-87-2	Methylcyclohexane	6.2	U	0.62	0.62	6.2	ug/Kg
71-43-2	Benzene	6.2	U	0.47	0.62	6.2	ug/Kg
107-06-2	1,2-Dichloroethane	6.2	U	0.62	0.62	6.2	ug/Kg
79-01-6	Trichloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
78-87-5	1,2-Dichloropropane	6.2	U	0.32	0.62	6.2	ug/Kg
75-27-4	Bromodichloromethane	6.2	U	0.62	0.62	6.2	ug/Kg
108-10-1	4-Methyl-2-Pentanone	30.9	U	3.1	3.1	30.9	ug/Kg
108-88-3	Toluene	6.2	U	0.62	0.62	6.2	ug/Kg
10061-02-6	t-1,3-Dichloropropene	6.2	U	0.62	0.62	6.2	ug/Kg

# CHEMITECH

Client:	Arcadis Inc.	Date Collected:	10/04/13
Project:	Karg Brothers Tannery, Johnstown	Date Received:	10/05/13
Client Sample ID:	FCLF-KARG05(100413)	SDG No.:	E4004
Lab Sample ID:	E4004-04	Matrix:	SOIL
Analytical Method:	SW8260	% Moisture:	19.7
Sample Wt/Vol:	5.03 Units: g	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	RTX-VMS ID: 0.18	Level :	LOW

File ID/Qc Batch: Dilution:		Prep Date	Date A	Analyzed	Prep Batch ID		
VD039295.D	1		10/08	10/08/13		VD100813	
CAS Number	Parameter	Conc.	Qualifier MDL		LOD	LOQ / CRQL	Units
10061-01-5	cis-1,3-Dichloropropene	6.2	U	0.62	0.62	6.2	ug/Kg
79-00-5	1,1,2-Trichloroethane	6.2	U	1.1	1.2	6.2	ug/Kg
591-78-6	2-Hexanone	30.9	U	3.1	3.1	30.9	ug/Kg
124-48-1	Dibromochloromethane	6.2	U	0.62	0.62	6.2	ug/Kg
106-93-4	1,2-Dibromoethane	6.2	U	0.62	0.62	6.2	ug/Kg
127-18-4	Tetrachloroethene	6.2	U	0.62	0.62	6.2	ug/Kg
108-90-7	Chlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg
100-41-4	Ethyl Benzene	6.2	U	0.62	0.62	6.2	ug/Kg
179601-23-1	m/p-Xylenes	12.4	U	0.89	1.2	12.4	ug/Kg
95-47-6	o-Xylene	6.2	U	0.62	0.62	6.2	ug/Kg
100-42-5	Styrene	6.2	U	0.56	0.62	6.2	ug/Kg
75-25-2	Bromoform	6.2	U	0.92	1.9	6.2	ug/Kg
98-82-8	Isopropylbenzene	6.2	U	0.59	0.62	6.2	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	6.2	U	0.57	0.62	6.2	ug/Kg
541-73-1	1,3-Dichlorobenzene	6.2	U	0.46	0.62	6.2	ug/Kg
106-46-7	1,4-Dichlorobenzene	6.2	U	0.51	0.62	6.2	ug/Kg
95-50-1	1,2-Dichlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg
96-12-8	1,2-Dibromo-3-Chloropropane	6.2	U	1.1	6.2	6.2	ug/Kg
120-82-1	1,2,4-Trichlorobenzene	6.2	U	0.62	0.62	6.2	ug/Kg
87-61-6	1,2,3-Trichlorobenzene	6.2	U	0.62	1.2	6.2	ug/Kg
123-91-1	1,4-Dioxane	120	U	120	120	120	ug/Kg
SURROGATES							
17060-07-0	1,2-Dichloroethane-d4	45.7		56 - 120	)	91%	SPK: 50
1868-53-7	Dibromofluoromethane	51.8		57 - 135	5	104%	SPK: 50
2037-26-5	Toluene-d8	51.8		67 - 123		104%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.1		33 - 141		104%	SPK: 50
INTERNAL STAN	NDARDS						
363-72-4	Pentafluorobenzene	541636	6.52				
540-36-3	1,4-Difluorobenzene	650362	7.63				
3114-55-4	Chlorobenzene-d5	638715	11.81				
3855-82-1	1,4-Dichlorobenzene-d4	403072	14.17				



CAS Number Par	ameter	Conc.	Qualifier MDL LOD	LOQ / CRQL Units
VD039295.D	1	Prep Date	10/08/13	VD100813
Eila ID/Oa Batahi	Dilution	Dran Data	Data Analyzad	Drop Datah ID
GC Column:	RTX-VMS II	D: 0.18	Level :	LOW
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
Sample Wt/Vol:	5.03 Units:	g	Final Vol:	5000 uL
Analytical Method:	SW8260		% Moisture:	19.7
Lab Sample ID:	E4004-04		Matrix:	SOIL
Client Sample ID:	FCLF-KARG05(100	)413)	SDG No.:	E4004
Project:	Karg Brothers Tanne	ery, Johnstown	Date Received:	10/05/13
Client:	Arcadis Inc.		Date Collected:	10/04/13
Client:	Arcadis Inc.		Date Collected	10/04/13

## **Report of Analysis**

U = Not Detected

- LOQ = Limit of Quantitation
- MDL = Method Detection Limit
- LOD = Limit of Detection
- E = Value Exceeds Calibration Range
- Q = indicates LCS control criteria did not meet requirements

- J = Estimated Value
- B = Analyte Found in Associated Method Blank
- N = Presumptive Evidence of a Compound
- \* = Values outside of QC limits
- D = Dilution

## APPENDIX G

## ENVIRONMENTAL EASEMENT

# FULTON COUNTY CLERK ANN NICKLOY

### Receipt

ŝ,

2	23 West Main Street, Johnstown, NY 12095 DOCUMENT TOTAL:>	\$310.00	Phone (518) 736-5555	Fax (518) 762-9214
	Transfer Tax Transfer Tax	\$0.00		
	RP5217 All others - State	\$241.00		
	RP5217 - County	\$9.00		
	тр584	\$5.00		
	Records Management - State	\$4.75		
	Records Management - County	\$1.00		
	Cultural Ed	\$14.25		
	Recording Fee	\$30.00		
	Cover Page	\$5.00		
	Recording Fees			
	LE PARTY: LAVUIE MICHAEL			
	OK PARTY: JUHNSTOWN CITY OF			
	DEED STAMP: 1537			
	DOC: DEED			
	Instr#: 2016-38121			
	T			
	DOCUMENT TOTAL:>	\$105.00		
	Transfer Tax	\$0.00		
	Transfer Tax			
	тр584	\$5.00		
	Records Management - State	\$4.75		
	Records Management - County	\$1.00		
	Cultural Ed	\$14.25		
	Recording Fee	\$75.00	2	
	Cover Page	\$5.00		
	Recording Fees			
	YORK			
	EE Party: PEOPLE OF THE STATE	OF NEW		
	OR Party: JOHNSTOWN CITY OF		Check # 14269 ->	\$103.00
	DEED STAMP: 1536		Check # 14251 ->	\$312.00
	DOC: EASEMENT		PAYMENTS	
	Instr#: 2016-38120			
	Rec'd Frm: MICHAEL J POULIN, E	SQ.	CASH BACK:	\$0.00
	Cash Drawer: CASH1		TOTAL RECEIVED:	> \$415.00
	Recording Clerk: LD		TOTAL RECEIPT:	> \$415.00
			Receipt Summary	£ 41 E 100
	<b>RECEIPT # 2016314304</b>			
	Receipt Date: 06/03/2016 02:14	1:53 PM		

County: Fulton Site No: E518022 State Assistance Contract: C303712 as amended July 27, 2015

### ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36

OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION AW

THIS INDENTURE made this 25<sup>th</sup> day of APRIL , 2016 between Owner(s) City of Johnstown, having an office at 33-41 East Main Street, P.O. Box 160, Johnstown, New York 12095, County of Fulton, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of South Side of Crescendoe Road (having a mailing address of 126-222 North Perry Street) in the City of Johnstown, County of Fulton and State of New York, known and designated on the tax map of the County Clerk of Fulton as tax map parcel numbers: Section 162.20 Block 11 Lot 6.11, being the same as that property conveyed to Grantor by deed dated September 29, 1998 and recorded in the Fulton County Clerk's Office in Liber and Page 815/122. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 5.255 +/- acres, and is hereinafter more fully described in the Land Title Survey dated June 25, 2015 prepared by James S. Thew, LLS of Thew Associates, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is

Environmental Easement Page 1

extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of State Assistance ContractNumber: C303712 as amended July 27, 2015, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. <u>Purposes</u>. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. <u>Institutional and Engineering Controls</u>. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

### Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Fulton County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining

Environmental Easement Page 2

contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section Division of Environmental Remediation NYSDEC 625 Broadway Albany, New York 12233 Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation County: Fulton Site No: E518022 State Assistance Contract: C303712 as amended July 27, 2015

Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. <u>Right to Enter and Inspect</u>. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. <u>Reserved Grantor's Rights</u>. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. <u>Enforcement</u>

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against

the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. <u>Notice</u>. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:	Site Number: E518022
	Office of General Counsel
	NYSDEC
	625 Broadway
	Albany New York 12233-5500
With a copy to:	Site Control Section
	Division of Environmental Remediation
	NYSDEC
	625 Broadway
	Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. <u>Recordation</u>. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the

County: Fulton Site No: E518022 State Assistance Contract: C303712 as amended July 27, 2015

recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. <u>Amendment</u>. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. <u>Extinguishment.</u> This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. <u>Joint Obligation</u>. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

Remainder of Page Intentionally Left Blank

**IN WITNESS WHEREOF,** Grantor has caused this instrument to be signed in its name.

City of Johnstown:

By: Michael B. Julius Print Name: Title:

**Grantor's Acknowledgment** 

STATE OF NEW YORK ) ss: )

COUNTY OF

On the <u>26</u> day of <u>Feb</u>, in the year 20 <u>16</u>, before me, the undersigned, personally appeared <u>Michael Julius</u>, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Clu Notary Public - State of New York CATHY A. VAN ALSTY NE Notary Public State of NY

01VA6065172 Resides in Fulton Co. Commission Expires Oct. 9, 20 THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By:

Robert W. Schick, Director Division of Environmental Remediation

### **Grantee's Acknowledgment**

STATE OF NEW YORK ) ) ss: COUNTY OF ALBANY )

On the <u>25</u> day of <u>Apren</u>, in the year 20<u>16</u>, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public - State of New York

PATRICK EUGENE FOSTER NOTARY PUBLIC, STATE OF NEW YORK QUALIFIED IN KINGS COUNTY NO. 02F06278032 COMMISSION EXPIRES 03/18/20 County: Fulton Site No: E518022 State Assistance Contract: C303712 as amended July 27, 2015

### **SCHEDULE "A" PROPERTY DESCRIPTION**

All that tract or parcel of land situate in the City of Johnstown, County of Fulton, State of New York, and being more precisely described as follows:

**Beginning** at a 5/8-inch rebar with a 1 1/4-inch diameter red plastic cap marked "THEW ASSOCIATES - UTICA NY" (herein after referred to as a 5/8-inch rebar) set on the southerly bounds of Crescendoe Street (40-foot width), said rebar being at the northwesterly corner of a parcel of land conveyed by the City of Johnstown to the Crossroads Incubator Corp. by deed dated December 31, 1999 and recorded in the Fulton County Clerk's Office on May 26, 2000 in Liber 860 of Deeds at Page 22, said rebar having New York State plane coordinates (NAD83/2011 – East Zone) of 1,522,499.33 feet North and 527,137.76 feet East;

thence along the westerly line of Crossroads Incubator Corp., the following two courses and distances:

- 1. South 09 degrees 30 minutes 39 seconds East, parallel to and 100 feet distant westerly measured at right angles from the westerly building face of Crossroads Incubator Corp., a distance of 206.66 to a set 5/8-inch rebar;
- South 52 degrees 00 minutes 37 seconds East a distance of 83.72 feet to a MAG Nail set on the northerly line of a parcel of land conveyed by The People's Bank of Johnstown, N.Y. to The Johnstown Cemetery Association by deed dated August 24, 1942, and recorded in the Fulton County Clerk's Office on March 31, 1943 in Liber 244 of Deeds at Page 512, said MAG Nail being on the reputed top of bank of Cayadutta Creek;

thence along the northerly line of The Johnstown Cemetery Association and along the reputed top of bank of Cayadutta Creek, the following 14 courses and distances:

- 1. South 50 degrees 06 minutes 33 seconds West a distance of 37.62 feet to a point;
- 2. South 39 degrees 06 minutes 43 seconds West a distance of 82.46 feet to a point;
- 3. South 34 degrees 21 minutes 21 seconds West a distance of 41.61 feet to a point;
- 4. South 38 degrees 57 minutes 59 seconds West a distance of 61.60 feet to a point;
- 5. South 50 degrees 43 minutes 03 seconds West a distance of 40.94 feet to a point;
- 6. South 27 degrees 06 minutes 00 seconds West a distance of 66.99 feet to a point;
- 7. South 51 degrees 41 minutes 01 seconds West a distance of 46.51 feet to a point;
- 8. South 61 degrees 18 minutes 59 seconds West a distance of 97.44 feet to a point;
- 9. South 71 degrees 18 minutes 10 seconds West a distance of 119.89 feet to a point;
- 10. South 59 degrees 43 minutes 59 seconds West a distance of 60.96 feet to a point;
- 11. South 58 degrees 54 minutes 15 seconds West a distance of 90.91 feet to a point;
- 12. South 56 degrees 56 minutes 56 seconds West a distance of 41.06 feet to a point;
- 13. South 49 degrees 19 minutes 24 seconds West a distance of 25.14 feet to a point;
- 14. South 43 degrees 14 minutes 29 seconds west a distance of 40.65 feet to a point;

thence South 88 degrees 41 minutes 18 seconds West a distance of 42.38 feet to a 5/8-inch rebar

set on the easterly bounds of North Perry Street (66-foot width), said course passing over a 1/2inch iron pipe (extends 0.8 feet above grade) found at a distance of 2.99 feet;

thence North 00 degrees 59 minutes 55 seconds West, along the easterly bounds of North Perry Street, a distance of 100.00 feet to a point at the southwesterly corner of a parcel of land conveyed by June A. Pasquarella to Vincent D. Johansen, Sr. by deed dated September 24, 1984 and recorded in the Fulton County Clerk's Office on October 1, 1984 in Liber 582 of Deeds at Page 1005, said point being North 68 degrees 12 minutes 59 seconds East a distance of 0.77 feet from a found 5/8-inch rebar (0.1 feet below grade);

thence North 68 degrees 12 minutes 59 seconds East, in part along the southerly line of Vincent D. Johansen, Sr. and in part along the southerly line of a parcel of land conveyed by Michael C. Gifford to the City of Johnstown by deed dated September 29, 1998 and recorded in the Fulton County Clerk's Office on October 6, 1998 in Liber 815 of Deeds at Page 122, a distance of 206.34 feet to a set 5/8-inch rebar;

thence North 15 degrees 53 minutes 32 seconds West, along the easterly line of the City of Johnstown, a distance of 108.24 feet to a 5/8-inch rebar set of the southerly bounds of East Fulton Street (40-foot width);

thence along the southerly, easterly, and northerly bounds of East Fulton Street, the following four courses and distances:

- 1. North 74 degrees 06 minutes 28 seconds East a distance of 91.22 feet to a set 5/8-inch rebar;
- 2. North 15 degrees 53 minutes 32 seconds West a distance of 40.00 feet to a set 5/8-inch rebar;
- 3. South 74 degrees 06 minutes 28 seconds West a distance of 142.21 feet to a set 5/8-inch rebar;
- 4. North 87 degrees 57 minutes 15 seconds West a distance of 18.31 feet to a 3/4-inch rebar (0.5 feet below grade) found on the easterly line of a parcel of land conveyed by Gillmore Oil Company, Inc. to J.H. Buhrmaster Co., Inc. by deed dated December 28, 1992 and recorded in the Fulton County Clerk's Office on December 29, 1992 in Liber 714 of Deeds at Page 193;

thence North 04 degrees 39 minutes 12 seconds East, along the easterly line of J.H. Buhrmaster Co., Inc., a distance of 102.50 to a set 5/8-inch rebar;

thence North 68 degrees 07 minutes 34 seconds East, in part along the easterly line of J.H. Buhrmaster Co., Inc., in part along the southerly line of a parcel of land conveyed by Dewey E. Frasier and June A. Frasier to Sandra M. Scott and Charles N. Lamphear by deed dated November 27, 1989 and recorded in the Fulton County Clerk's Office on February 19, 1992 in Liber 699 of Deeds at Page 103, and in part along the southerly line of a parcel of land conveyed by Joan Coon to James S. Lamphear by deed dated February 9, 2005 and recorded in the Fulton County Clerk's Office on February 9, 2005 in Liber 995 of Deeds at Page 333, a distance of 222.85 feet to a 5/8-inch rebar set at the southerly corner of a parcel of land conveyed by Anthony J. and Anna M. Valovic to Anthony J. III and Barbara H. Valovic by deed dated November 14, 1986 and recorded in the Fulton County Clerk's Office on November 20, 1986 in Liber 596 of Deeds at Page 7;

thence North 03 degrees 36 minutes 14 seconds East, along the easterly line of Anthony J. III and Barbara H. Valovic, a distance of 120.82 feet to a 5/8-inch rebar set at the southeasterly bounds of East Canal Street (20-foot width);

thence along the easterly and northerly bounds of East Canal Street, the following two courses and

**Environmental Easement Page 10** 

County: Fulton Site No: E518022 State Assistance Contract: C303712 as amended July 27, 2015

distances:

- 1. North 21 degrees 45 minutes 06 seconds West a distance of 20.00 feet to a set MAG Nail;
- 2. South 68 degrees 14 minutes 54 seconds West a distance of 67.91 feet to a MAG Nail set on the easterly line of a parcel of land conveyed by Gillmore Oil Company, Inc. to Jeffrey F. Lehner by deed dated December 21, 1992 and recorded in the Fulton County Clerk's Office on December 21, 1992 in Liber 714 of Deeds at Page 88;

thence along the easterly line of Jeffrey F. Lehner, the following two courses and distances:

- 1. North 80 degrees 48 minutes 26 seconds West a distance of 24.00 feet to a found 3/4-inch rebar (flush with grade);
- North 59 degrees 01 minutes 22 seconds East a distance of 69.86 feet to a MAG Nail set at the southeasterly corner of a parcel of land conveyed by Nicholas C. Miller to Jan Keichline and Gail Miller by deed dated December 7, 2007 and recorded in the Fulton County Clerk's Office on December 12, 2007 in Liber 1092 of Deeds at Page 226;

thence North 62 degrees 57 minutes 31 seconds East along the easterly line of Jan Keichline and Gail Miller, a distance of 122.99 feet to 3/8-inch rebar (Extends 1.0 feet above grade) found at the southeasterly corner of a parcel of land conveyed by Kenneth and Lena Taddune to Robert F. and Joan D. Frenyea by deed dated May 15, 1971 and recorded in the Fulton County Clerk's Office on May 24, 1971 in Liber 512 of Deeds at Page 862;

thence North 14 degrees 44 minutes 17 seconds East, along the easterly line of Robert F. and Joan D. Frenyea a distance of 123.67 feet to a point on the southerly bounds of Crescendoe Street, said point being South 14 degrees 44 minutes 17 seconds West a distance of 1.27 feet from a found 1-inch iron pipe (flush with grade);

thence South 75 degrees 21 minutes 18 seconds East a distance of 189.72 feet to the Point of Beginning.

To contain 228,894 square feet or 5.255 acres of land, more or less.

The above-described parcel of land is intended to be the same premises conveyed by Michael C. Gifford, as City Chamberlain for the City of Johnstown to the City of Johnstown by deed dated September 29, 1998 and recorded in the Fulton County Clerk's Office on October 6, 1998 in Liber 815 of Deeds at Page 122.

The above-mentioned coordinates, bearings, and distances are referenced to the North American Datum of 1983 – 2007 adjustment (NAD83/2007), projected on the New York State Plane Coordinate System (East Zone).

A map of the above-described parcel of land, dated June 25, 2015, was prepared by Thew Associates PE-LS, PLLC, and is distinguished as Drawing No. UK475-12-13.

TP-584 (,3/07)

New York State Department of Taxation and Finance Combined Real Estate Transfer Tax Return, Credit Line Mortgage Certificate, and Certification of Exemption from the Payment of Estimated Personal Income Tax

Recording office time stamp

See Form TP-584-I, Instructions for Form TP-584, before completing this form. Please print or type.

Schedule A — Infor	mation relating to co	nveyance		
Grantor/Transferor	Name (il individual; last, first, middle initial)		Social security number	
Individual	City of Johnstown			
Corporation	Mailing address			Social security number
Partnership	33-41 East Main Str	eet, PO Box 160		
Estate/Trust	City	State	ZIP code	Federal employer ident. number
X Other	Johnstown	New York	12095	14-6002260
Grantee/Transferee	Name (if individual: last, first	middle initial)		Social security number
Individual	NYS Department of	Environmental Conservation		
Corporation	Mailing address			Social security number
Partnership	625 Broadway			
Estate/Trust	Cily	State	ZIP code	Federal employer ident. number
X Other	Albany	New York	12233	17-6013200

Location and description of property conveyed

Tax ma	ap desig	nation		Address		City/village	Town	County
Section	Block	Lot	_	Crescendoe Road		Johnstown	n/a	Fulton
162.20	11	6.11			-	connictown	100	i utori
/pe of proper	ty conve	eyed (ch	eck applicable box	x)				1.
One- to to Resident Resident Vacant la	three-far tial coop tial cond and	nily hou erative Iominiu	use 5 [ 6 ] m 7 ] 8 ]	Commercial/Industrial Apartment building Office building Other	Date of conv 04,25	day year	Percentage of re conveyed which real property <i>(see ins</i>	eal property is residential % tructions)
ondition of co	onveyand	ce (cheo	k all that apply)					
🔲 Conveya	ince of fe	e inter	est	f.  Conveyance which mere change of ide	consists of a ntify or form of	I. 🔲 Opti	on assignment or	surrender
Acquisitio	on of a col de acquire	ntrolling ed	interest (state %)	ownership or organ Form TP-584.1, Sched	ization (attach ule F)	m. 🗌 Leas	sehold assignmen	t or surrender
Transfer	of a con	trolling	interest (state	g. Conveyance for which credit for tax previously paid will be claimed (attach		n. 🗌 Leas	n. 🔲 Leasehold grant	
percenta	ige trans	ferred_	%)	Form TP-584.1, Sche	dule G)	o. 🕅 Con	veyance of an eas	ement
<ul> <li>Conveyance to cooperative housing corporation</li> </ul>		h. 🔲 Conveyance of cooperative apartment(s)		(s) p. ☐ Conv from <i>Sch</i> e	p. Conveyance for which exemption from transfer tax claimed (complete Schedule B, Part III)			
Conveya foreclosu	nce purs ire or ent	suant to forcem	or in lieu of ent of security	j. 🗌 Conveyance of air r development rights	ights or	q. 🗖 Conv and	veyance of proper partly outside the	ty partly within state
interest (a	attach For	m TP-58	4.1, Schedule E)	k. 🔲 Contract assignmer	nt	r, 🗌 Othe	er (describe)	
or recording of	fficer's us	e I	Amount received		Date received		Transaction n	umber
			Schedule B., Part I Schedule B., Part I	I \$				

### Page 2 of 4 TP-584 (3/07)

Schedule B — Real estate transfer tax return (Tax Law, Article 31)			
<ul> <li>Part I Computation of tax due</li> <li>1 Enter amount of consideration for the conveyance (if you are claiming a total exemption from tax, check exemption claimed box, enter consideration and proceed to Part III)</li> <li>2 Continuing lien deduction (see instructions if property is taken subject to mortgage or lien)</li> </ul>	the in Claimed 1. 2.		
3 Taxable consideration (subtract line 2 from line 1)			
4 Tax: \$2 for each \$500, or fractional part thereof, of consideration on line 3			
<ul> <li>5 Amount of credit claimed (see instructions and attach Form TP-584.1, Schedule G)</li> <li>6 Total tax due* (subtract line 5 from line 4)</li> </ul>			
o Total tax due (subtract line 5 from line 4)			
Part II – Computation of additional tax due on the conveyance of residential real property for \$1 millior 1 Enter amount of consideration for conveyance (from Part L line 1)	1 or more		
2 Taxable consideration (multiply line 1 by the percentage of the premises which is residential real property, as shown in §	Schedule A) 2.		
3 Total additional transfer tax due* (multiply line 2 by 1% (.01))			
Part III – Explanation of exemption claimed on Part I, line 1 (check any boxes that apply)			
The conveyance of real property is exempt from the real estate transfer tax for the following reason:			
a. Conveyance is to the United Nations, the United States of America, the state of New York, or any of agencies, or political subdivisions (or any public corporation, including a public corporation created compact with another state or Canada)	their instrumentalities, pursuant to agreement or a		
b. Conveyance is to secure a debt or other obligation	b		
c. Conveyance is without additional consideration to confirm, correct, modify, or supplement a prior conveyancec			
d. Conveyance of real property is without consideration and not in connection with a sale, including con realty as bona fide gifts	nveyances conveying		
e. Conveyance is given in connection with a tax sale	e		
f. Conveyance is a mere change of identity or form of ownership or organization where there is no cha ownership. (This exemption cannot be claimed for a conveyance to a cooperative housing corporatio comprising the cooperative dwelling or dwellings.) Attach Form TP-584.1, Schedule F	nge in beneficial n of real property f		
g. Conveyance consists of deed of partition	g		
h. Conveyance is given pursuant to the federal Bankruptcy Act	h		
i. Conveyance consists of the execution of a contract to sell real property, without the use or occupanc the granting of an option to purchase real property, without the use or occupancy of such property	y of such property, ori		
Conveyance of an option or contract to purchase real property with the use or occupancy of such property where the consideration is less than \$200,000 and such property was used solely by the grantor as the grantor's personal residence and consists of a one-, two-, or three-family house, an individual residential condominium unit, or the sale of stock in a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential conduction is a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential conduction is a cooperative housing corporation in connection with the grant or transfer of a proprietary leasehold covering an individual residential cooperative apartment.			
<ul> <li>k. Conveyance is not a conveyance within the meaning of Tax Law, Article 31, section 1401(e) (attach do supporting such claim)</li> </ul>	ocuments		
I. Other (attach explanation)			

\*Please make check(s) payable to the county clerk where the recording is to take place. If the recording is to take place in New York City, make check(s) payable to the *NYC Department of Finance*. If a recording is not required, send this return and your check(s) made payable to the *NYS Department of Taxation and Finance*, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

Schedule C — Credit Line Mortgage Certificate (Tax Law, Article 11)
Complete the following only if the interest being transferred is a fee simple interest. I (we) certify that: <i>(check the appropriate box)</i>
1. 🔀 The real property being sold or transferred is not subject to an outstanding credit line mortgage.
2. The real property being sold or transferred is subject to an outstanding credit line mortgage. However, an exemption from the tax is claimed for the following reason:
The transfer of real property is a transfer of a fee simple interest to a person or persons who held a fee simple interest in the real property (whether as a joint tenant, a tenant in common or otherwise) immediately before the transfer.
The transfer of real property is (A) to a person or persons related by blood, marriage or adoption to the original obligor or to one or more of the original obligors or (B) to a person or entity where 50% or more of the beneficial interest in such real property after the transfer is held by the transferor or such related person or persons (as in the case of a transfer to a trustee for the benefit of a minor or the transfer to a trust for the benefit of the transferor).
The transfer of real property is a transfer to a trustee in bankruptcy, a receiver, assignee, or other officer of a court.
The maximum principal amount secured by the credit line mortgage is \$3,000,000 or more, and the real property being sold or transferred is <b>not</b> principally improved nor will it be improved by a one- to six-family owner-occupied residence or dwelling.
Please note: for purposes of determining whether the maximum principal amount secured is \$3,000,000 or more as described above, the amounts secured by two or more credit line mortgages may be aggregated under certain circumstances. See TSB-M-96(6)-R for more information regarding these aggregation requirements.
Other (attach detailed explanation).
3. The real property being transferred is presently subject to an outstanding credit line mortgage. However, no tax is due for the following reason:
A certificate of discharge of the credit line mortgage is being offered at the time of recording the deed.
A check has been drawn payable for transmission to the credit line mortgagee or his agent for the balance due, and a satisfaction of such mortgage will be recorded as soon as it is available.
4. The real property being transferred is subject to an outstanding credit line mortgage recorded in
Signature (both the grantor(s) and grantee(s) must sign)
The undersigned certify that the above information contained in schedules A, B, and C, including any return, certification, schedule, or attachment, is to the best of his/her knowledge, true and complete, and authorize the person(s) submitting such form on their behalf to receive

**Reminder:** Did you complete all of the required information in Schedules A, B, and C? Are you required to complete Schedule D? If you checked *e*, *f*, or *g* in Schedule A, did you complete Form TP-584.1? Have you attached your check(s) made payable to the county clerk where recording will take place or, if the recording is in New York City, to the *NYC Department of Finance*? If no recording is required, send your check(s), made payable to the *Department of Taxation and Finance*, directly to the NYS Tax Department, RETT Return Processing, PO Box 5045, Albany NY 12205-5045.

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### Schedule D - Certification of exemption from the payment of estimated personal income tax (Tax Law, Article 22, section 663)

### Complete the following only if a fee simple interest or a cooperative unit is being transferred by an individual or estate or trust.

#### Part I - New York State residents

If you are a New York State resident transferor(s)/seller(s) listed in Schedule A of Form TP-584 (or an attachment to Form TP-584), you must sign the certification below. If one or more transferors/sellers of the real property or cooperative unit is a resident of New York State, **each** resident transferor/seller must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all resident transferors/sellers.

### Certification of resident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) as signed below was a resident of New York State, and therefore is not required to pay estimated personal income tax under Tax Law, section 663(a) upon the sale or transfer of this real property or cooperative unit.

Signature Muchand B	Print full name Michael B. Julius, Mayor	Date 9/28/15-
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date

Note: A resident of New York State may still be required to pay estimated tax under Tax Law, section 685(c), but not as a condition of recording a deed.

### Part II - Nonresidents of New York State

If you are a nonresident of New York State listed as a transferor/seller in Schedule A of Form TP-584 (or an attachment to Form TP-584) but are not required to pay estimated personal income tax because one of the exemptions below applies under Tax Law, section 663(c), check the box of the appropriate exemption below. If any one of the exemptions below applies to the transferor(s)/seller(s), that transferor(s)/seller(s) is not required to pay estimated personal income tax to New York State under Tax Law, section 663. **Each** nonresident transferor/seller who qualifies under one of the exemptions below must sign in the space provided. If more space is needed, please photocopy this Schedule D and submit as many schedules as necessary to accommodate all nonresident transferor/sellers.

If none of these exemption statements apply, you must complete Form IT-2663, *Nonresident Real Property Estimated Income Tax Payment Form*, or Form IT-2664, *Nonresident Cooperative Unit Estimated Income Tax Payment Form*. For more information, see *Payment of estimated personal income tax*, on page 1 of Form TP-584-I.

### Exemption for nonresident transferor(s)/seller(s)

This is to certify that at the time of the sale or transfer of the real property or cooperative unit, the transferor(s)/seller(s) (grantor) of this real property or cooperative unit was a nonresident of New York State, but is not required to pay estimated personal income tax under Tax Law, section 663 due to one of the following exemptions:

The real property or cooperative unit being sold or transferred qualifies in total as the transferor's/seller's principal residence (within the meaning of Internal Revenue Code, section 121) from \_\_\_\_\_\_ to \_\_\_\_\_ to \_\_\_\_\_ (see instructions).

The transferor/seller is a mortgagor conveying the mortgaged property to a mortgagee in foreclosure, or in lieu of foreclosure with no additional consideration.

The transferor or transferee is an agency or authority of the United States of America, an agency or authority of the state of New York, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association, or a private mortgage insurance company.

Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date
Signature	Print full name	Date