

Application Summary

History: The Site is currently vacant and undeveloped and contains old equipment associated with the former cement plant (Ironton Portland Cement Company) plant activities included, but were not limited to, on-site mining (surface and underground), cement manufacturing, power generation, maintenance support, fuel storage and process water collection/discharge. No information as to how kiln dust was handled was discovered.

Current Uses of the Property: The Site is currently vacant and undeveloped. Building remnants, which are still intact, include three sets of silos, a former packing house and a railcar loader. In addition numerous building foundations remain.

Uses of Adjacent Properties: Land use adjoining the Property has and continues to be primarily undeveloped and/or residential. The warehouse and lumber mill located to the south/southwest were developed within the past 10 and 30 years, respectively. Land use surrounding the Property includes single-family residential, idled agricultural land and undeveloped open space/woodlands. In addition, a scrap processing and metal recycling facility adjoins the former cement works building to the north and east. A vacant warehouse and a lumber mill (i.e., Muth Lumber Co.) are located south of the cement works buildings.

Buildings on the Property: The Site is 235 acres in size.

The property is irregular in shape, with the exception of remnants of the former cement plant, the Property is undeveloped. Building remnants, which are still intact, include three sets of silos, a former packing house and a railcar loader. In addition, numerous building foundations remain.

Previous Sampling: None

Current Plan: Cheryl Bolender, the current owner has plans to redevelop the site and to build an Extended Stay and other commercial structures on the property. To support this end use, the Lawrence County Commissioners is applying for a grant from the Clean Ohio Assistance Fund to perform a Phase II environmental site assessment at the property. This grant will allow a detailed evaluation of the environmental impacts from past operations at the property and will provide the information necessary to develop a cost estimate for any remediation and abatement activities.

Application: As part of the Clean Ohio Assistance Fund application, a resolution is required that authorizes the Lawrence County Commissioners to file an application to the State of Ohio.

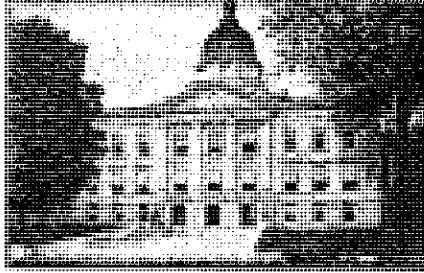
Schedule: As currently planned, the application will be submitted August 24, 2009 to the Ohio Department of Development. Additional details on the schedule for development will be driven by the results of the Phase II environmental site assessment.

Attachment 2

Authorization Resolution Approving Project from the Applicant

Attached is a resolution adopted by Lawrence County Commissioners on April 2, 2009. This authorizes the Lawrence County Commissioners to file an application to the State of Ohio, To participate in the Clean Ohio Assistance Fund for the assessment activities at Hog Run Road at County 24 property.

Jason C. Stephens, CFP®
President
Les Boggs, Th. M
Doug Malone



Tami Meade
Administrator

Summer Riley
Assistant Administrator

**LAWRENCE COUNTY
COMMISSIONERS**

111 South 4th Street • Ironton, Ohio 45638
PH: (740) 533-4300 • FAX: (740) 533-4370
Email: lawco2@ash.twcbc.com

April 2, 2009

KERAMIDA
Matt Wagner
260 Northland Boulevard, Suite 114
Cincinnati, Ohio 45246-3610

This is to certify that the following action was taken at the regular scheduled meeting of the Board of Lawrence County Commissioners held on April 2, 2009. Commissioners Journal 81, page 122.

Motion by: Mr. Stephens Second by: Mr. Malone

To approve the Resolution giving Keramida permission to run Grant through Lawrence County one hundred percent grant no matching dollars.
cc: Cheryl Bolinder

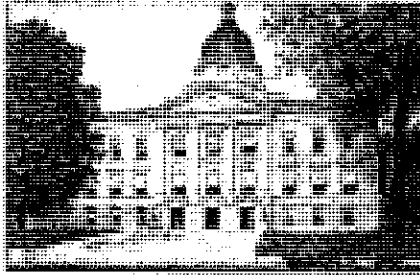
ATTEST: Summer Riley, Assistant Administrator
Summer Riley, Assistant Administrator
Bd of Lawrence County Commissioners
Lawrence County, Ohio

Attachment 3

Authorization Ordinance from Legislative Authority of the Community in which the Property is Located

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To participate in the Clean Ohio Assistance Fund for the assessment activities at Hog Run Road
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cc: Cheryl Bolinder

ATTEST: Summer Riley, Assistant Administrator
Summer Riley, Assistant Administrator
Bd of Lawrence County Commissioners
Lawrence County, Ohio

**Attachment 5
"CLEAN HANDS" AFFIDAVIT**

(Must be completed by Administrative Applicant of Record and any additional applicant(s))

STATE OF OHIO _____)
COUNTY OF Lawrence _____)

Jason Stephens
(authorized representative of applicant or development partner)

being first duly sworn, depose and state that I have personal knowledge of, and certify, the following:

1. Neither this applicant nor a preceding organization or entity of this applicant, if any, caused or contributed, either in whole or in part, to the release of hazardous substances or petroleum on the property that is the subject of this application. Neither this applicant nor a preceding organization or entity of this applicant, if any, had any hands on involvement with or control over hazardous substances or petroleum that resulted in a release, or conducted any hands on activities that contributed, in whole or in part, to a release on the property.
2. I understand that I may be found guilty of a felony resulting in a fine of not less than ten thousand dollars (\$10,000) or more than twenty-five thousand dollars (\$25,000), or imprisoned not less than two (2) years or more than four (4) years, or both, for knowingly signing and submitting a false affidavit.

Jason Stephens Signature 7/9/09 Date

Jason Stephens, President
Name/Title

Sworn to before me and signed in my presence this 9th day
of July, 2009.

Summer Diley
Notary Public

**Attachment 6
Tax Information and Disclosure Information**


I hereby **irrevocably** authorize the Tax Commissioner of the Ohio Department of Taxation or any agent designated by the Tax Commissioner of the Ohio Department of Taxation from the date below until the applicant(s) no longer is receiving funds from the Ohio Department of Development or repaying funds back to the Ohio Department of Development or obligated in any way to the Ohio Department of Development to disclose to the Director of the Ohio Department of Development or any designated employee of the Director the amounts of any or all outstanding liabilities for corporation franchise tax, individual income tax, employer withholding tax, sales tax, use tax, or excise tax which are currently unpaid and certified to the Attorney General of the State of Ohio for collection.

I expressly waive notice of the disclosure(s) to the Ohio Department of Development by either the Tax Commissioner of the Ohio Department of Taxation or by any agent designated by the Tax Commissioner of the Ohio Department of Taxation. I **expressly waive the confidentiality provisions of Ohio law, including but not limited to, Section 5703.21 of the Ohio Revised Code, which would otherwise prohibit disclosure and agree to hold the Department of Taxation and its employees harmless with respect to the limited disclosure authorized herein.**

This authorization is to be liberally interpreted and construed; any ambiguity shall be resolved in favor of the Tax Commissioner or the Ohio Department of Taxation.

This authorization is binding on any and all heirs, beneficiaries, survivors, assigns, executors, administrators, successors, receivers, trustees, or other fiduciaries.

A photocopy or facsimile of this authorization is as valid as the original.


 Signature _____ Date 7/9/09

Jason Stephens, President
 Name/Title _____

**Attachment 7
Financial Liability Form**

Explain any outstanding financial liabilities you (applicant or development partner) have with state or local governments in Ohio. Whether or not the amounts are being contested in a court of law, do you and/or your organization owe:

Any delinquent taxes to the State of Ohio (the "State"), a state agency, or a political subdivision of the State?

Yes No

Any monies to the State or a state agency for the administration or enforcement of the environmental laws of the State?

Yes No

Any other monies to the State, a state agency, or a political subdivision of the State that are past due?

Yes No

Are you or the applicant(s) the subject of any existing tax lien?

Yes No

If you answered "yes" to any of the above, please provide details of each instance including, but not limited to, the location, amounts, and case identification numbers (if applicable). Attach additional sheets if necessary.


Signature

7/9/09
Date

Jason Stephens, President
Name/Title

Attachment 8

Public Participation Documents

The six components of performing and documenting the public notice are:

1. Public Notice in newspaper announcing meeting at least 45 days prior to the public meeting. A suggested format for the notice is included below. Insert the pertinent information where the parentheses are included. The notice does not have to be italicized.

Notice of public meeting and Information repository for a Clean Ohio Assistance Fund Grant

Lawrence County Commissioners are applying for a grant from the Clean Ohio Assistance Fund for a Phase II Environmental Assessment to assist the Ice Creek Land Company project located at Hog Run Road at County Road 24. The application is available for review at the Briggs Lawrence County Public Library, located at 321 South Fourth Street until August 31, 2009 or online at www.lawrencecountyohio.org. A public meeting to discuss and solicit comments to the grant application will be held on Monday, August 31, 2009 at the Briggs Lawrence County Public Library at 321 South Fourth Street at 7:00 pm. Any questions may be referred to Les Boggs, County Commissioner at 740-533-4300.

2. Sign on property announcing proposed work, application, and public meeting at least 45 days prior to public meeting. The sign must be at least four feet by four feet and must contain the following information. A suggested format for the notice is included below. Insert the pertinent information where the parentheses are included. The sign does not have to be italicized.

NOTICE

Lawrence County Commissioners are applying for a Clean Ohio Assistance Fund grant to pay for an environmental assessment of the Ice Creek Land Company property, Former Alpha Cement Company at Hog Run Road at County Road 24. A public meeting will be held on August 31, 2009 at 7:00 pm at the Briggs Lawrence County Public Library located at 321 South Fourth Street. The public is encouraged to attend this meeting to learn more about the application and provide comments about the grant application. The public meeting minutes and any public comments will be incorporated into the application.

The application is available for public review online at www.lawrencecountyohio.org or at the Briggs Lawrence County Public library located at 321 South Fourth Street. For more information contact: Les Boggs at 740-533-4300.

3. Library receipt signed by a librarian indicating that a copy of the application has been placed in the library at least 45 days prior to the public meeting.

July 10, 2009

On July 10, 2009 the Briggs Lawrence County Public Library received a copy of the Clean Ohio Assistance Fund application for the former Alpha Cement Company located Hog Run Road and County Road 24. The application will be available for public review in the reference section until August 31, 2009.

Librarian signature

Typed name

Title

After these steps have been completed, the applicant must do the following:

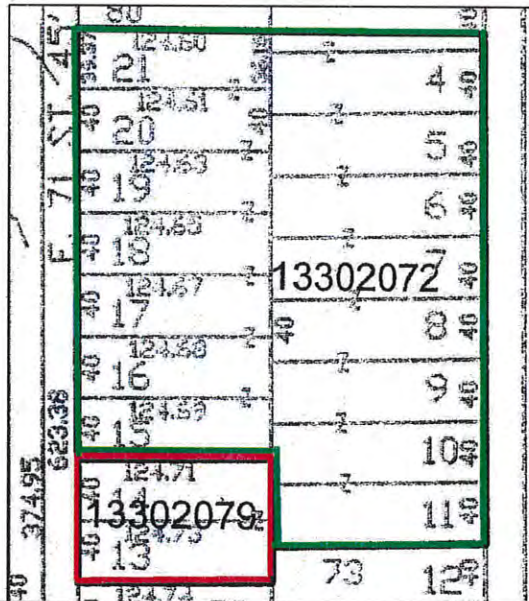
4. Fax copies of the newspaper public notice, picture of sign, and librarian receipt to the Ohio Department of Development Office of Urban Development within three days of obtaining this evidence. (This information should be faxed at least 42 days prior to the public meeting). The fax number is 614-466-4172. This information is to confirm that legislatively mandated timeframes can be met.
5. Hold the public meeting. Log attendees on a sign-in sheet. Take minutes of the public meeting recording all comments. Provide a responsiveness summary which addresses questions or concerns brought up by the public during the public comment period or during the public meeting.

Place copies of the public notice, picture of sign, library receipt, meeting sign-in sheet, public meeting minutes, and responsiveness summary in the application in **Attachment 8**.

Attachment 9
(Provided by Applicant)

The property boundaries are defined by the Applicant, and can be a portion of a parcel, a single parcel or multiple contiguous parcels. The property must have been commercial or industrial property. To evaluate the application, the size of the property, ownership of the property and access to the property must be well documented. Provide the following:

- Legal description
 - Provide legal descriptions either from the property deed or stamped and signed by a licensed surveyor
- Location Map
- Property Map(s)
 - The project property boundary shall be submitted as an 8.5x11 hardcopy image which contains a clearly delineated property boundary displayed on top of a high resolution aerial photograph or a USGS 7.5 minute topographic map.
- Plat Map(s)
 - Include survey points
 - Color-code parcels per legal description (see example below)



Parcel ID 13302072 Green Color Boundary
Parcel ID 13302079 Red Color Boundary

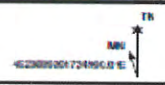
As shown above, indicate through the use of color coding parcels within the project area and describe them in a legend.



DeLORME

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www.delorme.com

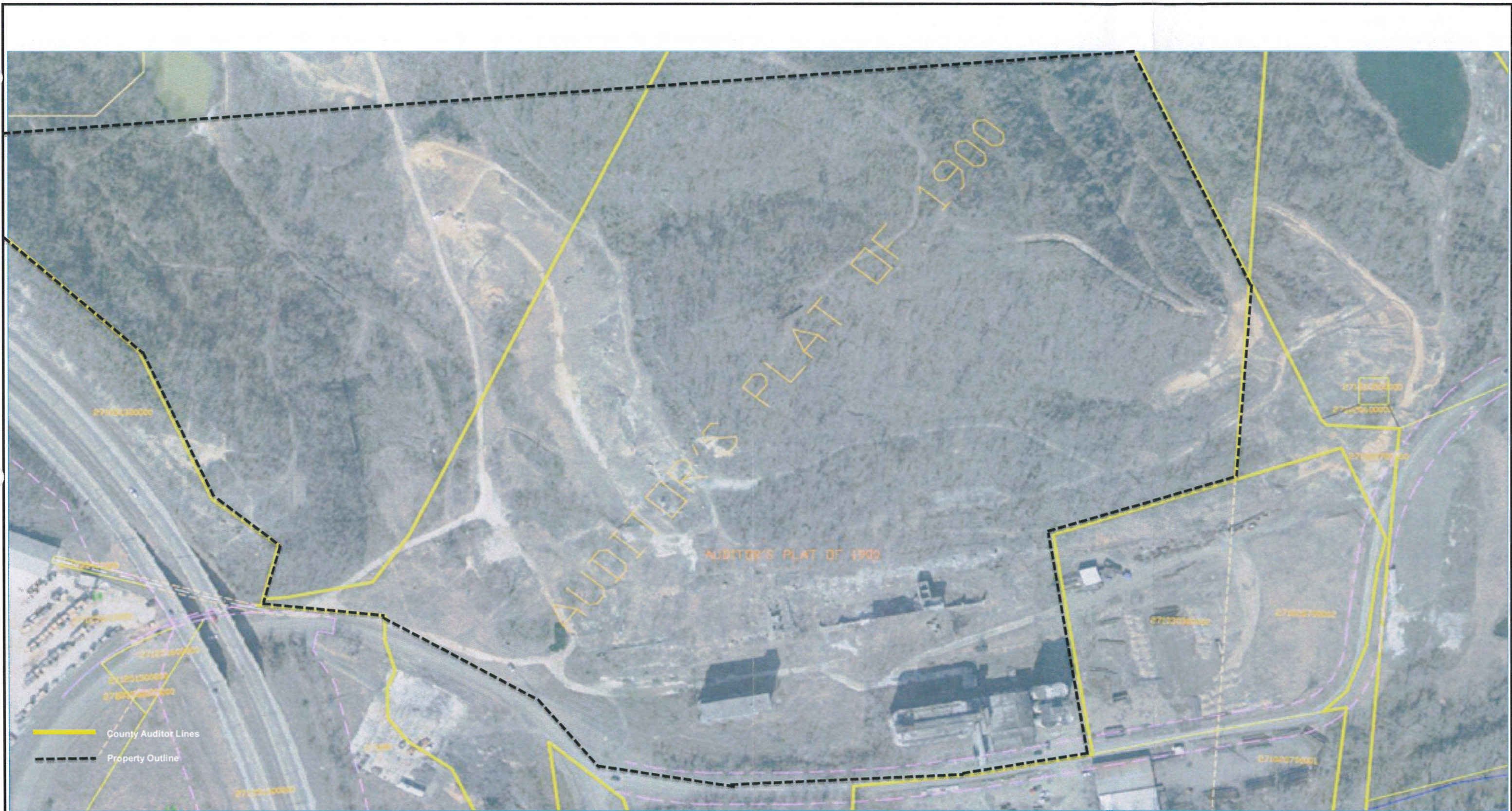
Scale 1 : 25,000
1" = 2080 ft



Site Map
Former Alpha Cement Company Site

Ironton, Ohio

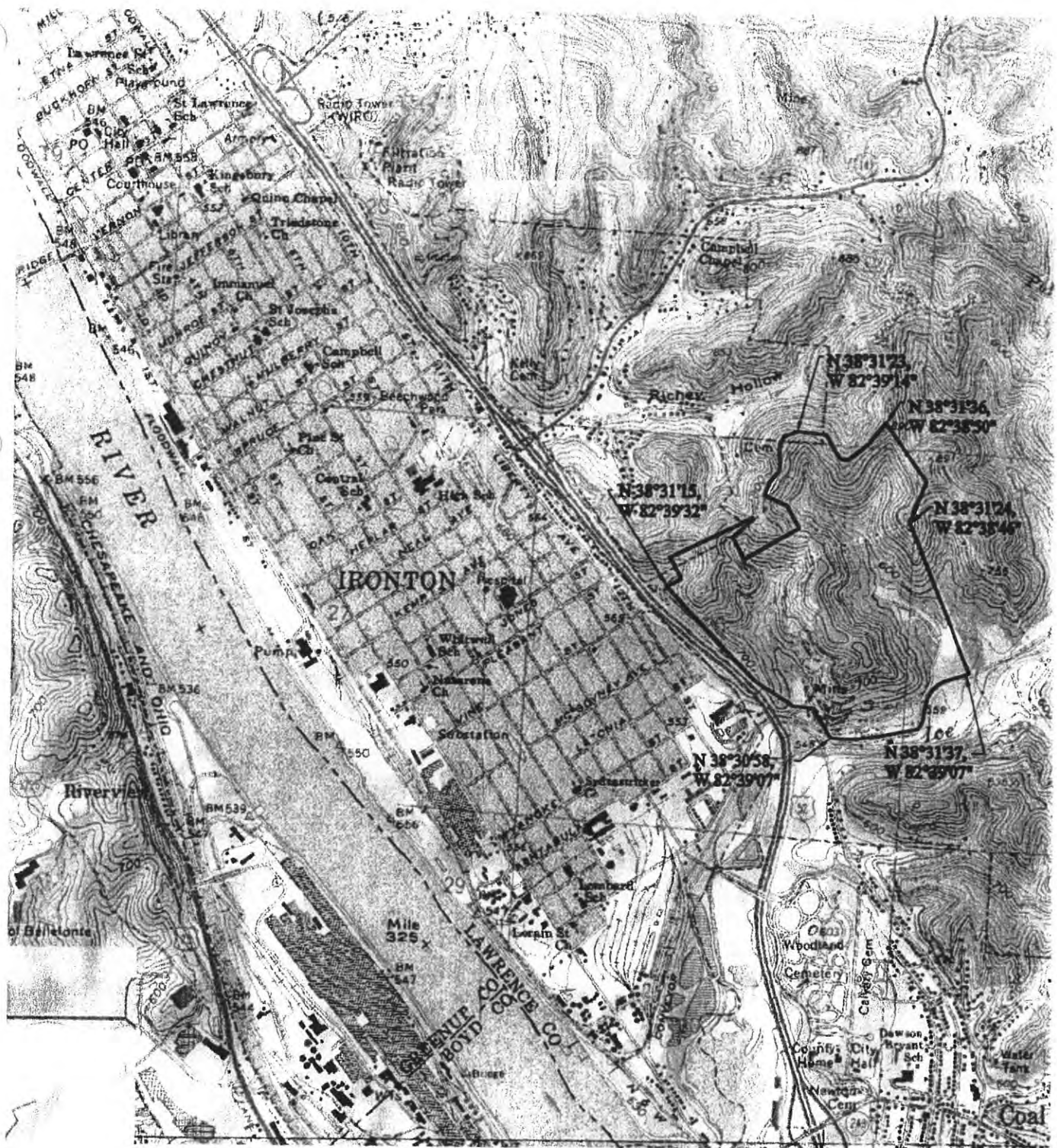
Figure 1
Prepared by : PDC
Approved by : TLH
Date : 7/6/2009





Plat Map
Former Alpha Cement Company Site
Ironton, Ohio

Prepared by : TLH
Approved by : TLH
Date :
Project No.:



NOTE: BASE MAP WAS COPIED FROM THE USGS TOPOGRAPHIC MAP OF IRONTON, OH-KY



QUADRANGLE LOCATION

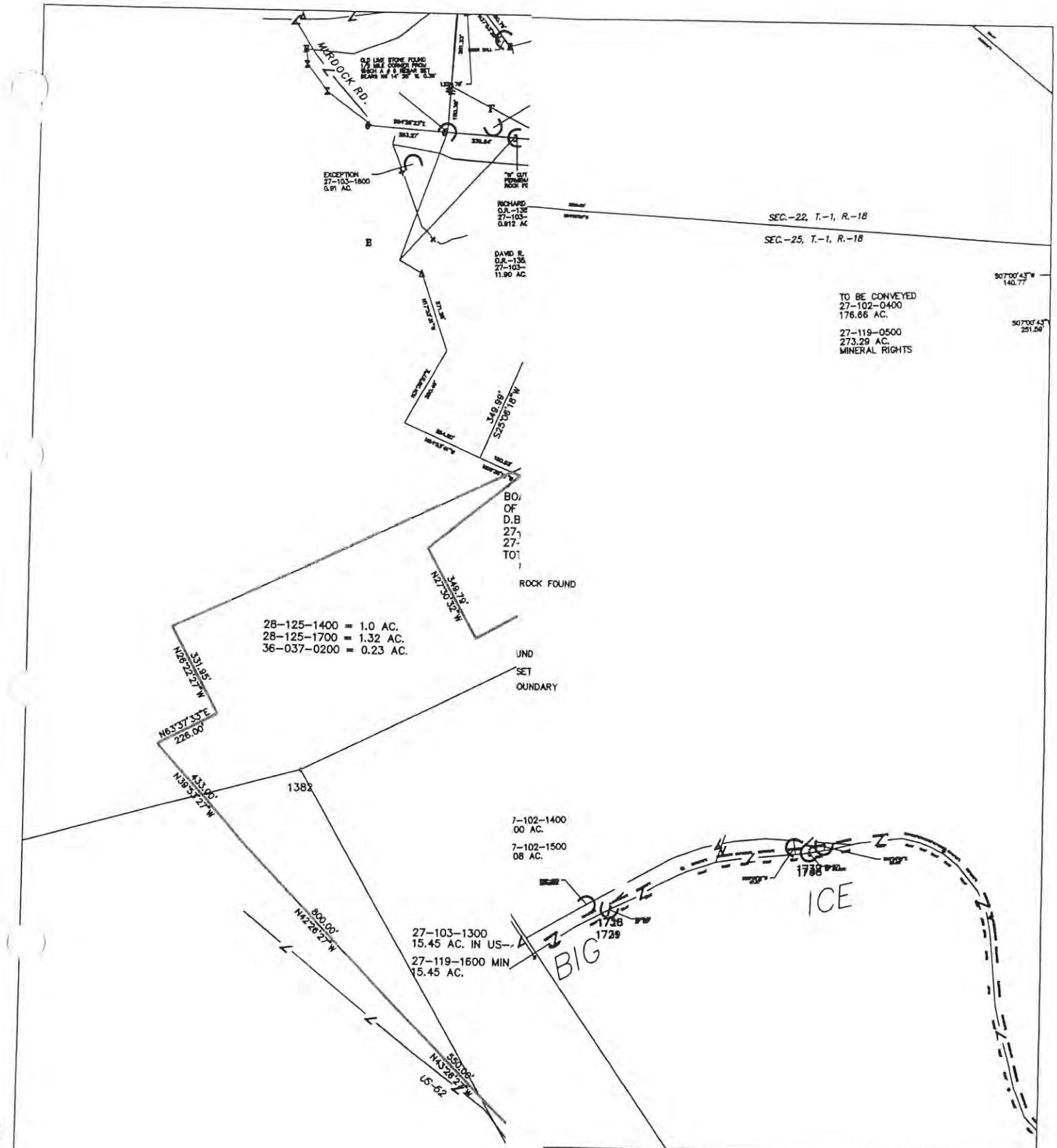
PROPERTY LOCATION MAP
 ICE CREEK LAND COMPANY, INC.
 IRONTON, OH



SRW ENVIRONMENTAL SERVICES, INC.
 65 WEST TECHNOCENTER DRIVE
 SUITE C, MILFORD, OHIO 45150
 TELE: 513-676-0009
 FAX: 513-676-9758

DRAWN BY/CHECKED BY: CLK/MSR	SCALE: 1" = 2,000'	PROJECT No.: EOC-049.08
DIR/FILE: ICD001\SITELOCT.DWG	REVISION DATE: 1/17/08	FIGURE No.: 1

C:\projects\101\101\SITESKETCH.dwg, 01/17/2008 11:44:42 AM



TO BE CONVEYED
 27-102-0400
 176.66 AC.
 27-119-0500
 273.29 AC.
 MINERAL RIGHTS

28-125-1400 = 1.0 AC.
 28-125-1700 = 1.32 AC.
 36-037-0200 = 0.23 AC.

PROPERTY SKETCH
 ICE CREEK LAND COMPANY, INC.
 IRONTON, OH



SRW ENVIRONMENTAL SERVICES, INC.
 65 WEST TECHCENTER DRIVE
 SUITE C, MILFORD, OHIO 45160
 TELE: 513-576-0009
 FAX: 513-576-9756

DRAWN BY/CHECKED BY: CLK/MSR	SCALE: 1" = 450'	PROJECT No.: ICD-001.01
DIR\FILE: ICD001\SITESKETCH.DWG	REVISION DATE: 1/17/08	FIGURE No.: 2

LISTING OF PARCELS

Parcel #	Acreage
28-125-1400	1.0
28-125-1700	1.32
36-037-0200	0.23
27-103-1300	15.45
27-103-1200	89.97
27-103-0300	93.84
27-102-0600	8.60
27-102-0700	5.14
27-103-1000	19.45
Total Acreage	235



Lawrencecountyohio.org

**PHASE II INVESTIGATION
FORMER ALPHA CEMENT SITE
IRONTON, OHIO**

DATA EVALUATION TABLE			
Summary of Data Evaluation and Analysis for Phase II Investigation			
Types of Evaluation or Analysis	Media of Concern	Level of Expertise Required	Timeframe
Data Tables	Soil, Groundwater & Asbestos	Staff Geologist/ Administrative	~60 Hours
Modeling	Groundwater	Project Hydrogeologist/ Manager	~40 Hours
Figures	Soil, Groundwater & Asbestos	Staff Geologist/ Draftsperson	~48 Hours
Report Preparation	Soil, Groundwater & Asbestos	Staff Geologist/ Project Manager	~120 Hours



260 Northland Blvd., Suite 114
Cincinnati, Ohio 45246
(513) 769-9057 • Fax (513) 772-5727
keramida@keramida.com • www.keramida.com

**WORK PLAN FOR FIELD SAMPLING IN
SUPPORT OF A PHASE II PROPERTY
ASSESSMENT OF
THE FORMER ALPHA CEMENT COMPANY PROPERTY**

**For the Site Located at:
Hog Run Road at County Road 24
Ironton, OH 45638**

**Prepared for:
Lawrence County Commissioners
111 South 4th Street
Ironton, Ohio 45638**

July 10, 2009

INCREASING OUR CLIENTS' PROFITABILITY THROUGH SMART CONSULTING™

ENGINEERS • GEOLOGISTS • SCIENTISTS • SAFETY PROFESSIONALS • INDUSTRIAL HYGIENISTS • TOXICOLOGISTS • MODELING EXPERTS
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- Figure 3: Proposed Sample/Well Location Map

TABLES

- Table 1: Field Investigation Table

1.0 INTRODUCTION

1.1 General

This Work Plan has been prepared for the Lawrence County Commissioners and by KERAMIDA Inc. (KERAMIDA) for field sampling at the former Alpha Cement Company property located at Hog Run Road at County Road 24 Ironton, OH 45638 (Property). Ms. Bolender is the current owner of the Property according to the Lawrence County Treasurer's Office tax cards.

This work is based upon a Phase I Environmental Site Assessment dated January 17, 2008 being conducted to assist Cheryl Bolender in pursuing remediation of the Property under the Ohio Voluntary Action Program (VAP) and in support of the Lawrence County Commissioners efforts to prepare a Clean Ohio Assistance Fund application. The field work will be consistent with VAP rules for Phase II Property Assessments codified at Ohio Administrative Code (OAC) 3745-300-07 and ASTM 1903-97 (2002).

1.2 Background

The Site is located on Hog Run Road at County Road 24 Ironton, Ohio and is located in a primarily residential/rural area with intermixed commercial use primarily local to the Site area. The Site contains numerous relic buildings or foundations of buildings associated with the former Alpha Cement Products company. Two primary buildings, which contain silo storage structures, are located along Hog Run Road and appear to have been utilized for storage of raw product materials. The majority of the buildings appear to have been located at the base of the hillside behind the silo buildings. Remaining structure foundations were noted to have existed north of the silo buildings in an uphill location. The property to the north of the Site investigation area is wooded and also owner by the Ice Creek Land Company, Inc. State Route 52 lies to the west of the site beyond which is a mixed residential and commercial area and the Ohio River. Undeveloped and residential property development exists to the east of the Site and to the south and southeast a scrap steel company exists beyond which is Ice Creek

A map of the Property location is provided as Figure 1, and a current site plan for the Property is included as Figure 2. The Lawrence County auditor identifies the property as being parts of parcel numbers 27103Q300000 and 271031200000. The property is located on the northeast corner of the intersection of Adams Lane and Hog Run Road.

The Site is approximately 30 acres in size. The Site acreage is a smaller portion of the overall property owned at this location by the Ice Creek Land Company, Inc. The existing former manufacturing operations occupy approximately 20% of the property area with the remainder consisting of concrete drives and grass or wooded areas. Exterior debris was noted adjacent to the standing buildings associated with deterioration of the buildings and potential dumping at the Site.

1.3 Previous Investigations

The following summarizes the regulatory history and investigations at the Property:

VAP Phase I Environmental Site Assessment

During January of 2008, SRW Environmental Services, Inc. (SRW) performed a VAP Phase I Environmental Site Assessment (Assessment) of the property located at Hog Run Road at County Road 24, Lawrence County, Ohio (Site) at the request of Ms. Cheryl Bolender.

This Phase I Environmental Site Assessment revealed the following Recognized Environmental Conditions/Identified Area.

- The entire former operations area may have possible contamination from petroleum, metals and polychlorinated biphenyls (PCBs).

Additionally based upon KERAMIDA's review of the VAP Phase I ESA and following a site visit, KERAMIDA has identified the following Identified Areas requiring further investigation.

- The limited visual observations of the property identified potential asbestos-containing materials at various locations throughout the Site. Because KERAMIDA's observations were not part of an actual asbestos survey, a more thorough survey would be required if the structure is going to be demolished or renovated. Any regulated ACM is required to be compliantly removed by an accredited Ohio Department of Health contractor.

1.4 Hydrogeology

The U.S. Department of Agriculture (USDA) division of Soil Conservation Service (SCS) classifies the underlying soils as Steinsburg sandy loam. This soil type is associated with moderate infiltration rates and is moderately to well drained. This soil type has a low corrosion potential for uncoated steel. This soil does not meet the requirements for hydric (wetland) soil types. The permeability rates of the upper soils are reported as 2.00 to 6.00 in/hr. According to available water well records, as compiled by EDR there are no USGS wells, no public water

supply wells, and three state database wells were found within 1 mile of the Site. The EDR AQUIFLOW database did not list any sites with groundwater wells within 1 mile of the Site. The nearest well(s) to the Site is the state database wells located between one-half and one mile southwest of the Site.

A more detailed search of well records was investigated through the Ohio Department of Natural Resources. Sixty four wells were found within an approximate 1-mile radius of the Site. It appears that all but possibly one are commercial property related. All sixty two wells are located in the area along the Ohio River plain south to west of the Site. Fifty two of the wells were installed at a Honeywell site located 1 mile southwest. Six of the wells are located 1 mile south of the Site associated with both a Super America Site and an owner identified as Brammer. The nearest wells (four) are located 0.8 miles west of the Site associated with Hood Realty. Two additional wells were identified near the Honeywell location associated with a Rich Oil station. A well was noted along Ice Creek immediately adjacent to the Site in the historic Sanborns, however no records were identified of this well in the ODNR well search.

According to the Ground-Water Resources of Lawrence and Gallia Counties Map available from the Ohio Department of Natural Resources, the nearest well to the Site (approximately $\frac{1}{2}$ to $\frac{3}{4}$ mile north/northwest) has a depth of 82 feet, is set in sandstone and yields only $\frac{1}{2}$ gallon per minute. The Site falls in to an area classified as having alternating layers of shale and thin sandstones at depths of less than 125 feet. It is also noted that brackish water may be encountered with deeper drilling.

2.0 DATA QUALITY OBJECTIVES

2.1 *Problem Statement*

The primary objectives of the Phase II are to:

1. Investigate areas of potential concern associated with historic property use;
2. Acquire data to identify the level of effort required to clean up the Property to applicable risk-based standards; and
3. Support a Grant or Loan application to acquire funds that will allow cleanup of the Property.

Sampling locations and analyses are based on findings from the Phase I including the nature of past activities at the Property and locations of Identified Areas.

2.2 Project Team

The proposed project team is presented below. The team members have been selected based on individual project experience related to the specific tasks required. A brief description of each individual's project responsibilities is provided below:

Project Manager – Terry L. Hair, Jr., PG, CP

Duties and responsibilities of the Project Manager (PM) consist of the following:

1. Administrate and supervise all phases of the project;
2. Determine that project objectives are met within financial and time constraints;
3. Work with the Quality Assurance Officer (QAO) and field personnel to plan and conduct project operations, progress meetings, etc.; and
4. Review reports and other work products prior to their issuance.

Quality Assurance Officer (QAO) – Ihor Melnyk, PE, CP

Specific functions and duties of the QAO will be to:

1. Establish Quality Assurance/Quality Control (QA/QC) procedures for the project;
2. Evaluate data quality and maintain QC records;
3. Provide a communication link between project personnel and the laboratory;
4. Monitor the progress of the field sampling personnel and provide PM with periodic QA reports; and
5. Stop work at any time that the Quality Assurance Project Plan (QAPP) is not being adhered to, or if the quality of the results are jeopardized by the work in progress.

Field Operations Coordinator – Paul Chasco

Duties and responsibilities of the Field Operations Coordinator (FOC) will be to:

1. Ensure the sampling activities are conducted in a manner that follows the procedures outlined in this plan;
2. Coordinate the sampling activities with the PM, QAO, and field personnel;
3. Oversee the use, maintenance and operation of sampling equipment; and
4. Report daily activities, problems, etc. to the QAO and PM.

Laboratory Director

The Laboratory Director will be primarily responsible for the overall operation of the laboratory including all samples analyzed and data reported. The Laboratory Director will also be responsible for initiating corrective action measures when analytical data do not meet the requirements of this plan or the laboratory's Quality Assurance Plan (QAP).

Laboratory Project Manager

The Laboratory Project Manager will be the primary communications link between the laboratory and KERAMIDA's QAO. The Laboratory Project Manager will be responsible for relating any special needs of the field operations personnel to the laboratory. The Laboratory Project Manager will also provide the final review of all data packages before reporting results.

Laboratory QAO

The Laboratory QAO will be primarily responsible for implementing and monitoring compliance with the laboratory's QAP. The Laboratory QAO's duties will also include: conducting audits, reviewing all QC data, and reporting problems to the Laboratory Director for corrective action.

3.0 CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) forms an understanding of the chemical source areas, chemical release mechanisms, environmental transport media, potential human intake routes, and potential human receptors for the Property. The purpose of the CSM is to provide a framework for problem definition, identify exposure pathways that may result in human health risks, indicate data gaps, and aid in identifying appropriate remediation measures. Chemical release mechanisms, environmental transport media, and potential human intake routes are identified for each potentially exposed receptor.

Chemicals of concern (COCs) were determined from the potential on and off Property sources as identified during the Phase I. COCs identified include VOCs, PAHs, PCBs, TPH, metals and asbestos. These COCs may be governed by the following Property-specific transport mechanisms and transported to a point of exposure:

1. Direct contact with COCs within the point of compliance (i.e., 0-2 ft. bgs), below the point of compliance for construction scenarios and to the residential point of compliance;
2. Volatilization of COCs in soil to ambient air (outdoor and/or indoor);
3. Dust emissions of COCs in soil to ambient air;
4. Leaching of COCs from soil to groundwater;
5. Groundwater transport;
6. Volatilization of COCs in groundwater to ambient air (indoor and/or outdoor);
7. Surface water run-off; and
8. Free-phase migration.

The current CSM provides a baseline assessment of the Property and will be modified as additional data are obtained.

3.1 Decision Identification

Phase II Property Assessment data will be compared to applicable VAP risk-based cleanup goals. Data gaps will be identified and, to the extent appropriate, supplemental investigations will be conducted to address those data gaps.

In consideration of future Property redevelopment efforts, the following decisions will be made from the Phase II:

1. Do portions of the Property contain COCs that exceed VAP risk-based cleanup goals, and do data gaps exist such that additional data are required to define nature and extent?
2. For areas of the Property containing COCs exceeding VAP risk-based cleanup goals, what are appropriate and cost-effective options for cleaning up the contamination or eliminating pathways (i.e., engineering and/or institutional controls) such that Property redevelopment can be accomplished?

3. For areas of the Property containing COCs exceeding VAP risk-based cleanup goals, what would be the cost and schedule for cleanup?

3.2 *Inputs to the Decision*

The investigative approach described in this Work Plan was defined based on results from the Phase I. In general, points of investigation have been designated within Identified Areas. The investigation will employ soil sampling, conducted during advancement of soil borings and the installation and sampling of monitoring wells to;

1. Identify the presence and concentrations of COCs in soil, groundwater and indoor air;
2. Define (to the extent feasible) the extent of COCs in soil, groundwater and indoor air; and
3. Identify and/or eliminate potential migration and exposure pathways.

Phase II findings may result in:

1. A decision to conduct additional investigations for the purpose of delineating COC's; and
2. A decision to implement Property redevelopment, including remedial activities, as supported by available funds and as necessary.

3.3 *Study Boundaries*

The spatial boundary of the environmental investigation will be limited to the approximate 30 acre Property. Property boundaries are shown on Figure 2.

Soils will be investigated to a depth of up to 30 ft. bgs, and an emphasis on sampling will be within the upper ten feet below grade. A groundwater assessment will be performed to evaluate the potential presence of COCs in the groundwater located in the soil overburden above the regional bedrock.

3.4 *Decision Rule*

Based on analytical results obtained from soil, groundwater and indoor air samples, the decision will be made whether or not to further investigate the Property. Should analytical concentrations

of COCs exceed VAP risk-based standards, then additional investigation may be needed to delineate the extent of contamination; otherwise no further assessment will be warranted.

Proposed boring locations, as provided on Figure 3, have been chosen to supplement existing data and are generally located to maximize the potential of detecting COCs. Based on KERAMIDA's knowledge of the Property and current use, there may be access difficulties at some proposed sampling locations due to terrain and vegetation however the property owner has indicated that they will provide clearance as needed to facilitate this investigation. Should the terrain be determined to pose a significant danger to the workers or is inaccessible due to grade some boring locations may need to be altered. Relocation of borings will be acceptable if they are generally near the original proposed location (i.e. approximately 20-40 feet) and remain near the respective Identified Area.

A summary of errors incurred during sample analysis will be provided by the laboratory in a summary report. Those sample analyses that fail to meet the given standards for precision or accuracy will be considered invalid.

3.5 Decision Error Limits

The proposed sampling locations have been biased towards Identified Areas and the COCs have been determined based on the potential sources resulting from these Identified Areas. The possibility of not sampling an unsuspected impacted area or not analyzing for a chemical present in the environment does exist. However, a decision was made to bias the sampling so that the results would tend to overestimate the true environmental impacts at the Property.

Given that the environmental concerns at the Property may be overestimated, the decision of whether or not to proceed with development will be weighed carefully. Furthermore, supplemental investigations to address potential data gaps are not unexpected.

3.6 Design Optimization

Optimization of the sampling and analysis was based on existing non-intrusive data such as record searches and a Property reconnaissance as part of a Phase I. As mentioned previously, sampling and analysis will be directed towards Identified Areas, potentially resulting in a conservative interpretation of environmental conditions. Furthermore, field screening and visual observations may result in a subset of the samples being collected at depths that contain the highest concentrations of COCs.

3.7 *Special Considerations*

Quality assurance and control guidelines and specific methodologies in the form of Standard Operating Procedures (SOPs) will be used for the project.

The laboratory analysis described in this Work Plan will be conducted by a VAP-certified laboratory. Laboratory procedures will be conducted in accordance with the substantive requirements of the selected test methods and the laboratory's Quality Assurance Plan. The Clean Ohio Program will be provided a copy of the laboratory's Standard Operating Procedures as an addendum to the KERAMIDA QAPP upon request.

4.0 SOIL/BUILDING ASSESSMENT

4.1 *Objectives*

KERAMIDA will conduct soil sampling activities to characterize COC concentrations in Property soil and determine the remedial methods necessary, if any, to meet applicable VAP standards. All chemical analyses will be conducted by a VAP-certified laboratory.

4.1.1 Suspected Asbestos Containing Materials (SACM) Investigation

KERAMIDA proposes to collect (SACM) samples from up to approximately 100 various locations on the property. Areas to be investigated include various building materials on-site, piping insulation materials and any visible potential asbestos containing debris found during the site investigation activities. A minimum of three samples from each homogeneous sample area will be collected for analysis. Additionally, 10% duplicates will be collected for QA/QC purposes. This will result in an additional 30 samples (3 per homogeneous area and 100 homogeneous areas). Sample details are summarized on Table 1.

4.1.2 Background Soil Survey

Based on the naturally elevated concentrations of metals associated with Ohio soils, KERAMIDA is proposing to collect shallow soil samples from eight upgradient locations on the property to allow evaluation for natural background soil concentrations for metals. The data obtained from the sampling will be utilized in the evaluation of metal results throughout the remainder of the property as performed under the "Property-Wide Investigation" as described in Section 4.1.3 of this document. Soil sampling will be performed at a depth of 0 - 2 feet in depth.

4.1.3 Property-Wide Investigation

The historic use of the Property and observations made during the Phase I ESA by SRW and a subsequent Site walk by KERAMIDA indicate potential for impact to the Site associated with the historic buildings and their roles in support of the cement manufacturing operation. Approximately twenty-eight different buildings or structures were indicated in the Sanborn map review on the property. Building or area uses that indicate potential areas of concern included such names as electric repair shop, laboratory, machine shop, power house, sub-station, kilns, oil house, transformer house, engine house/dynamo room, etc. Accordingly, the investigation will include advancement of forty-seven soil borings with nine of the soil borings subsequently converted to monitoring wells at the Site. The forty-seven soil borings will be advanced to a depth of approximately 30 feet, bedrock or groundwater whichever is encountered first. Upon receipt of soil analytical data the installation of the nine monitoring wells will be performed and biased towards areas of greatest impact or areas to document delineation/migration conditions (i.e. property boundaries). The nine wells will be installed to an estimated depth of 30 feet (or to rock). The wells will be two-inch diameter, schedule 40 PVC constructed with fifteen feet of 10-slot screen. Each of the nine wells will be completed with a pro-stick up monitoring well cover for enhance visibility at the Site.

Based upon review of available ODNR records indicating that the Site is in a low groundwater yield location (less than 2 gallons per minute) and that bedrock consisting of shales, sandstones, coal and limestone with low groundwater yields are known to exist beneath the area the installation of multiple deep bedrock wells is not proposed for this Site. KERAMIDA is proposing the installation of one bedrock well to validate bedrock aquifer conditions and associated classification. This bedrock well will also be utilized to sample the bedrock groundwater for potential COCs identified at the Site. If the results of the investigation indicate significant impact to the uppermost groundwater zone, additional deeper wells may be necessary for assessment of deeper groundwater however costs for such is not requested at this time. The protocol for installation of the bedrock wells will be the same as for the shallower wells.

Proposed sampling depths are summarized on Table 1. All borings will be continuously sampled and logged in the field by a geologist from KERAMIDA. Soil samples will analyzed for polynuclear aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), metals, polychlorinated biphenyls (PCBs) and total petroleum hydrocarbons (TPH). Three samples of native soil will also be selected from uncontaminated areas for analysis for total organic carbon.

4.2 *Sample Locations and Frequency*

Soil boring locations are shown on Figure 3. A minimum of two samples per boring will be selected for chemical laboratory analysis. One sample will be from the 0 to 2 foot depth interval and the other will be from the 2 to 6 foot depth interval. Additional soil samples in each boring may be selected for analysis based upon headspace screening using a photoionization detector (PID) or direct observation (i.e., identification of discoloration or evidence of contamination). The sample interval from directly above the observed zone of saturation will also be submitted for laboratory analysis for each boring location extended to the zone of saturation (expected at a maximum depth of approximately 20 – 30 feet).

Three soil samples from the Property will be selected for geotechnical analysis. The purpose of the geotechnical analysis is to obtain property-specific data for potential use in a risk assessment or contaminant fate and transport modeling or determination of the soil characteristics of an underlying confining layer between an upper and lower aquifer unit at the Site. The samples will be collected from undisturbed native soil in uncontaminated areas of the property using a Shelby tube. The samples will be analyzed for bulk density, grain size, porosity, moisture content, and hydraulic conductivity.

4.3 *Sample Designation*

A sample numbering system will be used to identify each investigative and quality control sample. The PM or designee will maintain a logbook containing the sample identification listings. Sample type will be identified by a two or three letter code corresponding to the sample type. Sample type codes to be used may include:

- SB - Soil sample
- TB - Trip Blank
- SACM – Suspect Asbestos-Containing Material

The location code will follow the sample type code. The location code consists of a two- to five-digit numeric or alpha-numeric code that indicates the sample location. Trip blanks and field blanks will be included in the system. Duplicates will not be specifically identified as such in the sample number but will have a different (sequential) number which will be noted in the sample logbook.

4.4 *Sampling Equipment and Procedures*

Borings will be advanced using either direct-push drilling techniques or hollow stem augering with discrete split spoon sampling. Soil samples will be collected continuously with two or four foot core or split spoon samplers.

4.5 *Headspace Screening of Soil Samples*

Soil samples will be field screened using a photo-ionization detector (PID) or a flame-ionization detector (FID) as described in our SOP. The PID or FID will be calibrated daily, consistent with the manufacturer's specifications.

4.6 *Sample Handling-Chemical Analyses*

Soil samples selected for chemical analysis will be analyzed at a VAP-certified laboratory for one of or a combination of volatile organic constituents (VOCs), polynuclear aromatic hydrocarbons (PAHs), metals, polychlorinated biphenyls (PCBs), and total petroleum hydrocarbons (TPH). Three samples from the Site will also be submitted for total organic carbon. Collection locations and analytical methods for soil samples are summarized in Table 1.

4.7 *Sample Preservation*

Samples will be placed in laboratory-supplied containers and stored on ice in a cooler immediately following collection. In addition, the samples will be packed for shipping in a manner to avoid disturbing the sample.

4.8 *Special Handling Considerations*

4.8.1 *Volatile Organics/Polynuclear Aromatic Hydrocarbons*

Those samples that are to be analyzed for VOCs or PAHs will not be transferred from one container to another. Transferring samples between containers may cause a loss of VOCs onto the walls of the sampling containers. Headspace will not be present in the sample container, thus minimizing the volatilization of organics from the sample. The laboratory will supply the appropriate glass containers with Teflon-lined lids.

4.8.2 *Blanks*

Both trip blanks and equipment blanks will be collected to verify that sample handling and equipment have not affected the integrity of the field samples. Trip blanks will be prepared by the laboratory and will consist of filling bottles associated with VOCs analysis with laboratory supplied reagent water. The trip blank will be subject to the same handling and transportation procedures as the samples. Trip blanks will be required at the rate of one per shipping container. Trip blanks will accompany sample containers during sample collection and transportation. Trip blanks will be analyzed for VOCs only, or as directed by the QAO.

To evaluate whether the sampling device has been effectively cleaned, equipment blanks will be prepared by filling the sampling device with distilled water, transferring the sample to bottles, and submitting the sample to the laboratory for analysis. The water will be collected in properly preserved containers specified by the laboratory. The sample will be analyzed for the identical methods as the groundwater sample.

The number of equipment blanks analyzed for a class of compounds will be equal to one blank for every 10 samples to be analyzed for those methods. It will be the sample team leader's responsibility to collect the appropriate number of equipment blanks for the day's sampling efforts.

4.8.3 Duplicates

Duplicate samples will be collected and analyzed to assess the quality of the data resulting from the field sampling and analytical programs. The duplicates will be randomly collected among the soil and wipe samples. Duplicates will be collected at a rate of one duplicate for every 10 samples.

4.8.4 Chain-of-Custody

The chain-of-custody will allow for the tracing of possession and handling of individual samples from the time of field collection through laboratory analysis. The chain-of-custody program will include: sample labels, sample seals, field logbook, chain-of-custody form/sample analysis request sheet and laboratory logbook. All chain-of-custody procedures will be performed in accordance with KERAMIDA's SOP.

4.8.5 Sample Labels

All sample labels will contain the following information:

1. Sample I.D. number;
2. Name of collector;
3. Date and time of collection;
4. Place of collection; and
5. Parameter(s) requested for analysis.

4.8.6 Sample Seal

A seal will be placed on the sample container or on the shipping container to ensure that samples have not been disturbed during transportation.

4.9 Field Log Book

An up-to-date field log book will be kept by each sampling team to document daily activities (if more than one group of individuals is sampling). The log book will include a general list of tasks performed, additional data, or observations not listed on field data sheets, and document communication with on-site personnel or visitors as it applies to the project.

4.10 Chain-of-Custody Record Sheet

The chain-of-custody record will be maintained to trace sample possession and time of collection. The chain-of-custody will accompany each sample and record the following

- Sample number;
- Signature of collectors;
- Date and time of collection;
- Sample type;
- Sample location identification;
- Number of containers;
- Analytical parameters requested;
- Signature of relinquished and dates of possession by each party; and
- Preservatives.

4.11 Laboratory Logbook

The laboratory will maintain a record of the processing steps that are applied to each sample (i.e., sample preparation techniques, instrumental methods, experimental conditions, QC results). The time, date and name of the person performing each processing will also be recorded.

4.12 Soil Classification and Field Descriptions

Samples will be classified in the field consistent with KERAMIDA's SOP. In addition, pertinent observations noted during installation of the soil borings will be documented on the soil boring logs.

4.13 Decontamination of Equipment

Soil sampling equipment such as drilling tools will be decontaminated prior to arrival on Property consistent with KERAMIDA's SOP. Decontamination will consist of washing each sampler with non-phosphate detergent and rinsing with distilled water between each sampling interval and decontaminating rods with a high pressure steam cleaner. Rinse fluids will be placed in Department of Transportation (DOT) – approved fifty-five gallon steel drums.

4.14 Decommissioning of Soil Borings

Soil borings will be decommissioned consistent with KERAMIDA's SOP. If no significant caving occurs, the soil boring may be decommissioned with hydrated bentonite chips as directed by the field geologist. The surface will be finished to grade with concrete or topsoil commensurate with the original surface conditions.

4.15 Disposal of Cuttings and Unused Soil Samples

Minimal cuttings should be generated during the installation of soil borings; however, excess soil generated will be properly stored and secured. Cuttings will be staged in a common area as agreed upon by the Property owner.

5.0 GROUNDWATER ASSESSMENT

5.1 Objectives

KERAMIDA will collect samples from all nine newly installed shallow monitoring wells and the one deeper well (if installed) in order to further characterize COC concentrations in Property groundwater and determine the remedial methods necessary, if any, to meet applicable VAP standards. Groundwater samples will be submitted to a VAP-certified laboratory for chemical analyses for SVOCs, VOCs, PCBs and metals.

5.2 Monitoring Well Sampling

5.2.1 Sample Locations and Frequency

Groundwater samples will be collected from all nine shallow monitoring wells and the one deeper well (if installed) and submitted to a VAP-certified laboratory for chemical analysis as outlined in Table 1. Sampling activities will include water level and immiscible layer measurements, well purging, and various field analyses of various groundwater parameters (i.e., pH, conductivity, turbidity and temperature). Further details of sampling procedures are included in the following discussions.

5.2.2 Sample Designation

A sample numbering system will be used to identify each investigative and quality control sample. The PM or designee will maintain a logbook containing the sample identification listings. Sample type will be identified by a two or three letter code corresponding to the sample type. Sample type codes to be used may include:

- MW - Groundwater sample from monitoring well
- GW - Groundwater sample
- TB - Trip Blank

The location code will follow the sample type code. The location code consists of a two- to five-digit numeric or alpha-numeric code that indicates the sample location. Trip blanks and field blanks will be included in the system. Duplicates will not be specifically identified as such in the sample number but will have a different (sequential) number which will be noted in the sample logbook.

5.2.3 Sampling Equipment and Procedures

The procedures that will be performed at each monitoring well include:

1. Measurement for immiscible layers;
2. Recording the water level measurement within the monitoring well;
3. Purging the monitoring well;
4. Headspace analysis of purged water; and
5. Collecting samples.

These items are discussed below and will be performed in the order that they are presented in this document.

5.3.4 Detection of Immiscible Layers

Floating (light) and/or sinking (dense) non aqueous-phase liquids, if present, will be measured in the monitoring wells using an interface probe. Light non-aqueous phase liquids (LNAPL) will be detected by carefully lowering the interface probe into the monitoring well until the approximate static water level is reached (i.e., water/miscible layer interface). Dense non aqueous-phase liquids (DNAPL) will be detected by carefully lowering the probe to the bottom of each monitoring well. KERAMIDA's SOP provides a detailed description of the procedures that will be used to detect immiscible layers. The interface probe will be decontaminated in a manner consistent with the procedure used for the water level indicator as discussed in KERAMIDA's SOP.

5.3.5 Water Level Measurements

A water level indicator will be used to measure the static water level elevation in each monitoring well. As a substitute, an interface probe may also be used to obtain water level measurements. Groundwater measurements will be conducted consistent with KERAMIDA's SOP. The measurement will be taken to the nearest 0.01 foot using the Property's reference datum from the designated reference point on each monitoring (e.g., top of the PVC riser). When measuring the total depth of the monitoring well with the water level indicator, it is necessary to add the distance from the sensor to the tip of the probe to the tape reading. The total depth of the

monitoring well may also be determined using the interface probe, which does not require the addition of the distance between the sensor to the tip of the probe. In addition, the volume of water present in the monitoring well will be calculated as discussed in KERAMIDA's SOP. A detailed description of the procedures to be followed when collecting groundwater samples is found in KERAMIDA's SOP.

The water level indicator/interface probe will be decontaminated using a non-phosphate detergent wash, followed by rinsing with potable water, and then rinsing with distilled water. KERAMIDA's SOP provides a more detailed description of decontamination procedures.

5.3.6 Monitoring Well Evacuation

The monitoring well will be purged prior to sampling, thus allowing a volume of water more representative of the surrounding formation to enter the well screen. Purging procedures will be performed consistent with KERAMIDA's SOP. Clean gloves will be worn by personnel handling the purging equipment.

A minimum of three well volumes of water will be removed from the monitoring well prior to sampling. The water will be pumped/bailed at a rate that does not cause recharge water to be excessively agitated. If the well is low yielding, it will be completely evacuated and then sampled after the monitoring well recovers enough to obtain the required volume of sample. Temperature, pH, turbidity and specific conductivity will be measured following each well volume purged. In-situ monitoring equipment will be calibrated according to the manufacturer's specifications.

The monitoring well may be purged using any of the following methods: a two-inch Grundfos stainless steel submersible pump, a peristaltic pump, a disposable polyethylene bailer (or equivalent) or similar equipment. It may be more efficient to purge the monitoring well by hand using a bailer or a low-flow pump (e.g., peristaltic, etc.) if the total volume to be purged from the monitoring well is less than 20 gallons.

Non-dedicated purging equipment will be decontaminated with a non-phosphate detergent wash, followed by a potable water rinse and a distilled water rinse. In order to further minimize the potential of cross-contamination between monitoring wells, a small volume of potable water will be discharged through the purge pump and hose (if used) to flush the system. Purge water will be containerized for proper disposal. The purge water generated from each monitoring well will

be temporarily stored at the Property in DOT-approved fifty-five gallon steel drums until disposal is approved. Cuttings will be staged in a common area as agreed upon by the Property owner.

5.3.7 Sample Withdrawal

A disposable bottom valve bailer (or equivalent), low-flow sampling pump or similar device will be used for sampling each monitoring well. A polypropylene rope or nylon string will be used to lower the bailer (if used) into the monitoring well to collect the sample. Clean gloves will be worn by each individual handling the sampling equipment. The following steps will be adhered to during sampling:

1. The integrity of the check valve for each bailer (if used) will be tested with distilled water to reduce the potential for fouling problems that could reduce the delivery capability or result in aeration of the sample.
2. The bailer or pump will not be dropped into the monitoring well, as this may cause degassing of the water on impact.
3. Groundwater will be transferred from the bailer or pump into the proper sample container in a manner which will minimize agitation and aeration.
4. In order to preserve sample quality, the sampling order will be as follows: volatile organic compounds, non-volatile organic compounds, metals and in-situ parameters (e.g., pH, specific conductance and temperature).

Used sampling equipment, including string, gloves, or other protective clothing, will be properly disposed following contact with groundwater. Waste sampling equipment will be temporarily stored in a plastic trash bag until it can be transported to a waste receptacle.

5.4 *Sample Handling and Analysis*

Groundwater samples will be analyzed at a VAP-certified laboratory for VOCs, PAHs, PCBs and metals. Sample containers and preservatives will be provided by the laboratory. Samples that are to be analyzed for VOCs will be preserved with hydrochloric acid at a pH < 2 and stored in 40-ml glass vials with Teflon-lined caps.

5.4.1 Sample Preservation

Laboratory supplied containers may be pre-preserved. Alternatively, the laboratory may supply applicable preservatives that would be added to the sample containers in the field by sampling personnel. Further preservation following the collection of each sample will consist of placing the sample on ice in a cooler immediately after the sample is collected and properly labeled.

5.4.2 Special Handling Considerations Volatile Organics

Those samples that are to be analyzed for VOCs will not be transferred from one container to another. Transferring samples between containers may cause a loss of volatile organic compounds onto the walls of the sampling containers. Headspace should not be present in the sample container, thus minimizing the volatilization of organics from the sample. The laboratory will supply the 40-ml glass vials with Teflon-lined lids and will also provide the proper preservatives.

5.4.3 Blanks

Both trip blanks and equipment blanks will be collected to verify that sample handling and equipment have not affected the integrity of the field samples. Trip blanks will be prepared by the laboratory and will consist of filling bottles associated with VOCs analysis with laboratory supplied reagent water. The trip blank will be subject to the same handling and transportation procedures as the samples. Trip blanks will be required at the rate of one per shipping container. Trip blanks will be analyzed for VOCs only or as directed by the Quality Assurance Officer. Trip blanks will accompany sample containers during sample collection and transportation.

To ensure the sampling device has been effectively cleaned, equipment blanks will be prepared by filling the sampling device with laboratory supplied reagent water, transferring the sample to bottles, and submitting the sample to the laboratory for analysis. Disposable bailers should be rinsed and filled with laboratory supplied reagent water then emptied prior to collecting the equipment blank.

The number of equipment blanks analyzed for a class of compounds will be equal to one blank for every 10 samples to be analyzed for those methods. It will be the sample team leader's responsibility to collect the appropriate number of equipment blanks for the day's sampling efforts. If contaminants are found in the equipment or trip blanks, the source of the

contamination will, if possible, be identified and corrective action, such as modifying the procedure and/or re-sampling if appropriate, will be initiated.

5.4.4 Duplicates

A duplicate sample will be collected and analyzed to assess the quality of the data resulting from the field sampling and analytical programs. The duplicate sample will be randomly collected from one of the monitoring wells. The duplicate sample will be analyzed for each of the analytical methods and will be collected and handled in the same manner as previously described for field samples and blanks. The number of duplicate samples analyzed for a class of compounds will be equal to one duplicate for every 10 samples to be analyzed for those methods.

5.4.4 Chain-of-Custody

The chain-of-custody will allow for the tracing of possession and handling of individual samples from the time of field collection through laboratory analysis. The chain-of-custody program will include: sample labels, sample seals, field logbook, chain-of-custody form/sample analysis request sheet and laboratory logbook. Chain-of-custody procedures will be performed consistent with our SOP.

5.4.5 Sample Labels

Sample labels will contain the following information:

1. Sample I.D. number;
2. Name of collector;
3. Date and time of collection;
4. Place of collection; and
5. Parameter(s) requested for analysis

5.4.6 Sample Seal

A seal will be placed on the sample container or on the shipping container to ensure that samples have not been disturbed during transportation.

5.4.7 Field Log Book

An up-to-date field log book will be kept to document daily activities. The log book will include a general list of tasks performed, additional data or observations not listed on field data sheets, and document communication with project personnel or visitors to the Property as it applies to the project.

5.4.8 Chain-of-Custody Record Sheet

The chain-of-custody record will be maintained to trace sample possession and time of collection. The chain-of-custody will accompany each sample and record the:

1. Sample number;
2. Signature of collectors;
3. Date and time of collection;
4. Sample type;
5. Sample location identification;
6. Number of containers;
7. Analytical parameters requested;
8. Signature of relinquished and dates of possession by each party; and
9. Preservatives.

5.4.9 Laboratory Logbook

The laboratory will maintain a record of the processing steps that are applied to each sample (i.e., sample preparation techniques, instrumental methods, experimental conditions, QC results). The time, date and name of the person performing each processing will also be recorded.

6.0 REFERENCES

A variety of technical manuals, administrative documents and publications were referenced in preparing this document. Some of the references consulted are presented below. Referenced documents and publications may or may not have been reviewed in their entirety. The guidelines

and procedures presented in the documents and publications referenced have been strictly adhered to unless stated otherwise.

Ohio Department of Natural Resources, Division of Geological Survey. Geologic Map and Cross Section of Ohio.

Ohio Department of Natural Resources, Groundwater Resources of Lawrence and Gallia Counties by James J. Schmidt, 1985.

Ohio Department of Natural Resources, On-Line Groundwater Well Search, July 2009.

EDR Database Report, October 23, 2007, USDA reference for Lawrence County Ohio.



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Scale 1 : 25,000
1" = 2080 ft

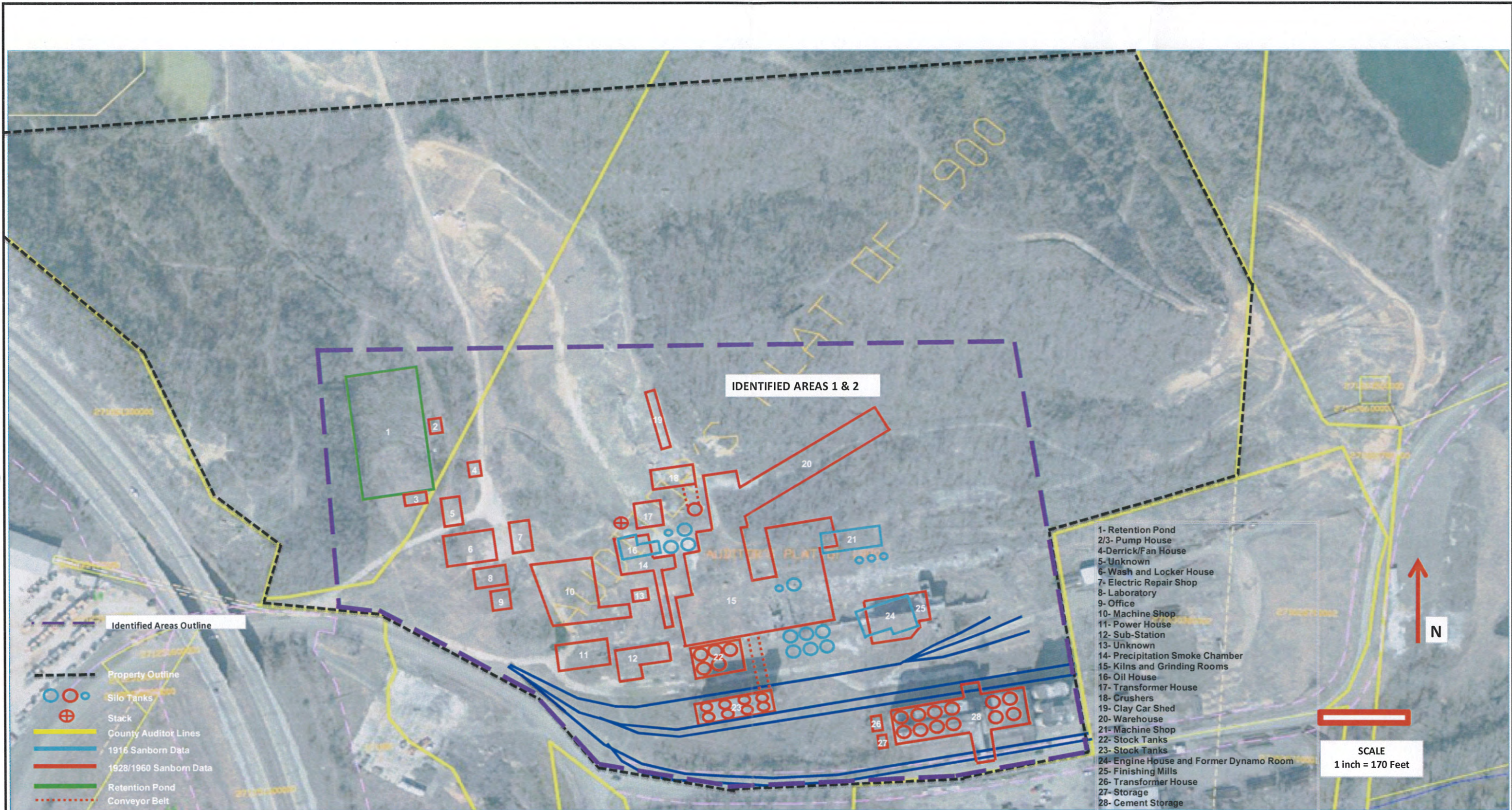


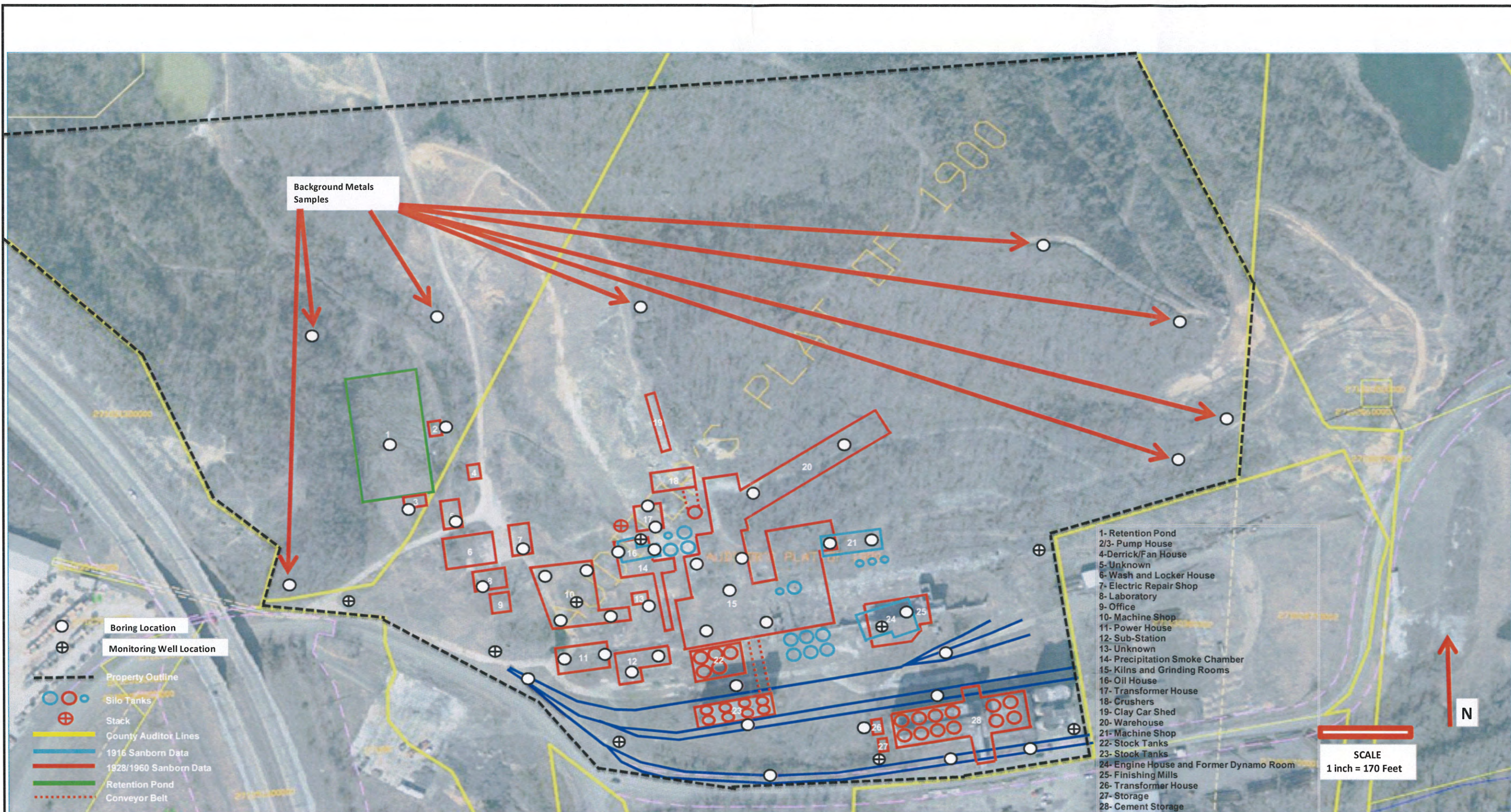
Site Map
Former Alpha Cement Company Site
Ironton, Ohio

Figure 1
Prepared by : PDC
Approved by : TLH
Date : 7/6/2009

Table 1
Field Investigation Table
Former Alpha Cement Property Site - Ironton, Ohio

Identified Area	Area Description	Chemicals of Concern	Proposed Field Investigation	Proposed Soil Sampling Depths	Media	Laboratory Analyses
IA-1 - Property Wide Site Investigation	Various former building areas across the Site	VOCs, PAHs, PCBs, Metals & TPH	Forty seven hydraulic push borings and nine shallow monitoring wells	0 - 2 feet 2 - 6 feet Sample above GW	Soil Soil Soil Soil Soil Water Water Water Water	VOCs by Method 8260 Metals by Methods 6010/7471 TPH by Method 8015 L/MMH PAHs by Method 8270 SIM PCBs by Method 8082 PAHs by Method 8270 SIM PCBs by Method 8082 VOCs by Method 8260 Metals by Methods 6010/7471
Deep Well	One in area of highest GW/Soil impact at Site	VOCs, PAHs, PCBs, Metals	One bedrock well to approximately 100 feet in depth	NA	Water Water Water Water	PAHs by Method 8270 SIM PCBs by Method 8082 VOCs by Method 8260 Metals by Methods 6010/7471
IA-2 Asbestos Inspection	Pre-demolition inspection of existing buildings and survey of property area for suspect ACM debris.	Asbestos	Estimated up to 100 sample locations (3 grab samples per homogeneous area).	NA	Solid	Asbestos





**Project Assump/ Cost Estimate
Former Alpha Cement Site - Ironton, Ohio**

Item	Rate	Unit	Project Coordination (HASP/ Scheduling/ Utility, Markout)	Asbestos Inspection	Soils Investigation	GW Wells (installation, sampling, etc.)	QA/QC Lab Analyses	Data Analysis	Report Prep	Total Quantity	Total Cost
Labor											
Senior Project Manager	\$135.00	Hr	4	2	4	6		8	40	64	\$8,640.00
Certified Professional	\$150.00	Hr	4	3	10	10		16	20	63	\$9,450.00
Project Manager	\$115.00	Hr	8	12	30	30		16	40	136	\$15,640.00
Asbestos Inspector	\$80.00	Hr		60				12	24	96	\$7,680.00
Geologist/Scientist	\$80.00	Hr	22		116	100		40	240	518	\$41,440.00
Administrative	\$40.00	Hr						24	16	40	\$1,600.00
CADD Operator	\$55.00	Hr							40	40	\$2,200.00
Labor Subtotal											\$86,650.00
Expenses											
Misc. Field Supplies	\$35.00	Ea			10	10				20	\$700.00
Hotel	\$78.00	Day	1	4	10	10				25	\$1,950.00
Per Diem	\$30.00	Day	2	6	10	10				28	\$840.00
Pickup Truck	\$40.00	Day	2	3	10	10				25	\$1,000.00
Truck Mileage	\$0.505	Mile		320	900	900				2120	\$1,070.60
PID Meter	\$100.00	Day			7	7				17	\$1,700.00
Sample Kit	\$50.00	Day		3	10	3				16	\$800.00
Measuring Wheel	\$10.00	Day		10	10	10				20	\$200.00
Distilled Water	\$2.53	Gallon		30	28	28				58	\$146.74
Ice	\$2.00	Ea		30	30	10				40	\$80.00
GPS Surveying	\$150.00	Day		2	1	1				3	\$450.00
Survey Equipment	\$100.00	Day								0	\$0.00
55-gallon Water Drums	\$33.00	Ea			5	5				5	\$265.00
Water Level Meter	\$50.00	Day		10	10	10				20	\$1,000.00
Bailer, disposable	\$12.00	Ea			8	8				8	\$96.00
Data Logger	\$500.00	Wk								0	\$0.00
Temp/pH/Cond. Meter		Wk								0	\$0.00
Expense Subtotal											\$10,298.34
Subcontractors											
Geotech		Ea								0	\$0.00
Private Utility Markout/GPR	\$5,397.50	Ea	1							1	\$5,397.50
Drilling (9 shallow wells & 1 deep well)	\$20,253.00	Ea			1	1				1	\$20,253.00
Drilling (borings - hydraulic push)	\$19,500.00	Ea		1						1	\$19,500.00
Low Flow Sampling Pump and supplies	\$770.00	Wk			1	1				1	\$770.00
Temp/pH/Cond. Meter	\$300.00	Wk			1	1				1	\$300.00
Surveying	\$3,000.00	Ea		1						1	\$3,000.00
Shipping	\$100.00	Ea		1						1	\$1,200.00
Non-Haz waste Disposal	\$90.00	Drum		4	6	6				12	\$1,200.00
Subcontract Subtotal											\$53,120.50
Laboratory											
Asbestos Analyses (3-day TAT)	\$7.00	Ea		300	1					330	\$2,310.00
Geotechnical Analyses (3 samples)	\$1,977.00	Ea								1	\$1,977.00
Soil Analytical											
TPH 8015 (soil)	\$75.00	Ea			141					171	\$12,825.00
RCRA Metals (soil)	\$75.00	Ea			141					171	\$12,825.00
VOCs 8260 (soil)	\$85.00	Ea			141					171	\$14,535.00
PAHs 8270/8310 SIM (soil)	\$85.00	Ea			141					171	\$14,535.00
PCBs 8082 (soil)	\$65.00	Ea			141					171	\$11,115.00
Total Organic Carbon	\$75.00	Ea		3						4	\$300.00
Percent Moisture	\$5.00	Ea			141					141	\$705.00
Soil pH	\$10.00	Ea		3						4	\$40.00
Groundwater Analytical											
RCRA Metals	\$75.00	Ea				10				12	\$900.00
PAHs 8270/8310 SIM	\$85.00	Ea				10				12	\$1,020.00
VOCs 8260 (includes trip blanks)	\$85.00	Ea				10				20	\$1,700.00
PCBs 8082	\$65.00	Ea				10				12	\$780.00
Lab Subtotal											\$75,567.00
Project Subtotal											\$225,635.84
Contingency (10% of hard costs)											\$13,898.58
Project Total											\$239,534.42

Hard Costs*	\$138,985.84	\$225,635.84
Soft Costs**	\$86,650.00	\$225,635.84
** Labor Cost		

C/P Signature:  CP#273



Direct Push Sampling
20 Vine Street, Peebles, Ohio 45660

Project: Ironton, OH
Contact Name: Terry Hair
Company: Keramida Environmental, Inc.
Company Location: Cincinnati, Ohio

Date: June 26, 2009

Re: Geoprobe Services Cost Estimate

Dear Terry:

Tiger Probe is pleased to provide Keramida Environmental a cost estimate for *Geoprobe* services in Ironton, Ohio.

Tiger Probe will perform continuous sampling for each boring as requested. We understand that the purpose of this work is to place 47 soil borings to approximately 30 feet and 8 additional borings to 8 feet. We understand that Keramida will provide a geologist to record and screen samples. We will be conducting the continuous sampling using the dual tube-sampler system (DTSS), unless otherwise specified. Potable Water will be supplied for the purposes of Concrete Coring and cleaning of the downhole equipment.

Tiger Probe assumes that the Ohio Utility Protection Services will be contacted by Keramida and that all underground utilities will be marked.

<i>Description</i>	<i>Unit Cost</i>	<i>Quantity</i>	<i>Estimated Total</i>
Probe Daily Rate (8 hours)	\$1,500.00	10 Days	\$15,000.00
Potable Water	75.00	10	750.00
Concrete Coring	150.00	10	1,500.00
Sample Sleeves	150.00	10	1,500.00
Bentonite for Backfill	75.00	10	750.00
		Total	\$19,500.00

Tiger Probe will provide the probe (54LT track unit) and an operator for a daily rate of \$1,950.00. This price includes all material, mobilization and overnight per-diem. We can perform all tasks associated with this project for a cost of **\$19,500.00**.

Tiger Probe is committed to probing excellence. Please call (937) 587-8700 if there are any questions or if modifications are required to this proposal. Thank You for the opportunity to provide Direct-Push Services for Keramida Environmental.

With Best Regards,

TIGER PROBE, LLC

Tim L. Setty



Direct Push Sampling
20 Vine Street, Peebles, Ohio 45660

Project: Ironton, OH
Contact Name: Terry Hair
Company: Keramida Environmental, Inc.
Company Location: Cincinnati, Ohio

Date: June 26, 2009

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With Best Regards,

TIGER PROBE, LLC

Tim L. Setty



Blood Hound, Inc.
 750 Patricks Place, Suite B
 Brownsburg, IN 46112

Estimate

Date	Estimate #
6/11/2009	4051

Name / Address
Keramida Environmental 260 Northland Blvd, Suite 114 Cincinnati, OH 45246 Attn: Terry L. Hair

Item	Description	Qty	Cost	Total
Single Tech Mobiliz-Ci...	IRONTON, OH @ "ALPHA CEMENT" SITE outside Greater Cincinnati area (per hour, round-trip)	5.5	105.00	577.50
Tier 3-Cincinnati	Tier 3 Service-Cincinnati (EM locating, GPR) (hourly rate, 2 hr min)	20	200.00	4,000.00
GPR Report-Cincinnati	GPR Report (hourly rate - 1 hour minimum)-Cincinnati	4	130.00	520.00
Per diem-Cincinnati	Per diem-Cincinnati (per technician, per night)	2	150.00	300.00
<p>Utilize electromagnetic (EM) locating equipment & ground-penetrating-radar (GPR) to perform a utility locate & geophysical survey on site. The site is an abandoned manufacturing facility that is approximately 20 acres in size.</p> <p>CONTACT PERSON: Terry L. Hair at 513-769-9057 OR thair@keramida.com</p> <p>**REPORTING PRICE ABOVE IF FOR A BASIC / NON-ADVANCED REPORT ONLY**</p> <p>TIME ON SITE: 20 HOURS</p>				

****Payment is due at the time of service, unless you already have an account with us. If you do have an account with us, payment terms are Net 30 days, unless otherwise stated in a pre-approved contract. To learn more, please call the office at 888-858-9830.**

****PRICE MAY VARY BASED ON ACTUAL TIME ON SITE. The above pricing is based only on the information supplied by the customer. If a site walkthrough has not been conducted, this may affect the price.**

WE LOOK FORWARD TO WORKING WITH YOU!

Total	\$5,397.50
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Phone #	Fax #	E-mail	Web Site
888-858-9830	888-858-9829	BHI@bhug.com	www.bhug.com

July 6, 2009

Mr. Terry L. Hair Jr.
KERAMIDA Environmental, Inc.
260 Northland Boulevard, Suite 114
Cincinnati, OH 45246



▶ 7770 West New York Street
Indianapolis, IN 46214-2988
317-273-1690 (FAX) 317-273-2250
4310-C Technology Drive
South Bend, IN 46628
574-233-6820 (FAX) 574-233-8242

Re: Environmental Soil Borings
and Monitoring Wells
Ironton Cement Co.
Ironton, Ohio
EEI Proposal No.: P1-09-336.1

Dear Mr. Hair:

We are pleased to submit our revised cost estimate for the referenced work. This proposal is in response to your request in an electronic message received July 2, 2009. At this time we understand the general scope of work will include the following:

1. Nine soil borings advanced with 4¼-in. I.D. hollow stem augers to an approximate depth of 30 ft (or to rock) with no split spoon samples;
2. The soil borings will be completed as 2-in. I.D. Schedule 40 PVC wells with 15 ft of 10-slot screen (machine cut), sand to about 2 ft above the screen, a bentonite chip seal, bentonite grout to near the surface, an expandable locking cap and an above-ground well cover concreted in place. Our personnel will develop the wells;
3. One additional boring will be advanced to bedrock with 4¼ -in. hollow stem augers and will be extended into bedrock to a total depth of 100 ft by NX rock core. The boring will then be reamed with a 3⅞-in. tri-cone roller bit. A 2-in. PVC well will be installed as described above, and;
4. Drilling tools and augers will be steam cleaned prior to mobilization, between borings and before demobilization. Auger cuttings from the borings, decontamination water and well development water will be placed in 55-gallon steel drums (DOT 17H) provided by us and remain on the site for disposition by others.

Based on this information, we estimate the total cost to be on the order of \$20,250, as outlined in the attached Cost Estimate. The estimated total is based, in part, on the soil boring/well locations being accessible to ATV-mounted drilling equipment, no standby or special services time, no water available on the site and all on-site work being performed under Level D personnel protection guidelines. Please note that due to the volatility of material costs, we reserve the right to increase prices after 30 days from the date of this proposal.

Mr. Brian Winter
KERAMIDA Environmental, Inc.
Ironton Cement Co. – Ironton, OH

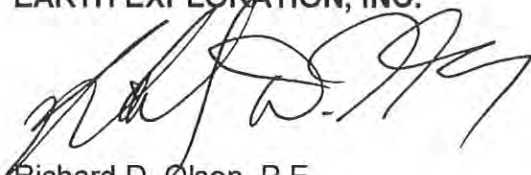
July 6, 2009
Page 2

We expect to complete the assignment in approximately seven days using a two-person crew depending on the actual workscope and site, subsurface and weather conditions. The responsibility to locate and identify underground utility lines, buried storage tanks or other subsurface appurtenances will be that of your company or the owner.

If you elect to utilize our services, please issue a purchase order referring to our proposal number. Thank you for your consideration.

Sincerely,

EARTH EXPLORATION, INC.

A handwritten signature in black ink, appearing to read 'Richard D. Olson', is written over the company name.

Richard D. Olson, P.E.
Vice President

Attachment: Cost Estimate

COST ESTIMATE
Soil Borings and Monitoring Wells
 Ironton Cement Co.
 Ironton, Ohio

Preparation and mobilization	1 LS	\$1,800.00 / LS	\$1,800.00
Drilling with 3¼-in. I.D. hollow stem augers			
0 - 30 ft deep	ft	\$7.50 / ft	
30 - 60 ft deep	ft	\$8.50 / ft	
Drilling with 4¼-in. I.D. hollow stem augers			
0 - 30 ft deep	300 ft	\$8.00 / ft	\$2,400.00
30 - 60 ft deep	ft	\$9.00 / ft	
Split spoon samples	ea	\$13.00 / ea	
Rock Core Set-up	1 ea	\$80.00 / ea	\$80.00
Rock Core	70 ft	\$30.00 / ft	\$2,100.00
Rock Reaming to 3⅞ - in.	70 ft	\$26.00 / ft	\$1,820.00
Pipe material - 2-in. I.D. Schedule 40 PVC			
Riser	270 ft	\$2.50 / ft	\$675.00
Screen	150 ft	\$4.00 / ft	\$600.00
End plugs	10 ea	\$8.00 / ea	\$80.00
Lockable caps	10 ea	\$21.00 / ea	\$210.00
Miscellaneous material			
Bentonite chips	10 bag	\$10.00 / bag	\$100.00
Bentonite grout	13 bag	\$18.00 / bag	\$234.00
Bentonite pellets	bckt	\$80.00 / bckt	
Concrete mix (regular)	30 bag	\$5.00 / bag	\$150.00
Concrete mix (fast setting)	bag	\$9.00 / bag	
Cement (47 lb)	bag	\$7.00 / bag	
Sand (50 lb bag)	95 bag	\$7.00 / bag	\$665.00
Protective covers (4" x 4" x5' above ground)	10 ea	\$90.00 / ea	\$900.00
Auger knockout plugs (4¼ in.)	9 ea	\$21.00 / ea	\$189.00
55-gallon steel drums	22 ea	\$40.00 / ea	\$880.00
Labor to install well materials	22 hr	\$130.00 / hr	\$2,860.00
Water hauling and auger washout	3 hr	\$130.00 / hr	\$390.00
Borehole grouting	hr	\$130.00 / hr	
Decontamination and clean-up	9 hr	\$130.00 / hr	\$1,170.00
Well development	6 hr	\$130.00 / hr	\$780.00
Hand augering	hr	\$130.00 / hr	
Other equipment, supplies and services			
Steam cleaner	7 day	\$30.00 / day	\$210.00
Standby or special services time	hr	\$130.00 / hr	
All-terrain mounted drilling equipment	7 day	\$100.00 / day	\$700.00
Miscellaneous out-of-pocket expenses		cost + 10 %	
Concrete penetration	ea	\$50.00 / ea	
2-ft X 2-ft asphalt pavement cut	ea	\$75.00 / ea	
2-ft X 2-ft concrete pavement cut	ea	cost + 10 %	
Submersible development pump (battery powered)	1 day	\$30.00 / day	\$30.00
Per diem	7 day	\$60.00 / day	\$420.00
Overnight living	5 night	\$150.00 / night	\$750.00
Support truck	day	\$100.00 / day	
Brass pad locks	10 ea	\$6.00 / ea	\$60.00
		Estimated Total	\$20,253.00

Pace Analytical 2009 Pricing Information

Keramida Fee Schedule



Pace Analytical Services is pleased to present our client Price list. We believe it will serve as a useful tool in estimating your projects' analytical costs. However, we encourage you to contact Pace Analytical directly for each individual project. Considering all aspects of your project, our marketing, project management, and technical personnel can provide you with a cost effective quotation based on your specific project scope and the appropriate analytical protocol. In addition, we will work with you to define and understand your expectations prior to the start of the project. During the course of your project, we will monitor the lab activities and provide feedback to you. It is our belief that diligent project setup, good communication, and attentive maintenance activities will ensure the success of your project.

The Pace Analytical nationwide system of laboratories offers quality technical data delivered on time with exceptional client service. Pace Analytical continues to be actively engaged in the evolution of the environmental industry by investing both time and money into our people, instrumentation, and quality control measures. Our philosophy at Pace Analytical, as it has always been, is to provide clients with the standards of service they require and deserve. It is a philosophy dedicated to providing:

Take advantage of PACEPORT, your online data management tool. Ask your Pace PM for details.

Uncompromising Quality
Service Responsive to Client's Needs
A Single Source of Comprehensive Services

Free courier service now available in most major metropolitan areas with greater than \$300 of analytical work. Call your PM or AE for details.

Prices for Standard Services Include:

- a) Overnight return shipping for shipments containing >\$300 of samples to Pace
- b) Containers, preservatives, coolers, labels, chain-of-custody forms
- c) Standard Electronic Deliverables via disk or email
- d) A minimum charge of \$200 for each project submitted

Prices for Specialty Services are shaded and may require special considerations when bidding (shipping, media, TAT, rentals, etc.) Please contact your Pace Representative.

Additional discounts are available for large projects or extended contracts.

Effective until December 31, 2009

ORGANICS		Price
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Gas Chromatography / Mass Spectrometry

Volatile Organic Compounds (VOCs)	EPA 8260	\$85
BTEX/MTBE	EPA 8260	\$35
Short List VOCs (<15 compounds)	EPA 8260	\$75
BTEX, MTBE, N-Hexane, and Napthalene	EPA 8260	\$45
Terracore Kits (for VOC sampling)	N/A	\$12
Terracore Kits TC2 Version (for GRO/VOC sampling)	N/A	\$15
Semivolatiles Organics (full list SVOCs)	EPA 8270	\$175
Polynuclear Aromatic Hydrocarbons (PAH) (low level, soil/water)	EPA 8270SIM	\$85
Semivolatiles Organics (full list SVOCs + PAH, low level)	EPA 8270/8270SIM	\$210

Gas Chromatography (GC)

Organochlorine Pesticides (Subcontracted within Pace)	EPA 8081	\$85
Organophosphorous Pesticides (Subcontracted within Pace)	EPA 8141	\$120
Polychlorinated Biphenyls (PCBs)	EPA 8082	\$65
Herbicides (subcontracted within Pace)	EPA 8151	\$145

PETROLEUM HYDROCARBONS / UST ANALYSES		Price
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BTEX/MTBE	EPA 8021	\$35
Gasoline Range Organics (TPH-GRO) [C6-C10]	EPA 8015M	\$35
Gasoline Range Organics - Ohio (TPH-GRO-OH) [C6-C12]	EPA 8015M	\$35
Diesel Range Organics (TPH-DRO) [C10-C28]	EPA 8015M	\$45
Diesel Range Organics - Ohio (TPH-OH) [C10-C20, C21-C34]	EPA 8015M	\$40
Extended Range Organics (TPH-ERO) [C10-C36]	EPA 8015M	\$50
Methane, Ethane, Ethene (Subcontracted within Pace)	SM3810	\$80
Total Petroleum Hydrocarbons Fractionation		
Volatile Petroleum Hydrocarbons (VPH) Water	WDOE-VPH	\$135
Extractable Petroleum Hydrocarbons (EPH) Water	WDOE-EPH	\$155
Volatile Petroleum Hydrocarbons (VPH) Soil	WDOE-VPH	\$165
Extractable Petroleum Hydrocarbons (EPH) Soil	WDOE-EPH	\$185
Total Oil & Grease		
Hexane extractable material (Subcontracted within Pace)	EPA 1664	\$65

RCRA HAZARDOUS WASTE		Price
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Corrosivity (pH)	EPA 9045	\$10
Reactive Cyanide	EPA 7.3.3.2	\$40
Reactive Sulfide	EPA 7.3.4.2	\$40
Ignitability of Solids	EPA 1030	\$50
Ignitability/Flashpoint (closed-cup)	EPA 1010	\$50
Paint Filter Liquids Test	EPA 9095	\$15
VOCs - Wastewater	EPA 624	\$120
SVOCs - Wastewater (Subcontracted within Pace)	EPA 625	\$225
Pesticides / PCBs - Wastewater (Subcontracted within Pace)	EPA 608	\$130
TCLP Lead only (includes leachate)	EPA 1311/6010	\$75
TCLP RCRA Metals (includes leachate)	EPA 1311/6010/7470	\$125
TCLP Benzene (includes leachate)	EPA 1311/8260	\$125
TCLP Volatiles (includes leachate)	EPA 1311/8260	\$175
TCLP Semi-Volatiles (includes leachate)	EPA 1311/8270	\$210

METALS	Price
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INDIVIDUAL METALS by ICP (Inductively Coupled Plasma) EPA 6010B/ 200.7

Metal Analysis (First Metal)	\$12
Each Additional Metal	\$8
Aluminum (Al)	Cobalt (Co)
Antimony (Sb)	Copper (Cu)
Arsenic (As)	Iron (Fe)
Barium (Ba)	Lead (Pb)
Beryllium (Be)	Magnesium (Mg)
Boron (B)	Manganese (Mn)
Cadmium (Cd)	Molybdenum (Mo)
Calcium (Ca)	Nickel (Ni)
Chromium, total (Cr)	Potassium (K)
Hexavalent Chromium (Cr VI), water	SW 7196, SM4500-Cr-D
Hexavalent Chromium (Cr VI), soil	SW 7196, SM4500-Cr-D
Mercury (Hg)	EPA 7470A/7471
Mercury (Hg), Low Level (Subcontracted within Pace)	EPA 1631
Metals Wipes (one metal)	SW-846 - 6010
each additional metal	SW-846 - 6010

Package Metals

Priority Pollutant Metals -Soils (13) (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	EPA 6010B/7471	\$115
RCRA Metals (8) (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	EPA 6010B/7470-7471	\$75
TAL Metals (23) (Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Hg, Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn)	EPA 6010B/7470	\$175

DRINKING WATER ANALYSES	Price
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All analyses are Indiana Drinking Water certified by the Indiana Department of Health.

Organics

Volatile Organic Compounds (VOCs)	EPA 524.2	\$125
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Metals

Antimony (Sb)	EPA 200.9	\$30
Arsenic (As)	EPA 200.9	\$30
Barium (Ba)	EPA 200.7	\$18
Beryllium (Be)	EPA 200.7	\$18
Cadmium (Cd)	EPA 200.7	\$18
Chromium, Total (Cr)	EPA 200.7	\$18
Copper (Cu)	EPA 200.7	\$18
Lead (Pb)	EPA 200.9	\$30
Mercury (Hg)	EPA 245.1	\$30
Nickel (Ni)	EPA 200.7	\$18
Selenium (Se)	EPA 200.9	\$30
Thallium (Tl)	EPA 200.9	\$30

Wet Chemistries

Nitrates (24-hour hold for Drinking Water)	EPA 353.2	\$25
Flouride	EPA 340.2	\$25
Cyanide	EPA 335.4	\$35

WET CHEMISTRY / INORGANIC ANALYSIS**Water****Soil*****Aqueous Wet Chemistries***

Acidity	EPA 2310B	\$12	EPA 2310B	\$20
Alkalinity	EPA 2320B	\$12.50	EPA2320B	\$20
Biochemical Oxygen Demand (BOD) (Subcontracted) (48-hr Hold)	EPA 5210B	\$28	n/a	
CBOD (Subcontracted outside Pace) (48-hr Hold)	EPA 5210B	\$35	n/a	
Chloride	EPA 4500	\$12	EPA 4500	\$20
Chlorine, Total Residual	EPA 4500	\$20	n/a	
Chemical Oxygen Demand (COD)	EPA 410.4	\$20	n/a	
Conductivity (Specific Conductance)	EPA 120.1	\$16	n/a	
Cyanide, amenable	EPA 335.4	\$55	EPA 335.4	\$60
Cyanide, free	EPA 9213	\$30	EPA 9213	\$50
Cyanide, total	EPA 335.4	\$25	EPA 335.4	\$35
Ferrous Iron (24-hr Hold)	SM3500-Fe-D	\$25	n/a	
Fluoride	EPA 4500FC	\$25	EPA 4500FC	\$30
Hardness, total	EPA 2340C	\$12	n/a	
Hydrogen Sulfide	SM4500-S	\$35	n/a	
Nitrogen, Ammonia	EPA 350.1	\$18	EPA 350.1-2	\$25
Nitrogen, Nitrate (48-hr Hold)	EPA 353.2	\$15	EPA 353.2	\$25
Nitrogen, Nitrite (48-hr Hold)	EPA 353.2	\$15	EPA 353.2	\$25
Nitrogen, Nitrate+Nitrite	EPA 353.2	\$20	EPA 353.2	\$25
Nitrogen, Total Kjeldahl (TKN)	EPA 351.2	\$20	EPA 351.2	\$30
Oxidation-Reduction Potential (REDOX)	n/a		SM2580B	\$25
Oxygen, Dissolved	4500 OG	\$15	n/a	
pH (24-hr Hold in water) (Corrosivity)	EPA 4500H+	\$10	EPA 9045	\$10
Phenol (4aap)	EPA 420.2	\$25	EPA 420.2	\$35
Phosphorus, Ortho	EPA 4500PE	\$15	EPA 365.2	\$25
Phosphorus, Total	EPA 4500PE	\$25	EPA 365.2	\$35
Resistivity	n/a		AASHTO-288	\$30
Solids, Total (TS)	EPA 2540B	\$15	n/a	
Solids, Total Dissolved (TDS)	EPA 2540	\$15	n/a	
Solids, Total Suspended (TSS)	EPA 2540S	\$15	n/a	
Sulfate	ASTM D516-9002	\$20	ASTM D516-9002	\$25
Sulfide	EPA 4500S2D	\$15	n/a	
Sulfite	EPA 377.1	\$15	n/a	
TOC (Subcontracted within Pace)	EPA 415.2	\$30	EPA 9060M	\$60
TOC - Walkley Black (Subcontracted within Pace)	n/a		Walk.-Black.	\$75
Turbidity (48-hr Hold)	EPA 180.1	\$15	n/a	

***Non-Standard Wet Chemistries may be available on a per project bases. Contact your Pace Representative for details.*

INDUSTRIAL HYGIENE - PERSONAL / PERIMETER MONITORING

Prices include cost of sampling media. Mandatory Method Blanks are considered a billable unit. Contact Pace Project Manager for sampling details.

Metals

Metals in Air (one metal)	NIOSH 7300	\$25
each additional metal	NIOSH 7300	\$7
Hexavalent Chromium	NIOSH 7600	\$45
Mercury	NIOSH 6009	\$50
Metals in Air - Hi Volume Sampler (one metal)	40CFR-Pt50 Appendix G	\$35
each additional metal	40CFR-Pt50 Appendix G	\$10

GC / GCMS Methods

Aromatic Hydrocarbons (BTEX Compounds Only)	NIOSH 1501	\$75
PCBs	NIOSH 5503	\$90
Vinyl Chloride	NIOSH 1007	\$85
VOCs - Passive Monitor Analysis (one compound)	OSHA 07M	\$75
each additional VOC compound	OSHA 07M	\$15
VOCs - Charcoal Tube Analysis (one compound)	OSHA 07M	\$50
each additional VOC compound	OSHA 07M	\$15

Particulate Matter

Nuisance Dust	NIOSH 0500	\$25
Respirable Dust	NIOSH 0600	\$25
Nuisance/Respirable Dust Media		\$10
PM-10 Emissions	40CFR-Pt50 Appendix J	\$25
Total Suspended Particulates	40CFR-Pt50 Appendix K	\$25

Passive monitors 3M OVM (organic vapor monitor) badges will be billed to the client at a rate of \$25/badge for media not returned to Pace Analytical for analysis

LANDFILL GAS / AMBIENT AIR METHODS

Landfill Gas: (Price does not include sampling media)

Permanent Gases:Methane, O2, CO2, N2, CO(GC/TCD/FID)	3C	\$90
Methane, Ethane, Ethene, Propane(GC/FID)	3810M	\$77
Methane only(GC/FID)	3810M	\$59

Air Toxics (Ambient Air): (Price does not include sampling media)

Volatile Organic Compounds(BTEX Compounds only) (GC/FID)	TO-3	\$68
Organochlorine Pesticides and PCB's(GC/ECD)	TO-4	\$63
Pesticides or PCB's separately(GC/ECD)	TO-4	\$153
Dioxin & Furan PCDD/PCDF(HRGCMS)	TO-9	\$743
Polynuclear Aromatic Hydrocarbons(GC/MS SIM)(need PUF + hi-vol sampler)*	TO-13	\$176
Volatile Organic Compounds(standard list-39 cmpds; summa can/bag)(GC/MS)	TO-14/15	\$180
Reduced List 1-5 Analytes(\$5 each add'l, up to 15 max)(GC/MS)	TO-14/15	\$113
Volatile Organic Compounds(59 cmpds, summa can) (GC/MS)(0.5 ppbv)	TO-15	\$198
Volatile Organic Compounds(59cmpds, summa can) (GC/MS)(0.2 ppbv)	TO-15 Low Level	\$198
Reduced List VOCs (1-5 cmpds, summa can) (GC/MS)(0.5 ppbv)	TO-15	\$125

Air Toxics**Price****STATIONARY SOURCE TESTING***Stack Air (stationary source): (Price does not include sampling media)*

Particulate Matter	5	\$14
Lead Emissions	12	\$40
Volatile Organic Compounds(GC/MS)	18	\$180
Semivolatiles (modified list 60 compounds) (GC/MS)	110	\$315
Dioxin & Furan (separate front end rinse value)	0023A	\$1,440
Dioxin & Furan PCDD/PCDF (HRGCMS)	23	\$720
Metals (12 Elements plus Mercury)	29	\$450
Mercury	101	\$54
Mercury Speciation in Stack Gas (CVAA)	324	
PM 10 Emissions (requires high volume sampler)*	201A	\$14
Condensable Particulate Emissions	202	\$36
Hydrogen Halide & Halogen Emissions (price per fraction)	26A	\$99
Polynuclear Aromatic Hydrocarbons (GC/MS SIM) (Std 14 compounds)	429	\$605

Sampling Media:

6 Liter Summa Canister (one week rental, subject to \$50 fee each addtl week)		\$36
Individual Canister Certification Process		\$68
Flow Control Valve (one week rental, subject to \$50 fee each addtl week)		\$27
1 Liter Tedlar Bag		\$11
PUF Cartridge (includes prespike fee if required)		\$36
XAD2 Trap (includes prespike fee)		\$54
Impinger		N/C
Impinger Pump Rental		\$60
Impinger Replacement		\$60
Charcoal Tubes (ORBO 100)		\$13
Filter		\$5

Biota/Biological Samples

Organochlorine Pesticides(EPA TCL 3.4 List)	8081A	\$210
Organochlorine Pesticides and PCBs(Incl TCL 3.4 List & 9 addl Pesticides)	8081M	\$342
PCB Aroclors (standard 7 compounds)	8082	\$180
PAHs (GC/MS-SIM)	8270C	\$235
BNA (EPA TCL List)	8270C	\$355
Tentatively Identified Compounds (TICs)	8270C	\$63
Lipid Analysis*	Lab SOP	\$45
Mercury by CVAA (includes Prep Charge)	7471A	\$36
Mercury by CVAA (includes Prep Charge)	245.6	\$45
Mercury by Low Level Method	1631	\$90
Metals by ICP-MS(each metal)	6020	\$16
TAL Metals	6020	\$234
AVS/SEM		\$315
Moisture Content	Lab SOP	\$11
Biota Tissue Homogenization(incl. fish filleting)	Lab SOP	\$23
Hantavirus Decontamination(required for all small rodents)	Lab SOP	\$135

**Lipid analysis is billable when a separate extraction is required, i.e. as a stand alone procedure or for metals*

DIOXINS/FURANS (and Dioxin-like compounds)		Price
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High Resolution Methods

2,3,7,8-TCDD (Single Compound, Drinking water)	EPA 1613	\$293
2,3,7,8-TCDD (Single Compound, other matrices)	EPA 1613	\$405
2,3,7,8-TCDD/TCDF (2 Compounds, pulp & paper industry)	EPA 1613	\$405
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 1613	\$720
2,3,7,8-TCDD (Single compound, all matrices)	EPA 8290	\$405
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 8290	\$720
Tetra-Octa (All 17 Dioxin/Furan compounds by CLP SOW)	DLMO 1.4	\$780
Tetra-Octa (Stack Testing, 17 compounds)	Method 23	\$720
Tetra-Octa (Ambient Air Testing, 17 compounds)	TO-9	\$720
PAHs by HRGCMS (17 Compounds)	EPA 429M	\$608
PCB Congeners (WHO List, 12 PCB congeners)	EPA 1668	\$575
PCB Congeners (209 PCB congeners and totals)	EPA 1668A	\$895
Tetra-Octa & PCBs (Dioxin/Furan/PCB's 29 compounds)	1613-1668	\$1,170
PBDE (Brominated Flame Retardants 49 compounds)	EPA 1614	\$855

Low Resolution Methods

Tetra-Hexa (Tetra-Hexa isomers only, Appendix IX)	EPA 8280A	\$405
2,3,7,8-TCDD (Single compound, all matrices)	EPA 8280A	\$360
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 8280A	\$450

NOTE: All prices reflect Level II reporting only. TAT is 15 days (20 for 1668A, 1614 and 1613/1668 combination).

Surcharges will apply for alternate report formats and rush TAT upon approval (call for quotation).

RADIOCHEMISTRY / RADIOACTIVITY ANALYSES		Price
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Radiochemistry in Drinking Water

Gross Alpha	EPA 900.0	\$45
Gross Beta	EPA 900.0	\$45
Gross Alpha/Beta	EPA 900.0	\$50
Total Alpha-Emitting Radium Isotopes	EPA 903.0	\$67
Radium-226; Radon Emanation	EPA 903.1	\$90
Radium-228	EPA 904.0	\$81
Radioactive Strontium	EPA 905.0	\$90
Tritium	EPA 906.0	\$67
Uranium	EPA 908.0	\$67
Radon-Liquid Scintillation Method	SM 7500-Rn	\$45

Please call for information on additional methods, certifications, hold times, turn around time, data packages, etc.

*Please call your Representative or our Waltz Mill Lab at 724-722-5407 for details on our Radiochemistry Program

OTHER CHARGES		
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Composite of Samples		\$25/sample
Percent Moisture in soils	ASTM Method	\$7.50/sample
Sample Filtration		\$25/sample
Extract and Hold (I.e. SVOCs, Pesticides, Herbicides, etc.)		50% of cost of analysis
Disposal of unanalyzed samples		\$20.00/sample+labor
Delivery of Sample Kits (<2 workday notice)		Cost of delivery + 10%
Copy of Chromatogram (if not requested at time of sample submittal)		\$50/hour
Retroactive Copy of Chromatogram (minimum one hour)		\$50/hour
Data Validation/Technical Reviewal of Data		\$50/hour
Minimum Laboratory Order		\$100.00

Client specified or project specific MS/MSDs are charged as one billable unit

TURNAROUND TIMES*

Standard (6-10 working business days)	No Surcharge
5 working business days	10% Surcharge
4 working business days	25% Surcharge
3 working business days	50% Surcharge
2 working business days	75% Surcharge
1 working business day	100% Surcharge
Less Than One Workday (also weekends and holidays)	Quote

*All turnaround times less than 10 business days MUST be pre-arranged.

**Surcharges for extractable & subcontracted analysis may vary, call for details. All turnaround times less than 10 business days MUST be pre-arranged. Surcharges are subject to change if prior notification has not occurred prior to sample receipt at the Laboratory.

DELIVERABLES/ DATA PACKAGES*

Level 1 Sample Data Reporting Only	No Surcharge
Level 2 Complete Quality Control (QC) Data Blanks, Spikes, duplicates (including batch matrix spike duplicates), laboratory control samples, relative percent difference (RPD), percent recovery	No Surcharge
Level 3 Items listed in level 2 and ICAL and CCAL data and summaries, run logs, surrogate recovery summaries, tune summaries, and internal standard summaries	15% Surcharge
Level 4 Items listed in level 3 plus raw data for QC (blanks, Ics, ms/msd) and samples	20% Surcharge

A minimum data package charge of \$200 will be applied when necessary to assemble a data package

PRICING NOTES

Items included represent services provided by Pace Analytical. Numerous additional services and certifications are available throughout our nationwide network of labs. The prices shown are for routine projects with standard turnaround times. Specific projects may be bid individually. These prices should be used as guidelines, as exact pricing will depend on project size and expected turnaround time. Please consult Pace Analytical for assistance.

- EPA or other approved methods will be used for all analyses.
- Laboratory prices include:
 - a. The supply of appropriate sample containers and preservatives.
 - b. Shipping of the sample containers and coolers to the client using standard UPS or equivalent service. Express charges will be billed back to the client.
 - c. Normal laboratory QA/QC protocol. Additional levels of QA/QC are available as presented above. Please consult Pace Analytical for details.
- Pace Analytical will dispose of all non-hazardous samples. Pace Analytical reserves the right to return to the client any highly hazardous, acutely toxic, or radioactive samples and sample containers.
- The Client is responsible for informing Pace of any necessary certifications, reporting limits and or methods at the time of initial project set-up.
- Pace Analytical reserves the right to subcontract any method listed with prior consent of the Client

GENERAL INFORMATION

ADDRESS: Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268

LOCATION: Northwest Indy, off 465W/86th Street exit

PHONE: 317-875-5894

FAX: 317-872-6189

BUSINESS HOURS: 8am - 5pm

SAMPLE RECEIVING HOURS: 8am - 6pm M - F; 9am-Noon Sat.

*Arrangements can be made for after hours drop-off times with prior notification. Please contact your Pace representative for alternate drop off options

Account Executive: Ms. Jenny Higgins, 513-292-6565, jenny.higgins@pacelabs.com
Project Manager: Mr. Drew Votaw, 317-875-5894, ext. 105, andrew.votaw@pacelabs.com

Pace Analytical Services, Inc. Terms and Conditions

1. **Controlling Provisions**- These Standard Terms and Conditions are an integral part of the Agreement between Pace Analytical Services, Inc. ("PASI") and CLIENT ("Client"), and supersede any other document provisions not consistent herewith. Further, the Agreement, including these Terms, constitutes the entire agreement between PASI and Client relating to the project and any written or oral representations, assurances, commitments, premises, or agreements by PASI not contained herein are void.
2. **PASI General Responsibilities**- Performance by PASI shall meet current reasonable scientific and engineering standards in effect in the industry at the time the service is performed. Tests and observations will be conducted using test procedures and laboratory protocols as specified in accepted task orders, Scope of Work, proposals prepared by PASI or written instructions to PASI from Client. If Client directs a manner of performing analyses that varies from PASI's standard or recommended methods and procedures, Client agrees to hold PASI harmless from all claims, damages, and expenses arising out of Client's direction.
3. **Reports and Records**- PASI will provide copies of each report to Client as specified in the task order or PASI proposal. PASI will retain final reports in a retrievable manner for five years from the date of issuance, and will retain back up data for those reports for a minimum of one year and a maximum of three years. PASI agrees to provide reports for Client's use only for purposes disclosed to PASI at the time of contracting. If Client does not pay for PASI's services as agreed, Client agrees that PASI may retain all reports and work not yet delivered to Client and request the return of the original reports issued. Methods, discoveries, procedures, and equipment developed by PASI during or for the project shall remain the sole property of PASI.
4. **Delivery and Acceptance of Samples**- Client will notify PASI of upcoming work at least ten working days prior to delivery of the samples. PASI can accept or refuse the work within two days thereafter. Client is responsible for loss of or damage to samples until PASI accepts delivery of samples by notation on chain of custody documents. PASI reserves the right to transfer samples within our laboratory system, after prior notification to Client. Such transfers will be made only to PASI laboratories which meet certification and/or approval requirements defined by client. In the event Client chooses to restrict the transfer of samples between PASI laboratories, PASI will not be responsible for the payment of penalties, fines, resampling or reanalysis charges. PASI reserves the right to charge for sample containers that are provided yet unused by the client or received by PASI and unanalyzed at the request of the Client.
5. **Sample Retention and Disposal**- PASI will dispose of all non-hazardous samples. It is the responsibility of the Client to inform PASI should it be desired that non-hazardous waste samples or extracts be saved beyond 30 days after the issuance of the final report or if alternative or special disposal methods are desired. PASI reserves the right to charge for storage of any sample(s) or extract(s) stored beyond 30 days after the date of the final report or for any disposal costs incurred. PASI reserves the right to return highly hazardous, acutely toxic, or radioactive samples and sample containers and residues to Client. In addition, samples containing analytes for which there is no approved method of disposal may also be returned to Client. Client agrees to accept them.
6. **Non-Assignment**- Neither party may assign or transfer any rights or obligations existing under the Agreement without prior written consent of the other party; provided, however, that PASI may distribute the project within its system of laboratories or may subcontract such part or parts of the project as PASI may deem appropriate.
7. **Time of Completion - Force Majeure**- PASI shall use its best efforts to accomplish the project within any specified time limitations. PASI shall not be responsible for any non-performance or delay in the work to be performed caused by Client, Client's employee, agents or contractors, or caused by factors beyond PASI's control such as governmental authorities, unanticipated physical conditions not now known, labor disputes or acts of God.
8. **Successors and Assigns**- The Terms shall be binding upon, and inure to the benefit of the successors and assignee of Client and PASI.
9. **Compensation**- The pricing offered to Client by PASI is predicated upon Client's acceptance of this Agreement. In most cases, the pricing includes all sample containers and preservatives as prescribed by the analytical method requested for each determination. Credit worthiness will be determined based upon an assessment of Client's payment history, credit reports, financial stability or other factors. If credit is not granted, Client must pay PASI in advance prior to initiation of the project. In the event that PASI is serving as a subcontractor for Client, PASI will be informed, upon request, of the identity of the ultimate client and may make inquiries of the ultimate client prior to granting credit. Client agrees to pay for services as stated in the PASI proposal or price quote as accepted by Client. Invoices are due 30 days from the date of the invoice. Within 15 days from receipt of invoice, client will notify PASI in writing of any particular item that is alleged to be incorrect. Uncontested portions of the invoices will be due within 30 days from initial invoice date. Interest will be charged on unpaid balances at the rate of 1.5% per month, but not to exceed the maximum rate allowed by law, beginning 30 days after receipt of invoice. PASI may choose to invoice a third party if requested by Client, however, Client agrees to be ultimately responsible for payment until PASI is provided with that third party's written acceptance of all terms of the Agreement and until PASI agrees to a substitution. In the event that payment is not made within 60 days following the invoice date, PASI will consider the default a total breach of the Agreement and may terminate all duties without liability to Client or to others. In the event that PASI must take action to collect payment, Client shall pay all costs of collection, including attorney's fees. Any significant changes to the scope of work subsequent to the submittal of a price quotation, or the delivery of samples to the laboratory are subject to a renegotiation of prices or terms relating to the original scope of work. Such changes include, but are not limited to: QA/QC requirements and procedures, detection limits, samples received and stored, but not analyzed, decrease in quantity of samples delivered compared to quantity quoted, reporting and other deliverable format requirements. PASI shall not be required to comply with such changes unless requested in writing and agreed upon by PASI in writing.
10. **Risk Allocation, Disputes, and Damages**- PASI's aggregate liability for negligent acts and omissions and of a non-intentional breach by PASI will not exceed the fee paid for the services. Client agrees to indemnify PASI from all liabilities to others in excess of that amount. The limitation does not apply to losses arising from gross negligence or intentional breaches of contract by PASI. Neither PASI nor Client will be liable to the other for special, incidental, consequential, or punitive losses or damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, or the cost of capital. PASI will not be liable to Client unless Client has notified PASI of the discovery of the claimed negligent act, error, omission or breach within 30 days of the date of its discovery, and within two years of the date of injury or loss, and unless PASI is given an opportunity to investigate and to recommend ways of mitigating Client's damages. If it is claimed by a third party that PASI did not complete an acceptable analysis, Client will seek further review and acceptance of the completed work by the third party and use their best efforts to obtain that acceptance. Subject to an overall limitation of liability provided for in this Agreement, if PASI has failed to meet an established holding time through negligence or non-intentional breach, PASI will be responsible for the actual costs of resampling and reanalysis, but not exceeding the value of the individual task order or proposal.
11. **Client Responsibility**- Client shall:
 - (a) Provide PASI full and complete information regarding all factors known to Client, or which Client has access to, which could have any affect on the ability of PASI to perform its obligations, and notify PASI should Client acquire information of this type during performance of the project.
 - (b) Provide to PASI personnel and/or subcontractors access to any site where PASI is to perform work, and access to all personnel of Client who are in any way involved in the project, including (but not limited to) any authority or permission which must be obtained by any third party.
 - (c) Notify PASI of any delay regarding the start-up, progress or completion of the project caused by Client, or caused by others and known to Client, not less than two (2) weeks before such delay. In the event that Client fails to give the notice required by the Paragraph, Client agrees to pay PASI for labor and material, and for lost profits due to PASI being unable to work elsewhere during the period of delay.
12. **Indemnities**- PASI will indemnify and hold Client harmless from and against demands, damages, and expenses caused by negligent acts and omissions and breaches of contract by PASI and by the negligent acts and omissions and breach of contract of persons for whom PASI is legally responsible. Client will likewise indemnify and hold PASI harmless.
13. **Insurance**- PASI carries liability insurance with limits as follows: General liability - \$2,000,000 general aggregate, each occurrence \$1,000,000; personal and advertising injury \$1,000,000; Automobile Liability - \$1,000,000; Excess Liability Umbrella - \$5,000,000 aggregate, \$5,000,000 each occurrence; Worker's Compensation insurance - with statutory limits; Professional Liability \$5,000,000 aggregate, \$5,000,000 per claim. PASI will, at Client's request, submit certificates of insurance from insurers showing limits of coverage.
14. **Change Orders**- PASI shall not be required to comply with any requested changes in the project unless agreed to by PASI in writing. Any changes may increase the amount due PASI.
15. **Confidentiality**- Each party agrees that if during the performance of the project it becomes aware of trade secrets, confidential or proprietary information of the other, it will not disclose except to its employees or contractors and then only as necessary to complete the project.
16. **Liability Limited**- Client is aware that the project may involve inherent risks, both patent and latent, and that PASI cannot guarantee satisfactory results or indemnify Client from any damages, direct or indirect, resulting from the project. Should it be determined by a Court of competent jurisdiction that PASI did not meet current reasonable scientific regulatory and engineering standards in effect in the industry at the time the service is performed, and if Client suffers damages directly as a result thereof, PASI liability is limited to the amount of the project cost. PASI shall not be responsible for any consequential or indirect damages in any amount. If Client desires any alteration of the limitation of PASI liability provided for in the Paragraph, it shall so advise PASI in writing prior to commencement by PASI of work on the project and agree to pay for the cost of any additional insurance PASI may agree to purchase to cover such liability. PASI shall not be required to undertake the project if it cannot, in PASI's opinion, adequately cover its exposure by insurance. Client will advise its agents, contractors and subcontractors involved in the project, if any, of the liability limitation.
17. **Miscellaneous Provisions**- PASI requests written acceptance of these terms and conditions, however, the arrival of samples at a PASI laboratory will be considered an intent to do business and constitute agreement to these Terms and Conditions. This Agreement constitutes the summary of terms and conditions between Client and PASI. In no event will the printed terms or conditions stated in a purchase order, other than agreed upon task order, be considered part of this Agreement. These terms shall be governed by the laws of the State of Minnesota.