

LIMITED SITE INVESTIGATION
SKINNER BLOCK SITE
1524-1534 RIVER DRIVE, MOLINE, ILLINOIS
USEPA BROWNFIELDS HAZARDOUS SUBSTANCES ASSESSMENT GRANT
(MAY 2006)

USEPA Cooperative Agreement No. BF-00E02901
Terracon Project No. 07067060
September 2, 2010

Prepared for:

CITY OF MOLINE
Moline, Illinois

Prepared by:

Terracon
BETTENDORF, IOWA

Terracon

September 2, 2010

Mr. Patrick Burke
Economic Development Manager
City of Moline
619 16th Street
Moline, Illinois 61265

Re: Limited Site Investigation
Skinner Block Site
1524-1534 River Drive, Moline, Illinois
USEPA Brownfields Hazardous Substances Assessment Grant (May 2006)
USEPA Cooperative Agreement No. BF-00E02901
Terracon Project No. 07067060

Dear Mr. Burke:

Terracon is pleased to submit this Limited Site Investigation (LSI) report for the Skinner Block Site located at 1524-1534 River Drive, Moline, Illinois.

This LSI report presents and evaluates data from recent field activities including the completion of soil borings and the collection of water samples for chemical analyses. Terracon conducted field activities in compliance with plans developed specifically for the Project. Specifically, these plans were as follows.

- *Generic Quality Assurance Project Plan (QAPP)*, dated February 20, 2007, approved by EPA 5 on June 28, 2007.
- *Property-Specific Sampling and Analysis Checklist* dated April 9, 2010, approved by EPA 5 on June 9, 2010.

The LSI provides preliminary intrusive information specific to the needs of the City of Moline as part of determining redevelopment potential of the site. Although the report refers to state-level programs, the LSI is not a part of any Illinois regulatory program. This document is public information due to USEPA funding and may be used by private owners or the public.

Sincerely,
TERRACON CONSULTANTS, INC.




Mark R. Wilson
Project Engineer



John F. Brimeyer, PE, REM
Environmental Manager

Distribution per Section 1.2 of the QAPP

JRB/JFB/jb2

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ACRONYMS AND ABBREVIATIONS

Terracon

ATSDR	Agency for Toxic Substances and Disease Registry
bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
Checklist	Property-Specific Sampling and Analysis Checklist
City	City of Moline
CWS	Community Water Supply
EPA 5	United States Environmental Protection Agency Region 5
EQL	Estimated Quantitation Limit
ESA	Environmental Site Assessment
ESC	Environmental Science Corporation, Mt. Juliet, Tennessee
eV	electron-volt
FEMA	Federal Emergency Management Agency
GIS	Geographical Information System
GRO	Groundwater Remediation Objective
IAC	Illinois Administrative Code
IEPA	Illinois Environmental Protection Agency
ISGS	Illinois State Geological Survey
LSI	Limited Site Investigation
LUST	Leaking Underground Storage Tank
MDL	Method Detection Limit
NELAC	National Environmental Laboratory Accreditation Conference
mg/kg	milligrams per kilogram, generally equivalent to ppm
mg/L	milligrams per liter, generally equivalent to ppm
NFR	No Further Remediation
PAH	Polycyclic Aromatic Hydrocarbon
PE	Professional Engineer
PID	Photoionization Detector
ppm	parts per million
PVC	Polyvinyl Chloride
QA	Quality Assurance
QAPP	Generic Quality Assurance Project Plan
QC	Quality Control
RA	Remedial Applicant
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RO	Remedial Objective
RPD	Relative Percent Difference
SRO	Soil Remedial Objective
SRP	Site Remediation Program
SVOC	Semi-Volatile Organic Compound
SWAP	Source Water Assessment Program
TACO	Tiered Approach to Corrective Action Objectives
TestAmerica	TestAmerica, Inc, Cedar Falls, Iowa
TSOP	Terracon Standard Operating Procedure-Bettendorf Office
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

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(May 2006)
CITY OF MOLINE**

**USEPA Cooperative Agreement No. BF-00E02901
Terracon Project No. 07067060
September 2, 2010**

1.0 INTRODUCTION

The USEPA awarded the City of Moline a Brownfields Assessment Grant to help address the adverse impacts associated with a number of Brownfield properties located in Moline, Illinois. The purpose of the Project is to promote area development and commercial activity. This LSI is part of the City's evaluation of redevelopment feasibility.

The following sequential decision elements are necessary to determine feasibility for redevelopment.

- Does the potential for environmental impairment implied by site conditions exist?
- If identified, has a potential actually resulted in environmental impairment?
- If impaired, does the degree of impairment negatively affect the feasibility for redevelopment of the property?

1.1 Purpose

The purpose of the Project is to provide a mechanism to supplement existing efforts to evaluate parcels for redevelopment and stimulate economic reuse of Brownfield properties in Moline, Illinois.

1.2 Background

On June 28, 2007, Terracon submitted the QAPP for the Project. This document provides a baseline for planning and implementation of Phase II ESAs and evaluation activities. EPA 5 approved the QAPP on June 28, 2007.

A Phase I ESA dated January 25, 2010 was completed by Terracon. The Phase I ESA identified RECs and environmental concerns for the site.

On April 9, 2010, Terracon submitted a Property-Specific Sampling and Analysis Checklist. This document guides the assessment of the site using the procedures documented in the QAPP. EPA 5 approved the Checklist on June 9, 2010.

1.3 Historical Site Information

The Phase I ESA for this property, dated January 25, 2010, did not identify conditions of imminent hazard to public health or the environment. A cursory summary of findings is provided below.

- REC1 - Activities on the southern adjoining property have included gasoline tanks, photo shops, apparent dry cleaners, auto repair facilities and machine shops. This REC will be assessed through a point source sampling design and chemical analysis of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and target analyte list (TAL) Metals.
- REC2 - The western adjoining property (1520 River Drive) is listed in the Illinois Environmental Protection Agency (IEPA) Site Remediation Program (SRP) database. This REC will be assessed through a point source sampling design and chemical analysis of VOCs, SVOCs, pesticides, PCBs, and TAL Metals.

This LSI evaluated if the RECs have resulted in actual environmental impairment. This was accomplished through sampling and testing of groundwater using a judgmental sampling design approved by EPA 5. Laboratory analyses of samples measured chemicals in groundwater above laboratory reporting limits.

Measurement of chemicals does not mean excess chemical risk is present for public health or the environment. The concentration of a chemical, the chemical's ability to do harm, the degree to which the public could be exposed to the chemical, and the degree to which the public requires protection determine if measured chemicals are at "safe" levels. These factors vary significantly with different types of land use (e.g., less chemical is acceptable for residential or family land use than is considered "safe" for industrial land use). In considering the feasibility of redeveloping a Brownfield, the future land use is typically not yet known; however for this site it is understood that the site will continue as light industrial use. This LSI must consider proposed future land uses and present possible planning considerations to remedy chemical impairment accordingly.

1.4 Principal User

The City of Moline is the principal end user of this information. Although the report is available for review by the public, further reliance by others is beyond the scope of the Grant and USEPA funding.

The City of Moline will make primary use of the data to aid in decision-making relative to considering properties for redevelopment. The data will not constitute the sole or final factor in the positive or negative feasibility determination for redevelopment. It is anticipated that this LSI is for preliminary

characterization and, if needed, will be used as the basis for secondary phases of remedial investigation.

The information contained in this report is for the sole benefit of the City of Moline in determining feasibility for redevelopment and restoration of the property. The information and funding expended to produce it does not provide windfall or extraneous benefits to property owners.

1.5 Reliance

This report is intended for the use of City of Moline as the principal end user of this information. Although the report is available for review by the public, further reliance by others is beyond the scope of the grant and USEPA funding. Use or reliance by any other party is prohibited without the written authorization of the City of Moline and Terracon Consultants, Inc. (Terracon).

Reliance on the ESA by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal, ESA report, and Terracon's Agreement for Services. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

The information contained in this report is for the sole benefit of the City of Moline in determining feasibility for redevelopment and restoration of the property. The information and funding expended to produce it does not provide windfall or extraneous benefits to property owners.

The Scope of Services performed during this investigation may not be appropriate for other users, and any use or re-use of this document, or the findings, conclusions, or recommendations presented herein are at the sole risk of said user. Pursuant to ASTM 1527-05, reliance on this report is limited to 180 days from the issuance date of this report.

2.0 PROPERTY DESCRIPTION

2.1 Site Location

The site is located within the southeast quarter of Section 32, Township 18 North, Range 1 West in Moline, Rock Island County, Illinois. The site is an approximate 8,160 square foot parcel of land that is improved with an approximate 8,160 square foot, three-story commercial and office building with a basement. Tenants include Ducky's Formalwear, Gunter Schwarz Advertizing, and Moorhead, Peterson and Woodward, CPA. The property is located at the southwesterly corner of 16th Street and River Drive. Figure 1 in Appendix A depicts the site's location on a portion of the USGS 7.5 minute topographic series topographic map for the area.

2.2 Natural Setting

2.2.1 Flood Plains

The site is Zoned X and AE by the FEMA Agency Flood Insurance Rate map, Community Panel Number 17161C0120E, dated October 18, 2002. Areas located within Zone X are described as areas within the 500-year flood zone; areas of 100-year flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from 100-year flood. Areas located with Zone AE are areas denoted as special flood hazard areas inundated by 100-year flood with base flood elevations determined.

2.2.2 Soil Conditions

According to the Soil Survey of Rock Island County published by the United States Department of Agriculture Soil Conservation Services, the soils at the site are classified as Orthents, loamy, undulating. Orthents series are typically exceedingly shallow soils and are somewhat poorly drained.

2.2.3 Geologic Conditions

According to the Geologic Map of Illinois published by the Illinois Geological Survey (1967), the site is underlain by the Cedar Valley Limestone formation. The Cedar Valley formation consists of highly fossiliferous, crystalline, light gray limestone with occasional fine-grained, argillaceous shaly zones and sandstone.

2.2.4 Hydrogeologic Conditions

The general surface topography of the site and land surrounding the property is flat and sloping slightly in a north/northwesterly direction. The estimated groundwater gradient is in a north direction toward the Mississippi River.

2.2.5 Surface Water

Surface water features do not adjoin the subject site. The nearest surface water is the Mississippi River, located approximately 750 feet north of the site. Surface topography of the site and the area is generally flat. Regionally, topography slopes towards the river.

2.2.6 Potable Water Supply and Well Survey

According to the IEPA SWAP fact sheet for Moline (Facility ID No. 1610450), potable water to the remediation site is supplied by the City. Moline obtains its water from the Mississippi River through

one surface water intake (IEPA #31943). The supply provides an average of 5.3 million gallons per day to 18,200 service connections with an estimated population of 43,768 persons in Rock Island County. Moline is interconnected with the Cities of East Moline (Facility ID No. 1610250) and Rock Island (Facility ID No. 1610650) to allow for mutual aid in the event of a water supply emergency.

The City has also established Ordinance No. 3022-2010, which prohibits the installation of potable wells within the municipal limits. According to its website, the IEPA has reviewed and approved the ordinance, and a memorandum of agreement is not required. Appendix C contains a reproduction of the ordinance.

Terracon also performed a search of the IEPA SWAP GIS database. The database includes information compiled from ISWS and ISGS databases. The search indicated that the following were not present at or near the site.

- Regulated Recharge Areas
- Class III Groundwater
- Non-CWS Phase I Wellhead Protection Areas
- Non-CWS Wells
- CWS Phase II Wellhead Protection Areas
- CWS wells
- Adopted Maximum Setback Zones

A CWS Phase I Wellhead Protection Area was identified 1.48 miles northwest of the site. The IEPA SWAP GIS database plotted the closest ISGS well north of the site, north of River Drive (Well Number 23575).

Table 2-1 Well Survey Information

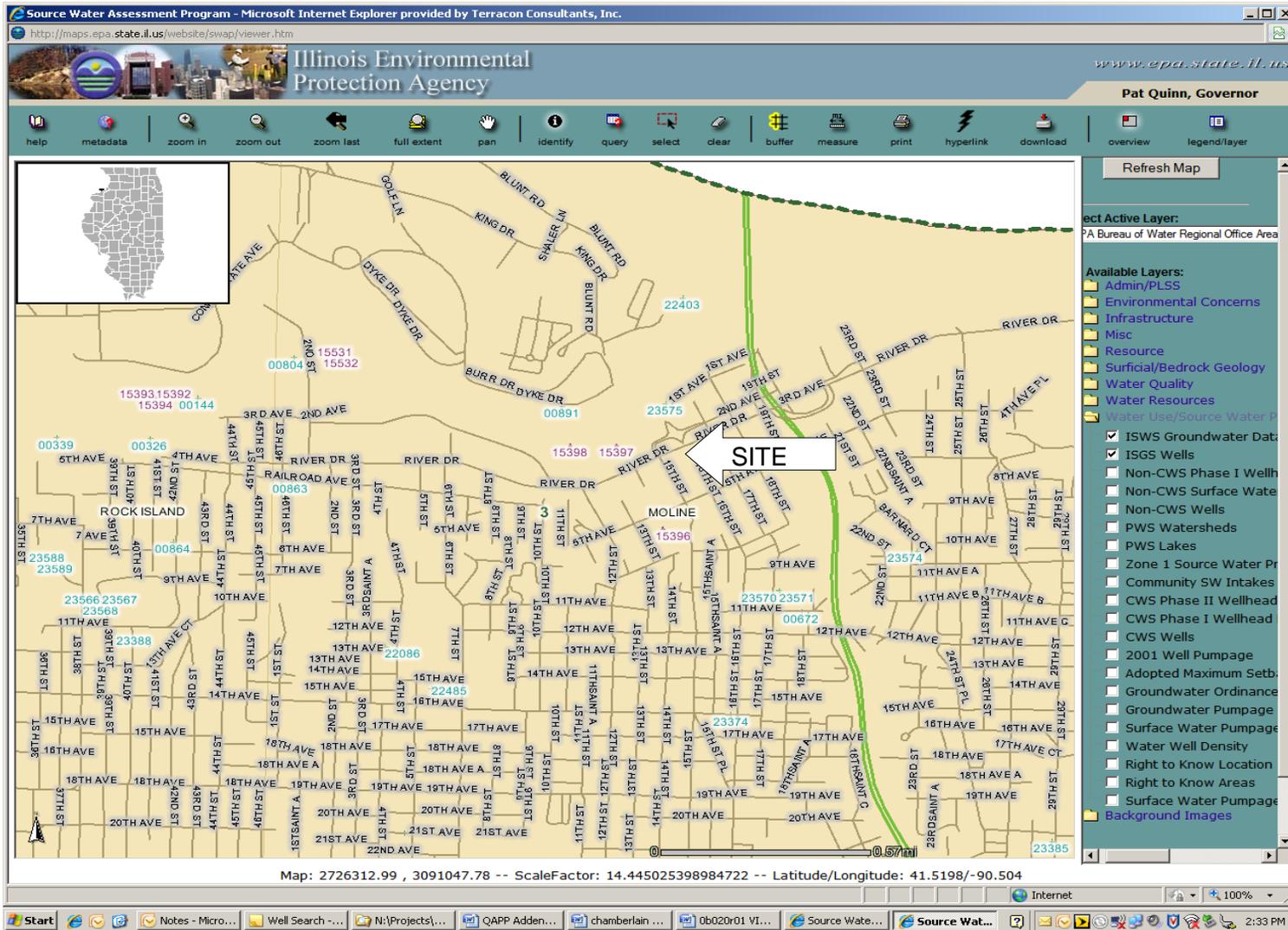
Well Number	Owner	Active?	Distance/Direction From Site	Direction With Respect to On-Site Groundwater Flow Direction
00891	Rock Island National Cemetery	Unknown	1742 feet northwest	Downgradient
23575	16 th Street Viaduct	Unknown	686 feet north	Downgradient
22086	Frutiger, Richard	Unknown	4488 feet southwest	Upgradient
00863	Fiems, Joe	Unknown	5386 feet west	Crossgradient
23392	Unknown	Unknown	5808 feet southwest	Upgradient
23393	Unknown	Unknown	5808 feet southwest	Upgradient
23569 23570 23571	Illinois Department of Transportation	Unknown	2746 feet southeast	Upgradient

Well Number	Owner	Active?	Distance/Direction From Site	Direction With Respect to On-Site Groundwater Flow Direction
23374	15 th Street Water Tower	Unknown	4700 feet south	Upgradient
00672	High Rise Housing	Unknown	3168 feet southeast	Upgradient
22481 – 22485	Quint Cities Petroleum	Unknown	4805 feet southwest	Upgradient
00864	Fryxell, Keith	Unknown	7339 feet southwest	Upgradient
22403	Rock Island Arsenal	Unknown	2323 feet north	Downgradient
00804	Republic Iron and Steel	Unknown	5597 feet west	Crossgradient
00144	Service Ice & Cold	Unknown	6864 feet west	Crossgradient
00326	International Harvester	Unknown	7498 feet west	Crossgradient

Based on the well survey information, the remediation site is not located within the regulated setback zone of a well.¹ The following page is a screen capture of the SWAP GIS information.

¹ The minimum setback zone in Illinois is 200 feet, unless the well is a Community Water Supply well tapping certain vulnerable geologic formations.

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2.2.7 Migration Pathways and Exposure Routes

The identified RECs for the site consist of off-site sources. Environmental impairment from off-site sources would be expected to occur as a result of groundwater migration. As such, the groundwater ingestion pathway is the applicable exposure route for evaluation.

2.2.8 Current and Post-Remediation Land Use

As shown on Figure 2 in Appendix A, current land use of the remediation site is a multi-story commercial building. The site has been developed since at least 1886 and used for a variety of commercial activities. It is understood that the site and vicinity are to remain as commercial development areas.

3.0 LIMITED SITE INVESTIGATION

Terracon completed the following tasks.

- Terracon advanced three soil borings (B-1, B-2 and B-3) using a Geoprobe® to depths of approximately 8 feet bgs. Due to probe refusal; however, groundwater samples were not collected. Figure 3 in Appendix A depicts the soil boring locations.
- Using a truck-mounted drill rig, soil borings were advanced near borings B-1, B-2, and B-3 and temporary groundwater monitoring wells were installed in each location. One groundwater sample was collected from each temporary monitoring well and submitted to ESC for analysis of PCBs, VOCs, SVOCs, TAL Metals and pesticides.

3.1 Methodology

Terracon followed standard procedures for sampling, physical measurements, equipment cleaning, construction of wells, and equipment calibration. The TSOPs that accompanied the sampling team incorporate industry protocols, internal procedures, and equipment operation manuals. The Checklist specified the appropriate TSOPs for use at the site.

3.1.1 Probing Methodology

Terracon advanced soil borings B-1, B-2, and B-3 with a truck-mounted Geoprobe® rig using direct-push technology. Terracon collected soil samples from the soil borings using a 48-inch long, macro-core sampler with acetate liners. Due to probe refusal at the top of bedrock, borings were terminated before encountering bedrock.

Terracon cleaned the macro-core samplers at the beginning of the project and between each soil sample by hand scrubbing in an Alconox™ and potable water solution followed by rinsing in potable water.

Terracon logged the lithology of the recovered material. The soil boring logs in Appendix D detail the subsurface lithology encountered during the investigation activities.

3.1.2 Monitoring Well Construction

Terracon constructed each temporary monitoring well using sections of flush-jointed, one-inch outside diameter, schedule 40 PVC threaded pipe. The screened section of each monitoring well consisted of a 0.01-inch slotted section of PVC pipe installed to intersect the water table. Following installation, Terracon developed each monitoring well by removing approximately three well casing volumes using dedicated disposable bailers.

3.2 Property-Specific TSOPs

The Checklist specified the following TSOPs. Terracon implemented these TSOPs during the fieldwork portion of the ESA.

Table 3-1 Phase II ESA TSOPs

Reference No.	Title
E.10	Project Mobilization
E.20	Standard Safe Operating Procedures for Hazardous Waste Operations
E.30	Chain of Custody Documentation
E.50	Sampling – Environmental Representativeness
E.310	Auger Drilling and Sampling
E.325	Casing Advance Drilling
E.400	Subsurface Sampling – Geoprobe® Platform
E.468	Sample Handling – Soil (Level D)
E.470	Sample Handling – Groundwater (Non-Hazardous)
E.552	Field Headspace Screening – Soil / Photoionization Detector
E.554	Field Screening – Air / Photoionization Detector
E.700	Well Construction – Temporary
E.1400	Well Development – Parametric
E.1500	Boring Abandonment – Commercial Sealant
E.1700	Well Abandonment – IDPH Title 77 Section 920.120 Criteria
E.1800	Field Measurement – Surface Layout
E.1805	Field Measurement – Elevations
E.1820	Field Measurement – Groundwater
E.1830	Field Measurement – Free Phase Product

Reference No.	Title
E.1900	Groundwater Sampling – Bailer
E.2000	Groundwater Sampling – Low Flow Pumping
E.2210	Site Housekeeping - General
E.2220	Disposal of Spent Supplies
E.2230	Handling and Storage of Drill Cuttings (Non-Hazardous)
E.2240	Site Security Procedures
E.2405	Cleaning - General
E.2410	Cleaning - Manual Washing
E.2420	Cleaning – High Pressure, Hot Water Washing

3.3 Deviations from the QAPP

As a deviation to the USEPA-approved Checklist, Terracon used a track-mounted auger drill rig that employs a hydraulic head for advancing soil borings adjacent to B-1, B-2, and B-3 into bedrock. Terracon advanced the soil borings using 3¼-inch diameter flight augers. The borings were advanced to auger refusal. Terracon did not collect soil samples of the overburden material. Terracon logged the rock types based on visual classification and apparent textural properties of rock bits returned to the surface. The soil boring logs in Appendix D detail the subsurface lithology encountered during the investigation activities.

Terracon will cleaned the drilling equipment using a high-pressure washer before beginning the project and before beginning each borehole.

The noted deviation does not affect the overall quality of the environmental assessment.

4.0 ASSESSMENT RESULTS

4.1 Physical Measurements and Field Screening

4.1.1 Soil Lithology

The site was overlain with approximately 2 to 4 inches of concrete, followed by sandy clay and fill to probe refusal at depths ranging from 6 ½ feet to 9 feet. The uppermost bedrock consisted of limestone at boring B-1 and shale at borings B-2 and B-3.

4.1.2 Field Screening

Terracon field screened the soil samples for organic vapors using a PID. This device provides a direct reading in ppm. The PID is a nonspecific total vapor detector and cannot

be used to identify unknown substances; it can only roughly quantify them. Upon removal of the sampler from the borehole, Terracon cut a portion of each sample and sealed it in a Ziplock™ bag. After a stabilization period, Terracon screened the headspace above the soil using the PID equipped with a 10.2 eV ultraviolet lamp source. Terracon calibrated the PID in accordance with the manufacturer's recommendations before the field activities. The boring logs include the field screening results for each soil boring.

4.2 Laboratory Analysis

4.2.1 Laboratory Reporting Limits and Non-Detect Values

Laboratory technology cannot detect to concentrations of zero. Acknowledged by the USEPA, analytical methods dictate MDLs as the lower limit to which the procedures can accurately and repeatedly "see." The MDL is a minimum concentration of a substance that can be measured and reported with 99% confidence that the compound concentration is greater than zero. The MDL is determined from analysis within the given matrix of the sample and affected by matrix materials and/or other compounds within the matrix. EQLs are matrix-dependent and represent the minimum concentrations that can be routinely identified and measured within specified limits of precision and accuracy under normal laboratory operating conditions. EQLs are typically five to ten times the MDLs.

When the laboratory reports that a concentration of a chemical is "non-detect," or lower than the EQL, it does not mean that the chemical is not present in the sample. These compounds may actually be present but at levels lower than what the laboratory can accurately measure.

4.2.2 Soil Analytical Program

In accordance with the Checklist, Terracon did not submit soil samples for analysis.

4.2.3 Groundwater Analytical Program

Terracon submitted groundwater samples for laboratory analysis in accordance with the Checklist. The following table summarizes the chemical analysis for each monitoring well.

Table 4-1 Summary of Groundwater Analytical Program

Locations	Pesticides Method 8082	PCBs Method 8081	VOCs Method 8260	SVOCs Method 8270	TAL Metals Method 6010/7470
GW-1		X	X	X	X
GW-3	X	X	X	X	X

4.3 Analytical Background

4.3.1 VOC Analysis Background

This chemical group is known as Volatile Organic Compounds, or VOCs. In lay terms, these chemicals readily evaporate to produce vapor. Many are often used as solvents in industry and manufacturing. Sampling and analysis require special care in the field and laboratory to guard against “losing” some of the materials from the soil/fill or groundwater samples before measurement takes place. The project methods provided this level of care.

The ATSDR describes VOCs as substances containing carbon and varying proportions of other elements such as hydrogen, oxygen, fluorine, chlorine, bromine, sulfur, or nitrogen. These substances easily become vapors or gases at room temperatures. A significant number of the VOCs are commonly used as solvents (paint thinners, lacquer thinner, degreasers, and dry cleaning fluids) or in petroleum hydrocarbon fuels (e.g., gasoline). Other information sources generally describe VOCs as organic compounds that evaporate easily.

When released into the atmosphere, VOCs contribute to the formation of ozone and smog, which have been linked to human health issues. In addition, VOCs can have direct adverse effects on human health. VOCs in the atmosphere come from combustible engines, industry, fuel spills, etc. Certain other fumes, such as those released from industrial plants, coating operations, and print shops can contain significant amounts of VOCs.

In addition to contributing to ozone and smog formation, VOCs can have direct adverse effects on human health. Many VOCs have been classified as toxic and carcinogenic (cancer causing) and it is therefore unsafe to be exposed to these compounds in large quantities or over extended periods. Some health effects from overexposure to VOCs are dizziness, headaches, and nausea. Long-term exposure to certain VOCs, such as benzene, has also been shown to cause cancer, and eventually death.

4.3.2 SVOC Analysis Background

This chemical group is known as Semi-Volatile Organic Compounds, or SVOCs. PAHs are a subset of SVOCs. In lay terms, these are generally chemicals that less readily evaporate to produce vapor and are used in industry in a variety of uses. Many of the compounds are also less soluble in water or other materials. Sampling and analysis do not require the same stringent care as for VOCs in the field and laboratory necessary to guard against vaporization of the materials from the soil/fill or groundwater samples before measurement takes place. The project methods provided the appropriate level of care required by the USEPA and the QAPP.

SVOCs, like VOCs, are organic compounds containing carbon and different proportions of other elements such as hydrogen, oxygen, fluorine, chlorine, bromine, sulfur, or nitrogen. Unlike VOCs, these compounds do not typically become vapors or gases at room temperature. A common group of SVOCs is the PAHs. The ATSDR describes PAHs as a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

Animal studies have shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. These effects, however, have not been seen in people. The Department of Health and Human Services has determined that some PAHs may reasonably be expected to be carcinogens. Some PAHs have caused cancer in laboratory animals when they breathed air containing them, ingested them in food, or had them applied to their skin.

4.3.3 Inorganic Analysis Background

Inorganic compounds are generally considered reasonably stable, non-hydrocarbon based chemicals of concern. These compounds are typically elemental metals. This is not to say that some metals do not have other properties of volatilization or solubility (e.g., mercury, lead).

Metals occur naturally, and can result from activities related to our lifestyles (e.g., automobile exhaust, industrial activity, etc.). Heavy metals generally cause the most problems, since even low doses are toxic. Municipal and industrial wastes are the main sources. Heavy metals include mercury, lead, and cadmium. In most cases, we are exposed

to these metals from the air and the food we eat, however, they can also be inhaled as dust particulate in the air we breathe or absorbed through the skin.

This assessment addressed the target analyte list of metals in a groundwater sample and includes the 8 metals addressed by RCRA. These metals can cause a variety of health effects, including gastrointestinal disturbances, muscular weakness, kidney, liver, bone, and blood damage, and others.

4.4 Groundwater Analytical Results

Laboratory analytical methods were in accordance with the Checklist. Appendix B contains tables summarizing the groundwater analytical results. Copies of laboratory analytical reports are included in Appendix E.

4.4.1 Groundwater VOC Results

Benzene was detected in GW-3 at a concentration above the EQL and below the most restrictive Tier 1 GRO. Cis-1,2-dichloroethene was detected in GW-1 at a concentration above the EQL and below the most restrictive Tier 1 GRO. Tetrachloroethene was detected at a concentration above the Tier 1 GRO in GW-1. Trichloroethene was detected in GW-1 at a concentration above the EQL and below the most restrictive Tier 1 GRO. The concentrations of remaining VOCs were not reported above the EQLs in the groundwater samples submitted for laboratory analysis.

Table 4-2 Summary of VOCs detected in Groundwater Samples

Chemical	Frequency of Detection	Maximum Detected Concentration (mg/L)	Location of Maximum Concentration
Benzene	1 of 1 (100%)	0.011	GW-3
Cis-1,2-Dichloroethene	1 of 2 (50%)	0.011	GW-1
Tetrachloroethene	1 of 2 (50%)	0.14	GW-1
Trichloroethene	1 of 2 (50%)	0.0014	GW-1

Reported concentrations in **bold** exceed the Tier 1 GRO

The reported concentration of tetrachloroethene exceeds the GRO for the Class I Groundwater Ingestion pathway. Analytical results indicate that environmental impairment may exist at the site; however, reported concentrations present a risk to human health only if the groundwater is ingested. Redevelopment of the property should consider possible restrictions on the use of groundwater at the site as a potable water source.

4.4.2 Groundwater SVOC Results

Bis(2-ethylhexyl)phthalate was detected in GW-3 at a concentration above the laboratory EQLs but below the most restrictive Tier 1 GRO. The remaining SVOCs were not detected at concentrations above the laboratory EQLs.

Table 4-3 Summary SVOCs Detected in Groundwater

Chemical	Frequency of Detection	Maximum Detected Concentration (µg/L)	Location of Maximum Concentration
Bis(2-ethylhexyl)phthalate	1 of 2 (50%)	0.0034	GW-3

Reported concentrations in **bold** exceed the Tier 1 GRO

4.4.3 Groundwater PCB Results

PCBs were not detected above EQLs in the two groundwater samples analyzed for PCBs.

4.4.4 Groundwater Pesticide Results

Pesticides were not detected above EQLs in the one sample analyzed for pesticides.

4.4.5 Groundwater Inorganic Results

Arsenic, beryllium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, thallium, vanadium, and zinc were detected in groundwater sample GW-1 at concentrations above the EQL and the most restrictive Tier 1 GRO. Iron, lead, manganese, and nickel were also detected in groundwater sample GW-3 at concentrations above the Tier 1 GRO. Aluminum, barium, calcium, cobalt, magnesium, potassium and sodium were detected above the EQL in groundwater samples GW-1 and GW-3, however; the reported concentration of these metals did not exceed the Tier 1 GROs. Antimony was detected in GW-1 at a concentration above the EQL and below the Tier I GRO. Arsenic, chromium, copper, selenium, vanadium and zinc were also detected in GW-3 at concentrations above the EQL and below the Tier 1 GROs. Silver was not detected above the EQL in either of the groundwater samples.

Table 4-4 Summary of Inorganics Detected in Groundwater Samples

Chemical	Frequency of Detection	Maximum Detected Concentration (mg/L)	Location of Maximum Concentration
Aluminum	2 of 2 (100%)	250	GW-1
Antimony	1 of 2 (50%)	0.0023	GW-1
Arsenic	2 of 2 (100%)	0.053	GW-1
Barium	2 of 2 (100%)	2	GW-1
Beryllium	1 of 2 (50%)	0.017	GW-1

Chemical	Frequency of Detection	Maximum Detected Concentration (mg/L)	Location of Maximum Concentration
Cadmium	1 of 2 (50%)	0.016	GW-1
Calcium	2 of 2 (100%)	250	GW-3
Chromium	2 of 2 (100%)	1	GW-1
Cobalt	2 of 2 (100%)	0.62	GW-1
Copper	2 of 2 (100%)	2.4	GW-1
Iron	2 of 2 (100%)	210	GW-1
Lead	2 of 2 (100%)	3.2	GW-1
Magnesium	2 of 2 (100%)	68	GW-3
Manganese	2 of 2 (100%)	3.8	GW-3
Mercury	1 of 2 (50%)	0.02	GW-1
Nickel	2 of 2 (100%)	0.93	GW-1
Potassium	2 of 2 (100%)	79	GW-1
Selenium	2 of 2 (100%)	0.094	GW-1
Sodium	2 of 2 (100%)	500	GW-1
Thallium	1 of 2 (50%)	0.004	GW-1
Vanadium	2 of 2 (100%)	1.4	GW-1
Zinc	2 of 2 (100%)	5.2	GW-1

Reported concentrations in **bold** exceed the Tier 1 GRO

The reported concentrations of arsenic, beryllium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, thallium, vanadium, and zinc exceeds the respective GROs for the Class I Groundwater Ingestion pathway. Analytical results indicate that environmental impairment may exist at the site; however, reported concentrations present a risk to human health only if the groundwater is ingested. Redevelopment of the property should consider possible restrictions on the use of groundwater at the site as a potable water source.

5.0 FIELD DATA QUALITY

The QAPP set forth the procedures and methods for data collection. The Checklist defined the specific procedures and adjustments necessary to maintain data quality to support the project decision. The LSI required both field and laboratory checks to monitor conformance to project quality limits.

5.1 Property-Specific Corrective Actions

A field methods audit was not conducted during the fieldwork for this site; however, field practices were conducted in a method consistent with the methodology of the QAPP, Checklist, and relevant TSOPs.

5.2 Quality Control Parameters

To assess whether quality assurance objectives for this project have been achieved, the following QC parameters were considered: precision, accuracy, representativeness, comparability, completeness, and sensitivity.

5.2.1 Precision and Accuracy

As described in the QAPP, precision is evaluated using the RPD between an actual sample and a duplicate sample. Accuracy is evaluated using a percent recovery measured in spiked and unspiked samples. Accuracy is a function of the laboratory method, and parameters regarding accuracy are included in the lab report provided by the laboratory. In accordance with the QAPP, duplicate samples with RPDs less than or equal to 20% were considered precise without further discussion. Duplicate samples with RPDs in excess of 20% (water matrix) and 35% (soil/sediment samples) require further evaluation

Duplicate groundwater samples were collected from GW-1 for analysis of VOCs, SVOCs, PCBs, and TAL metals and from GW-3 for analysis of pesticides. For each compound that was detected in both samples (e.g., GW-1 and its duplicate), Terracon compared the reported concentrations. The absolute values of the RPDs for groundwater ranged from 0% to 90%. Adjustment of the concentrations based on the elevated RPD's would not result in an exceedance of the GRO's for constituents which did not exhibit a concentration above the GRO in the original sample. The elevated RPD's are not deemed to have an effect on the quality of the analytical data.

Laboratory accuracy controls were documented in accordance with the laboratory's internal QA Manual. The laboratory followed SW-846 procedures.

5.2.2 Representativeness

Terracon has evaluated the representativeness of the LSI activities to document the degree to which the sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Review of field methods and procedures indicated that sample collection, handling, and transportation were conducted in accordance with the QAPP and Checklist. Review of analytical results indicates that the analytical data is generally uniform and consistent between sampling points and with previous sampling and analysis activities.

5.2.3 Completeness

Monitoring well B-2 did not produce water and the groundwater sample at this location was not collected. Field completeness was determined to be 67%. Terracon notes that monitoring well B-2 was intended to evaluate REC 1 and REC 2. REC 1 was also evaluated with monitoring well B-1 and REC 2 was evaluated with monitoring well B-3. Each REC was evaluated with completed groundwater sampling. The incomplete sampling is not deemed to have an effect on the quality of the analytical data.

Laboratory analysis was completed on each of the samples collected in the field and submitted for analysis. Laboratory completeness was determined to be 100%.

5.2.4 Comparability

To produce comparable data, the units specified for analytical results obtained during the field activities are consistent throughout this project and standardized analytical methods have been used for each parameter.

5.2.5 Sensitivity

The laboratory quantization limits were not sufficient to report concentrations below the statewide standards for some of compounds in the soil and groundwater samples; however, these instances were evaluated in accordance with the procedure described in Section 4.2.1. In Terracon's opinion, the instances of elevated laboratory quantitation limits are not indicative of actual environmental impact.

6.0 LABORATORY DATA QUALITY

The laboratory completed validation and verification of laboratory processes and data. The laboratory report documents compliance to the QAPP. Terracon reviewed the laboratory qualifiers in the report, and determined that the laboratory's data quality was sufficient for this project.

7.0 REGULATORY SETTING

Based on our review, the site is eligible for enrollment in the IEPA SRP. The SRP is a voluntary cleanup program administered by the Remedial Project Management Section, Bureau of Land. The SRP's intent is to provide RAs (i.e., any persons seeking to perform or performing investigative or remedial activities) the opportunity to receive review and

evaluation services, technical assistance and NFR determinations from the IEPA. The SRP is intended to be flexible and responsive to the requirements of RAs, to project constraints, and to variable remediation site conditions. The goal(s) and scope of actions at remediation sites are normally defined by the RA, subject to the regulations at 35 IAC Chapter 740: *Site Remediation Program*. Successful participation in the SRP results in the issuance of an NFR letter by the IEPA. Based on our evaluation of site conditions, issuance of a NFR letter by the IEPA, without the need for physical remediation, is a viable option.

7.1 Program Authority

The IEPA is authorized to provide review, evaluation, and approval services for actions at remediation sites where hazardous substances, pesticides, or petroleum products may be present and for which the remediation site owner requested such services in writing. For RAs other than the remediation site owner, written permission from the remediation site owner, or authorized agent of the owner, must be obtained for enrollment in the SRP. The written permission must clearly identify the remediation site for which the services are sought and must contain the original signature of the owner. An authorized agent means a person who is authorized by written consent or by law to act on behalf of a remediation site owner.

7.2 Relationship to Superfund/CERCLA

The USEPA and the IEPA have entered into a Superfund memorandum of understanding through which the USEPA concurs that further response actions will not be required by the USEPA at sites that have received an NFR letter. In addition, the USEPA will not plan or anticipate federal action under CERCLA at an enrolled site, except in emergency situations.

7.3 Enrollment

Completion of the SRP Application and Services Agreement Form (DRM-1) is required of persons requesting enrollment. This form requires identification of the remediation site, the RA, the property owner, and project objectives. In addition, the RA will be required to either:

1. Make an advance partial payment in the amount of \$500 when submitting the application and service agreement, or
2. Request that the IEPA estimate the total costs to the IEPA of providing the requested services and assess an advance partial payment not to exceed \$5,000 or one-half of the total anticipated costs of the IEPA, whichever is less.

7.4 Assessment Process

Remediation site activities must be conducted by, or under the supervision of, an Illinois licensed PE. Remediation site investigations must be performed to identify any RECs existing at the remediation site, the related contaminants of concern, and associated factors that will aid in the identification of risks to human health, safety and the environment, the determination of remediation objectives, and the remedial design. Site investigations must satisfy data quality objectives for field and laboratory operations to ensure that all data are scientifically valid and of known precision.

All plans and reports submitted for review and evaluation must be prepared by, or under the supervision of, an Illinois licensed PE. Any plan or report submitted to the IEPA for review and evaluation must be accompanied by a Site Remediation Program Form (DRM-2). The required plans and reports for corrective action projects are as follows.

- Site Investigation Report (SIR)
- Remediation Objectives Report (ROR)
- Remedial Action Plan (RAP)
- Remedial Action Completion Report (RACR)

These reports are described in the following sections.

7.4.1 Site Investigation Report

The SIR identifies RECs existing at the remediation site, the related contaminants of concern, and associated factors. Such information will be used to aid in the identification of risk to human health and the environment, the determination of remediation objectives, and the design and implementation of a RAP.

7.4.2 Remediation Objectives Report

The ROR presents the ROs for the site developed using the TACO procedures set forth in 35 IAC Chapter 742: *Tiered Approach to Corrective Action Objectives*. The TACO procedures present an approach to development of ROs that includes an option for the use of any of three tiers for developing applicable ROs, the exclusion of pathways from further consideration, and the use of area background concentrations as ROs. The existing groundwater ordinance (City Ordinance No. 3022-2010) effectively excludes the groundwater ingestion pathway from further consideration. It is anticipated that development of ROs would be required.

7.4.3 Remedial Action Plan

A RAP, if required, is intended to describe a proposed remedy and to evaluate its ability and effectiveness to achieve the ROs approved for the remediation site.

7.4.4 Remedial Action Completion Report

Upon completion of all corrective actions, the RA must submit a report attesting that all ROs, site-specific response actions, and SRP data quality objectives have been successfully attained. It is anticipated that remedial actions would consist of groundwater ingestion pathway exclusion via the existing city ordinance and utilization of an engineered barrier and that physical remediation would not be required.

7.5 TACO Evaluation

TACO uses a three tiered approach to develop ROs for a subject site. Under Tier 1, the reported concentrations of chemicals of concern are compared to tabulated ROs that are broken down for either residential or industrial/commercial property use. ROs are established for the direct ingestion of groundwater, soil inhalation, soil ingestion, and the soil component of groundwater ingestion (soil leaching). The lowest of the applicable exposure values for each media is considered the RO for the remediation site. At Tier 2, prescribed models may use site-specific information to calculate ROs. The use of both institutional controls and engineered barriers may be considered in developing ROs. Tier 3 provides RAs the opportunity to conduct variable scale risk assessment activities and more complex contaminant fate and transport modeling than the standard Tier 2 exposure models.

Remedial Applicants may also demonstrate protection of human health and the environment by less stringent ROs, by implementing engineered barriers, institutional controls, post-remediation use restrictions, or by any combination of these. Exclusion of pathways from further consideration is based on effective source control coupled with site conditions and an appropriate institutional control that effectively prohibits human exposure through a given pathway. If an exposure route is excluded from consideration, then no numeric cleanup objective need be developed for the exposure route.

8.0 SITE CONSIDERATIONS

Site assessment activities have identified environmental impact in groundwater as a result of off-site activities. Soil impairment poses a risk to human health as a result of direct ingestion or inhalation. As documented in this report, however, the site is currently being used for light industrial purposes and it is anticipated that future uses of the site will remain the same.

If the site were to be enrolled in the SRP, the Remedial Applicant could pursue a NFR on the basis of a land use restriction, without the need for physical remediation of soil at the site.

Groundwater impairment poses a risk to human health as a result of direct ingestion of the water. As documented in this report, drinking water wells are not present at the site or within 680 feet of the site, the site is served by a municipal water system, and an ordinance is in effect prohibiting the installation and use of a drinking water well. Environmentally impaired groundwater at the site is not being used as a source of drinking water and will not be used in the future. If the site were to be enrolled in the SRP, the Remedial Applicant could pursue a NFR on the basis of exclusion of the groundwater ingestion pathway, without the need for physical remediation of groundwater at the site.

In anticipation of possible enrollment of the site in the SRP, Terracon has conducted this LSI in general accordance with SRP guidelines. Further, Terracon has evaluated TACO requirements establishing criteria that must be met to exclude the groundwater ingestion pathway. Specifically, Terracon notes the following:

- Free product was not encountered during field activities
- The site is not located within the minimum or designated maximum setback zone or within a regulated recharge area of a potable water supply well
- The City has established ordinance 3022-2010, which prohibits the installation of potable wells within the municipal limits
- The nearest surface water is the Mississippi River, located approximately 4,277 feet north of the site.

By excluding the groundwater ingestion pathway and implementation of a land use restriction, the site should be eligible for an NFR without undergoing physical remedial activities.

9.0 FINDINGS AND CONCLUSIONS

Terracon has conducted fieldwork and evaluation for the LSI portion of the Project for this property. Terracon makes the following conclusions.

- This LSI has been completed consistent with the intent and strictures of the grants.
- Except as noted, this LSI has otherwise been conducted consistent with the QAPP and the Checklist, both approved by USEPA 5.

- This LSI has produced data of a quality sufficient to make the project decisions set forth in the QAPP.
- This LSI has measured environmental impact at the property lines.
- This LSI has not identified conditions of imminent threat or public hazard.
- The primary project decision determined that the property is environmentally impaired. Redevelopment of the property should consider possible restrictions on the use of groundwater at the site as a potable water source.
- The affected areas defined by the LSI appear eligible for successful enrollment in the SRP and issuance of a NFR letter transferable to future successors to title.

10.0 GENERAL COMMENTS

Terracon has performed a LSI consistent with the QAPP and the Checklist.

The analysis presented in this report is based upon data obtained from field activities and from other information discussed in this report. This report does not reflect any variations in subsurface stratigraphy that may occur between borings or across the site. Actual subsurface conditions may vary. The extent of such variations may not become evident without additional exploration. The limitations of this assessment should be recognized as the City of Moline formulates conclusions on the environmental risks associated with this property.

This report is prepared for the exclusive use of our client for the specific application to the project discussed and has been prepared in accordance with generally accepted environmental engineering practices. No warranties, express or implied, are intended or made. In the event any changes in nature or location of subsurface conditions as outlined in this report are observed, the conclusions contained in this report cannot be considered valid unless the changes are reviewed and the conclusions of this report are modified or verified in writing by the environmental engineer.

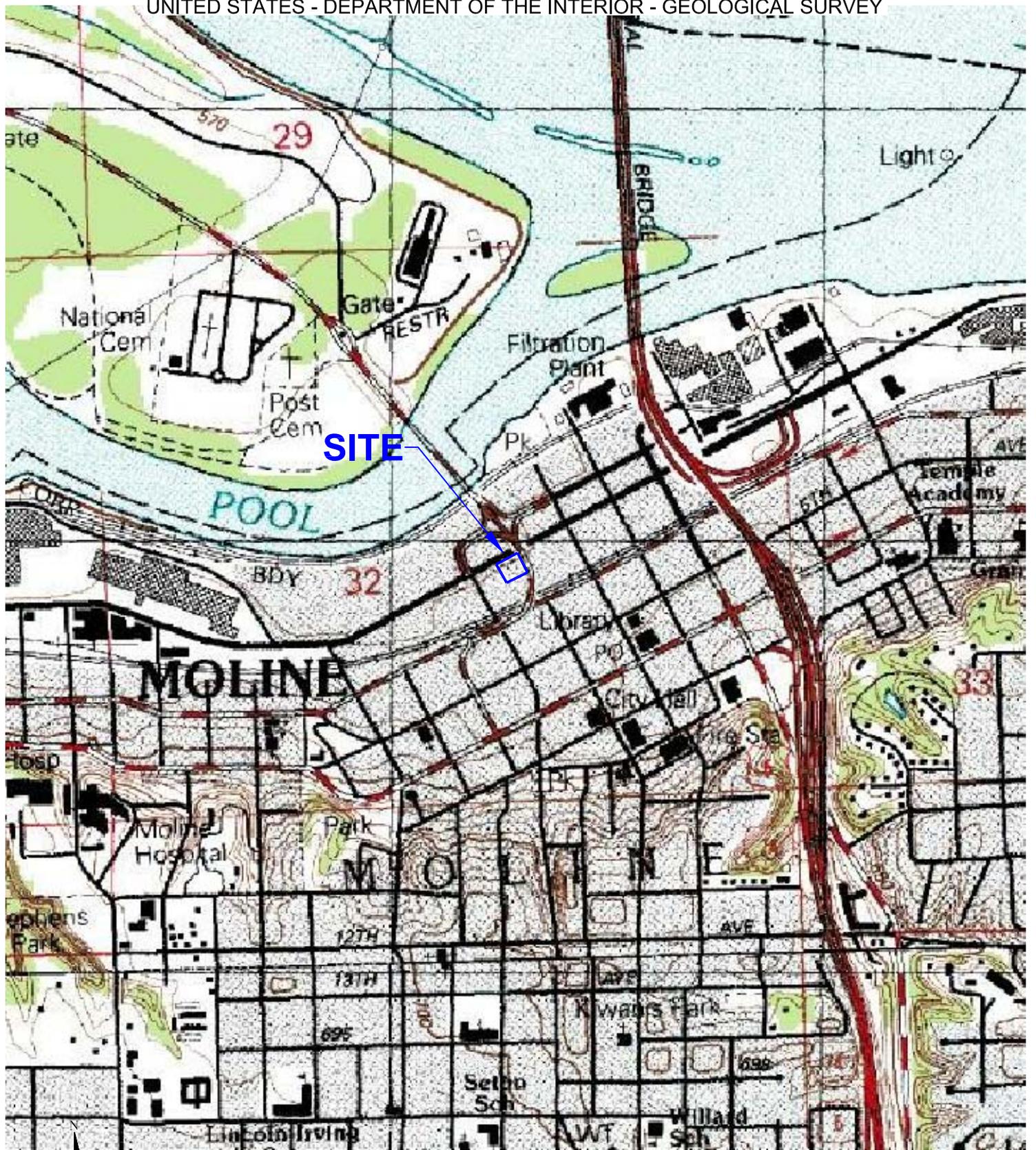
APPENDIX A

Figures

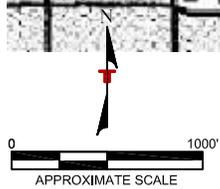
Figure 1 - Topographic Vicinity Map

Figure 2 - Site Diagram

Figure 3 - Sample Location Map



Source: USGS TERRASERVER-USA.COM - Topographic Image, Dated 1995



----- Approximate Site Location

N:\Projects\2010\06\07067060\Drawings\1524 River Drive\Phase II\07067060-LSI-Skinner Block.dwg

Project Mngt:	RJH	Project No.	07067060.1
Drawn By:	EP	Scale:	AS-SHOWN
Checked By:	RJH	Revised By:	-
Approved By:	RJH	Date:	August 30, 2010

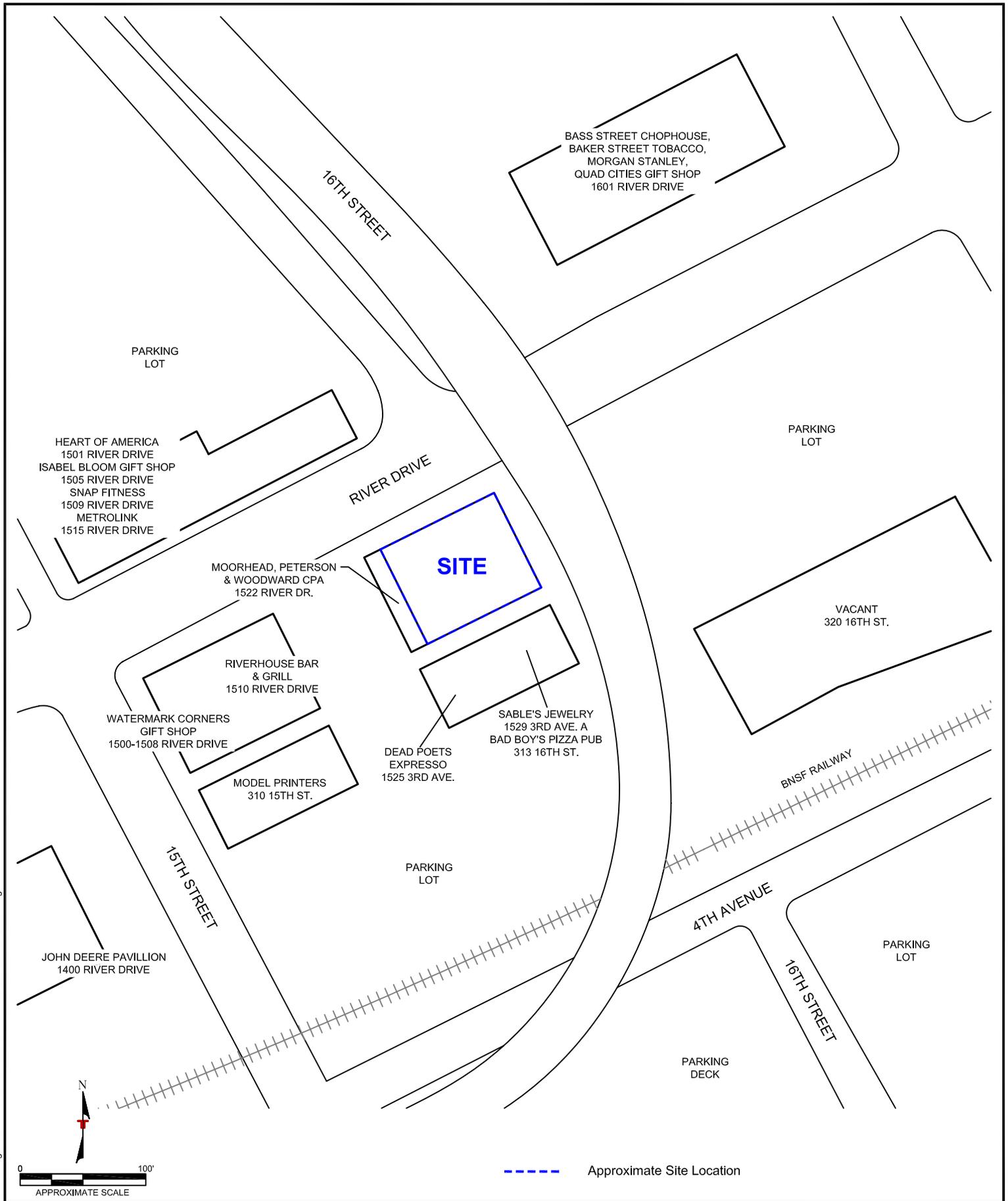
Terracon
Consulting Engineers and Scientists

135 AMBASSADOR DRIVE NAPERVILLE, ILLINOIS 60540
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TOPOGRAPHIC VICINITY DIAGRAM

**LIMITED SITE INVESTIGATION
SKINNER BLOCK**
1524-1534 RIVER DRIVE
MOLINE, ROCK ISLAND, ILLINOIS

FIG. No.	1
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Project Mngt:	RJH	Project No.	07067060.3
Drawn By:	EP	Scale:	AS-SHOWN
Checked By:	RJH	Revised By:	~
Approved By:	RJH	Date:	August 30, 2010

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SITE DIAGRAM

**LIMITED SITE INVESTIGATION
SKINNER BLOCK**

1524-1534 RIVER DRIVE
MOLINE, ROCK ISLAND, ILLINOIS

FIG. No.	2
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DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES. 2A

RIVER DRIVE

16TH STREET

SITE

B-3

B-1

B-2

IEPA SRP FACILITY

USTs, PHOTO SHOPS, DRY CLEANERS
AUTO REPAIR, MACHINE SHOPS



Approximate Monitoring Well Location

Approximate Site Location

N:\Projects\2006\07060\Drawings\1524 River Drive\Phase II\07067060-LSI-Skinner Block.dwg

Project Mngt:	RJH	Project No.	07067060.3
Drawn By:	EP	Scale:	AS-SHOWN
Checked By:	RJH	Revised By:	~
Approved By:	RJH	Date:	September 1, 2010

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SAMPLE LOCATION MAP

LIMITED SITE INVESTIGATION
SKINNER BLOCK
1524-1534 RIVER DRIVE
MOLINE, ROCK ISLAND, ILLINOIS

FIG. No.	3
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APPENDIX B

Tables

Table Notes

Table 1 - Groundwater Analytical Results

Table Notes
Skinner Block
Limited Site Investigation

Remediation Objectives from proposed amendments to 35 Illinois Administrative Code Chapter 742: *Tiered Approach to Corrective Action Objectives* (TACO), September 29, 2006.

Remediation Objectives for Non-TACO Compounds from IEPA Toxicity Assessment Unit, October 1, 2004.

mg/kg = milligrams per kilogram, generally equivalent to ppm

μg/kg = micrograms per kilogram, generally equivalent to ppb

mg/L = milligrams per liter, generally equivalent to parts per million (ppm)

μg/L = micrograms per liter generally equivalent to ppb

TCLP = Toxicity Characteristic Leaching Procedure

SPLP = Synthetic Precipitation Leaching Procedure

TOC was analyzed by USEPA SW-846 Method 9060

Exceedances of applicable ROs are highlighted in **bold**

**Table 1
Groundwater Analytical Data
Skinner Block
Limited Site Investigation**

Analyte	CAS	Method	Units	Sample ID						Frequency of Detection	Maximum Detected Concentration	Maximum Exceeds Objective?	Tier 1 Groundwater Remediation Objective
				GW-1	GW-3	Duplicate 1	Duplicate 2	Blank 1	Blank 2				Class I
Pesticide and Aroclors Organic Analytical Parameters													
1,1,1,2-Tetrachloroethane	630-20-6	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,1,1-Trichloroethane	71-55-6	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.2
1,1,2-Tetrachloroethane	79-34-5	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.42
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,1,2-Trichloroethane	79-00-5	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.005
1,1-Dichloroethane	75-34-3	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.7
1,1-Dichloroethene	75-35-4	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.007
1,1-Dichloropropene	563-58-6	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,2,3-Trichlorobenzene	87-61-6	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,2,3-Trichloropropane	96-18-4	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,2,3-Trimethylbenzene	526-73-8	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,2,4-Trichlorobenzene	120-82-1	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.07
1,2,4-Trimethylbenzene	95-63-6	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,2-Dibromo-3-Chloropropane	96-12-8	8260B	mg/l	<0.0050	<0.0050	<0.0050		<0.0050		0 of 4 (0%)	NA	NA	---
1,2-Dibromoethane	106-93-4	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,2-Dichlorobenzene	95-50-1	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.6
1,2-Dichloroethane	107-06-2	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.005
1,2-Dichloropropane	78-87-5	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.005
1,3,5-Trimethylbenzene	108-67-8	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,3-Dichlorobenzene	541-73-1	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.0063
1,3-Dichloropropane	142-28-9	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
1,4-Dichlorobenzene	106-46-7	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.075
2,2-Dichloropropane	594-20-7	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
2-Butanone (MEK)	78-93-3	8260B	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	4.2
2-Chloroethyl vinyl ether	110-75-8	8260B	mg/l	<0.050	<0.050	<0.050		<0.050		0 of 4 (0%)	NA	NA	---
2-Chlorotoluene	95-49-8	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
4-Chlorotoluene	106-43-4	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
4-Methyl-2-pentanone (MIBK)	108-10-1	8260B	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	---
Acetone	67-64-1	8260B	mg/l	<0.050	<0.050	<0.050		<0.050		0 of 4 (0%)	NA	NA	6.3
Acrolein	107-02-8	8260B	mg/l	<0.050	<0.050	<0.050		<0.050		0 of 4 (0%)	NA	NA	---
Acrylonitrile	107-13-1	8260B	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	---
Benzene	71-43-2	8260B	mg/l	<0.0010	0.0011	<0.0010		<0.0010		1 of 4 (25%)	0.0011	NO	0.005
Bromobenzene	108-86-1	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
Bromodichloromethane	75-27-4	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.0002
Bromoform	75-25-2	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.001
Bromomethane	74-83-9	8260B	mg/l	<0.0050	<0.0050	<0.0050		<0.0050		0 of 4 (0%)	NA	NA	0.0098
Carbon tetrachloride	56-23-5	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.005
Chlorobenzene	108-90-7	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.1
Chlorodibromomethane	124-48-1	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.14
Chloroethane	75-00-3	8260B	mg/l	<0.0050	<0.0050	<0.0050		<0.0050		0 of 4 (0%)	NA	NA	2.8
Chloroform	67-66-3	8260B	mg/l	<0.0050	<0.0050	<0.0050		<0.0050		0 of 4 (0%)	NA	NA	0.0002
Chloromethane	74-87-3	8260B	mg/l	<0.0025	<0.0025	<0.0025		<0.0025		0 of 4 (0%)	NA	NA	0.028
cis-1,2-Dichloroethene	156-59-2	8260B	mg/l	0.0011	<0.0010	0.0011		<0.0010		2 of 4 (50%)	0.0011	NO	0.07
cis-1,3-Dichloropropene	10061-01-5	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
Dibromomethane	74-95-3	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
Dichlorodifluoromethane	75-71-8	8260B	mg/l	<0.0050	<0.0050	<0.0050		<0.0050		0 of 4 (0%)	NA	NA	---
Di-isopropyl ether	108-20-3	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
Ethylbenzene	100-41-4	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.7
Hexachloro-1,3-butadiene	87-68-3	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.0014
Isopropylbenzene	98-82-8	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
Methyl tert-butyl ether	1634-04-4	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.07
Methylene Chloride	75-09-2	8260B	mg/l	<0.0050	<0.0050	<0.0050		<0.0050		0 of 4 (0%)	NA	NA	0.005
Naphthalene	91-20-3	8260B	mg/l	<0.0050	<0.0050	<0.0050		<0.0050		0 of 4 (0%)	NA	NA	0.14
n-Butylbenzene	104-51-8	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
n-Propylbenzene	103-65-1	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
p-Isopropyltoluene	99-87-6	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
sec-Butylbenzene	135-98-8	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
Styrene	100-42-5	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.1

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Groundwater Analytical Data
Skinner Block
Limited Site Investigation**

Analyte	CAS	Method	Units	Sample ID						Frequency of Detection	Maximum Detected Concentration	Maximum Exceeds Objective?	Tier 1 Groundwater Remediation Objective
				GW-1	GW-3	Duplicate 1	Duplicate 2	Blank 1	Blank 2				Class I
tert-Butylbenzene	98-06-6	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
Tetrachloroethene	127-18-4	8260B	mg/l	0.14	<0.0010	0.13		<0.0010		2 of 4 (50%)	0.14	YES	0.005
Toluene	108-88-3	8260B	mg/l	<0.0050	<0.0050	<0.0050		<0.0050		0 of 4 (0%)	NA	NA	1
trans-1,2-Dichloroethene	156-60-5	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.1
trans-1,3-Dichloropropene	10061-02-6	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	---
Trichloroethene	79-01-6	8260B	mg/l	0.0014	<0.0010	0.0017		<0.0010		2 of 4 (50%)	0.0017	NO	0.005
Trichlorofluoromethane	75-69-4	8260B	mg/l	<0.0050	<0.0050	<0.0050		<0.0050		0 of 4 (0%)	NA	NA	---
Vinyl chloride	75-01-4	8260B	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.002
Xylenes, Total	1330-20-7	8260B	mg/l	<0.0030	<0.0030	<0.0030		<0.0030		0 of 4 (0%)	NA	NA	10
Semivolatile Organic Analytical Parameters													
1,2,4-Trichlorobenzene	120-82-1	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.07
2,4,6-Trichlorophenol	88-06-2	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.01
2,4-Dichlorophenol	120-83-2	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.021
2,4-Dimethylphenol	105-67-9	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.14
2,4-Dinitrophenol	51-28-5	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.014
2,4-Dinitrotoluene	121-14-2	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.00002
2,6-Dinitrotoluene	606-20-2	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.00031
2-Chloronaphthalene	91-58-7	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.56
2-Chlorophenol	95-57-8	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.035
2-Nitrophenol	88-75-5	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	---
3,3-Dichlorobenzidine	91-94-1	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.02
4,6-Dinitro-2-methylphenol	534-52-1	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.0007
4-Bromophenyl-phenylether	101-55-3	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	---
4-Chloro-3-methylphenol	59-50-7	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.49
4-Chlorophenyl-phenylether	7005-72-3	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	---
4-Nitrophenol	100-02-7	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.056
Acenaphthene	83-32-9	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.42
Acenaphthylene	208-96-8	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.21
Anthracene	120-12-7	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	2.1
Benzidine	92-87-5	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	---
Benzo(a)anthracene	56-55-3	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.00013
Benzo(a)pyrene	50-32-8	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.0002
Benzo(b)fluoranthene	205-99-2	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.00018
Benzo(g,h,i)perylene	191-24-2	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.21
Benzo(k)fluoranthene	207-08-9	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.00017
Benzylbutyl phthalate	85-68-7	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	1.4
Bis(2-chloroethoxy)methane	111-91-1	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	---
Bis(2-chloroethyl)ether	111-44-4	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.01
Bis(2-chloroisopropyl)ether	108-60-1	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.28
Bis(2-ethylhexyl)phthalate	117-81-7	8270C	mg/l	<0.0010	0.0034	<0.0010		<0.0010		1 of 4 (25%)	0.0034	NO	0.006
Chrysene	218-01-9	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.0015
Dibenz(a,h)anthracene	53-70-3	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.0003
Diethyl phthalate	84-66-2	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	5.6
Dimethyl phthalate	131-11-3	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	70
Di-n-butyl phthalate	84-74-2	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.7
Di-n-octyl phthalate	117-84-0	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.14
Fluoranthene	206-44-0	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.28
Fluorene	86-73-7	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.28
Hexachloro-1,3-butadiene	87-68-3	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.0014
Hexachlorobenzene	118-74-1	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.00006
Hexachlorocyclopentadiene	77-47-4	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.05
Hexachloroethane	67-72-1	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.007
Indeno(1,2,3-cd)pyrene	193-39-5	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.00043
Isophorone	78-59-1	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	1.4
Naphthalene	91-20-3	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.14
Nitrobenzene	98-95-3	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.0035
n-Nitrosodimethylamine	62-75-9	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	---
n-Nitrosodi-n-propylamine	621-64-7	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.0018
n-Nitrosodiphenylamine	86-30-6	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.0032

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Analyte	CAS	Method	Units	Sample ID						Frequency of Detection	Maximum Detected Concentration	Maximum Exceeds Objective?	Tier 1 Groundwater Remediation Objective
				GW-1	GW-3	Duplicate 1	Duplicate 2	Blank 1	Blank 2				Class I
Pentachlorophenol	87-86-5	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.001
Phenanthrene	85-01-8	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.21
Phenol	108-95-2	8270C	mg/l	<0.010	<0.010	<0.010		<0.010		0 of 4 (0%)	NA	NA	0.1
Pyrene	129-00-0	8270C	mg/l	<0.0010	<0.0010	<0.0010		<0.0010		0 of 4 (0%)	NA	NA	0.21
Pesticide and Aroclors Organic Analytical Parameters													
PCB 1016	12674-11-2	8082	mg/l	<0.00050	<0.00050	<0.00050		<0.00050		0 of 4 (0%)	NA	NA	---
PCB 1221	11104-28-2	8082	mg/l	<0.00050	<0.00050	<0.00050		<0.00050		0 of 4 (0%)	NA	NA	---
PCB 1232	11141-16-5	8082	mg/l	<0.00050	<0.00050	<0.00050		<0.00050		0 of 4 (0%)	NA	NA	---
PCB 1242	53469-21-9	8082	mg/l	<0.00050	<0.00050	<0.00050		<0.00050		0 of 4 (0%)	NA	NA	---
PCB 1248	12672-29-6	8082	mg/l	<0.00050	<0.00050	<0.00050		<0.00050		0 of 4 (0%)	NA	NA	---
PCB 1254	11097-69-1	8082	mg/l	<0.00050	<0.00050	<0.00050		<0.00050		0 of 4 (0%)	NA	NA	---
PCB 1260	11096-82-5	8082	mg/l	<0.00050	<0.00050	<0.00050		<0.00050		0 of 4 (0%)	NA	NA	---
4,4-DDD	72-54-8	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.014
4,4-DDE	72-55-9	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.01
4,4-DDT	50-29-3	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.006
Aldrin	309-00-2	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.014
Alpha BHC	319-84-6	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.00011
Beta BHC	319-85-7	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	---
Chlordane	57-74-9	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	---
Delta BHC	319-86-8	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	---
Dieldrin	60-57-1	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.009
Endosulfan I	959-98-8	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.042
Endosulfan II	33213-65-9	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.042
Endosulfan sulfate	1031-07-8	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.042
Endrin	72-20-8	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.002
Endrin aldehyde	7421-93-4	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.002
Endrin ketone	53494-70-5	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 1 (0%)	NA	NA	0.002
Gamma BHC	58-89-9	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.0002
Heptachlor	76-44-8	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.0004
Heptachlor epoxide	1024-57-3	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.0002
Hexachlorobenzene	118-74-1	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 1 (0%)	NA	NA	0.00006
Methoxychlor	72-43-5	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.04
Toxaphene	8001-35-2	8081/8082	mg/l		<0.000050		<0.000050		<0.000050	0 of 3 (0%)	NA	NA	0.003
Inorganic Analytical Parameters													
Aluminum	7429-90-5	6010B	mg/l	250	6.7	110		0.13		4 of 4 (100%)	250	NA	---
Antimony	7440-36-0	6020	mg/l	0.0023	<0.0010	0.0025		<0.0010		2 of 4 (50%)	0.0025	NO	0.006
Arsenic	7440-38-2	6020	mg/l	0.053	0.0076	0.054		<0.0010		3 of 4 (75%)	0.054	YES	0.05
Barium	7440-39-3	6010B	mg/l	2	0.33	1.2		<0.0050		3 of 4 (75%)	2	NO	2
Beryllium	7440-41-7	6010B	mg/l	0.017	<0.0020	0.011		<0.0020		2 of 4 (50%)	0.017	YES	0.004
Cadmium	7440-43-9	6010B	mg/l	0.016	<0.0050	<0.0050		<0.0050		1 of 4 (25%)	0.016	YES	0.005
Calcium	7440-70-2	6010B	mg/l	220	250	220		<0.50		3 of 4 (75%)	250	NA	---
Chromium	7440-47-3	6010B	mg/l	1	0.023	0.38		<0.010		3 of 4 (75%)	1	YES	0.1
Cobalt	7440-48-4	6010B	mg/l	0.62	0.095	0.44		<0.010		3 of 4 (75%)	0.62	NO	1
Copper	7440-50-8	6010B	mg/l	2.4	0.034	2.3		<0.020		3 of 4 (75%)	2.4	YES	0.65
Iron	7439-89-6	6010B	mg/l	210	25	120		<0.10		3 of 4 (75%)	210	YES	5
Lead	7439-92-1	6010B	mg/l	3.2	0.012	2.9		<0.0050		3 of 4 (75%)	3.2	YES	0.0075
Magnesium	7439-95-4	6010B	mg/l	60	68	51		<0.10		3 of 4 (75%)	68	NA	---
Manganese	7439-96-5	6010B	mg/l	2.9	3.8	2.6		<0.010		3 of 4 (75%)	3.8	YES	0.15
Mercury	7439-97-6	7470A	mg/l	0.02	<0.00020	0.02		<0.00020		2 of 4 (50%)	0.02	YES	0.002
Nickel	7440-02-0	6010B	mg/l	0.93	0.14	0.55		<0.020		3 of 4 (75%)	0.93	YES	0.1
Potassium	9/7/7440	6010B	mg/l	79	11	45		<0.50		3 of 4 (75%)	79	NA	---
Selenium	7782-49-2	6010B	mg/l	0.094	0.024	<0.020		<0.020		2 of 4 (50%)	0.094	YES	0.05
Silver	7440-22-4	6010B	mg/l	<0.010	<0.010	0.022		<0.010		1 of 4 (25%)	0.022	NO	0.05
Sodium	7440-23-5	6010B	mg/l	500	160	560		1.5		4 of 4 (100%)	560	NA	---
Thallium	7440-28-0	6020	mg/l	0.004	<0.0010	0.0031		<0.0010		2 of 4 (50%)	0.004	YES	0.002
Vanadium	7440-62-2	6010B	mg/l	1.4	0.018	0.53		<0.010		3 of 4 (75%)	1.4	YES	0.049
Zinc	7440-66-6	6010B	mg/l	5.2	0.25	3.9		<0.030		3 of 4 (75%)	5.2	YES	5

APPENDIX C

City of Moline Ordinance No. 3022-2010

STATE OF ILLINOIS)
)
ROCK ISLAND COUNTY) SS

I, Tracy A. Koranda, City Clerk for the City of Moline, County of Rock Island, State of Illinois, do hereby certify that the foregoing Ordinance, General Ordinance 3022-2010, is a true and correct copy of the original Ordinance passed by the City Council of the City of Moline, Illinois, at a meeting duly convened and held on the 20th day of April, 2010.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the corporate seal of the City of Moline, Illinois, this 3rd day of May, 2010.



Tracy A. Koranda
City Clerk

(Seal)

Sponsor: _____

AN ORDINANCE

AMENDING Chapter 34, "WATERS AND SEWERS," of the Moline Code of Ordinances, by amending Section 34-2300, "USE OF GROUNDWATER AS A POTABLE WATER SUPPLY PROHIBITED," by repealing said section in its entirety and replacing it with one new Section 34-2300 dealing with the same subject matter.

WHEREAS, the Illinois Environmental Protection Agency has requested the City of Moline make two minor changes to its groundwater regulations; and

WHEREAS, the amended ordinance will allow property owners to request a No Further Remediation letter from the Illinois Environmental Protection Agency after remediation has occurred.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MOLINE, ILLINOIS, as follows:

Section 1 – That Chapter 34, "WATERS AND SEWERS," of the Moline Code of Ordinances, Section 34-2300, "USE OF GROUNDWATER AS A POTABLE WATER SUPPLY PROHIBITED," is hereby amended by repealing said section in its entirety and replacing it with one new Section 34-2300 dealing with the same subject, which shall read as follows:

"SEC. 34-2300. USE OF GROUNDWATER AS A POTABLE WATER SUPPLY PROHIBITED.

Except for such uses or methods in existence before the effective date of this ordinance, the use or attempt to use as a potable water supply groundwater from within the corporate limits of the City of Moline by the installation or drilling of wells or by any other method is hereby prohibited, including at points of withdrawal by the City of Moline."

Section 2 – That this ordinance shall be in full force and effect from and after passage, approval, and if required by law, publication in the manner provided for by law.

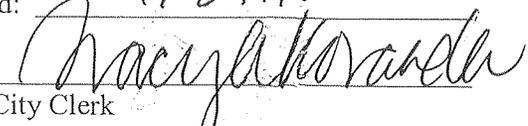
CITY OF MOLINE, ILLINOIS

Mayor

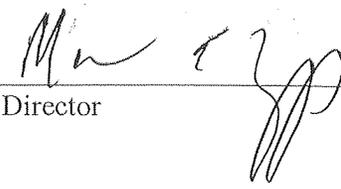
Date 4/20/10

Passed: 4.20.10

Approved: 4.27.10

Attest: 
City Clerk

APPROVED AS TO FORM:


Law Director

APPENDIX D

Monitoring Well Construction Diagrams

BORING NO. B-1

CLIENT
City of Moline

SITE
Moline, Illinois

PROJECT
Skinner Block

Boring Location: 11' N, 2' E of SE Corner of Building

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	FIELD VAPOR TEST (PPM)*
0.25	CONCRETE			1		23			<1
0.42	GRAVELLY SAND								
	MEDIUM SAND Light to Medium Brown								
5	SANDY CLAY Light to Medium Brown	5		2		34			<1
8.5	LIMESTONE BEDROCK	10		3		1			<1
19	BOTTOM OF BORING	15							

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

* ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi).

WATER LEVEL OBSERVATIONS, ft			
WL	▽ 7	WD	▽ 9.29 AB
WL	▽		▽
WL			



BORING STARTED	6-10-10
BORING COMPLETED	7-2-10
RIG GP/DT-90	FOREMAN JRB
APPROVED JRB	JOB # 07067060

BOREHOLE 99 SKINNER BLOCK.GPJ TERRACON.GDT 9/1/10

BORING NO. B-2

CLIENT
City of Moline

SITE
Moline, Illinois

PROJECT
Skinner Block

Boring Location: 11' S, 11' W of SW Corner of Building

GRAPHIC LOG	DESCRIPTION	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
				NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	FIELD VAPOR TEST (PPM)*
0.167	CONCRETE FAT SILTY CLAY Reddish Brown			1		26		<1	
5	SANDY LEAN CLAY, TRACE GRAVEL Reddish Brown	5		2		39		<1	
6.5	CLAY SHALE Gray								
12	BOTTOM OF BORING								

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

* ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi).

WATER LEVEL OBSERVATIONS, ft

WL	▽		▽
WL	▽		▽
WL			



BORING STARTED		6-10-10	
BORING COMPLETED		7-2-10	
RIG	GP/DT-90	FOREMAN	JRB
APPROVED	JRB	JOB #	07067060

BOREHOLE 99 SKINNER BLOCK.GPJ TERRACON.GDT 9/1/10

BORING NO. B-3

CLIENT
City of Moline

SITE
Moline, Illinois

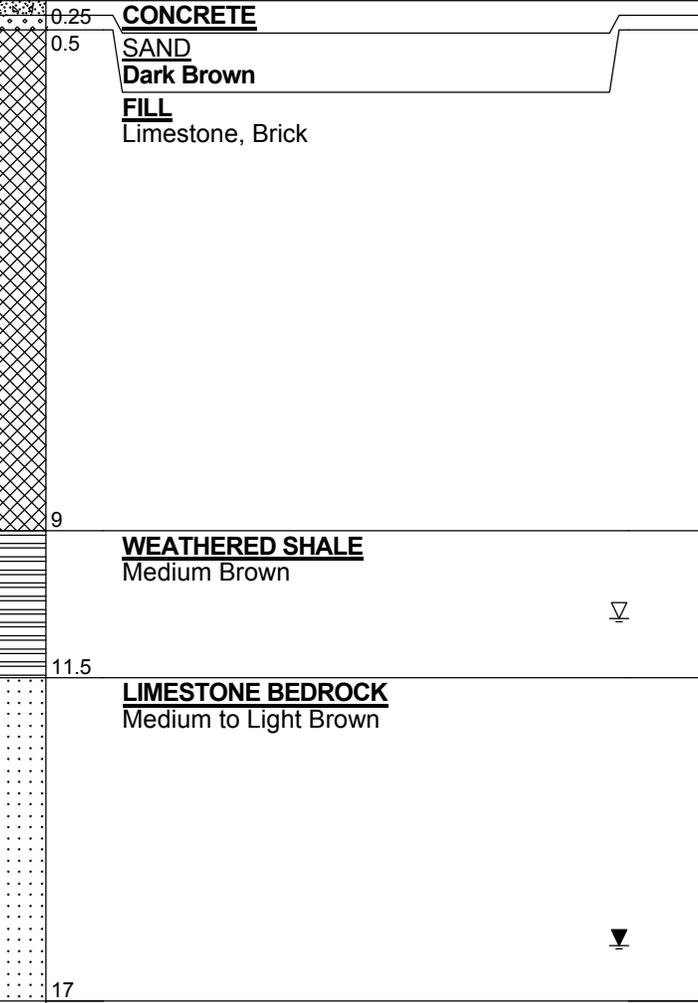
PROJECT
Skinner Block

Boring Location: 2.5'N, 6' W of NW Corner of Building

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	FIELD VAPOR TEST (PPM)*	SOIL SAMPLE SENT TO LABORATORY
0.25		1		12			<1	
0.5								
5		2		12			<1	
9		3		32			<1	
10								
15								
17								



The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

* ND indicates a reading of less than the field detection limit (FDL) of one (1) part per million isobutylene equivalents (ppmi).

WATER LEVEL OBSERVATIONS, ft			
WL	▽ 10.5	WD	▽ 16.06 AB
WL	▽		▽
WL			



BORING STARTED	6-10-10
BORING COMPLETED	7-2-10
RIG GP/DT-90	FOREMAN JRB
APPROVED JRB	JOB # 07067060

BOREHOLE 99 SKINNER BLOCK.GPJ TERRACON.GDT 9/1/10

APPENDIX E

Analytical Results and Chains of Custody



12065 Lebanon Rd.
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

John Brimeyer
Terracon - Bettendorf
870 40th Avenue
Bettendorf, IA 52722

Report Summary

Friday July 16, 2010

Report Number: L467548

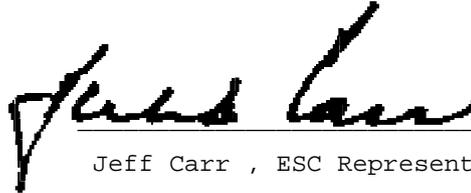
Samples Received: 07/03/10

Client Project: 07067060

Description: Skinner Block

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:



Jeff Carr , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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REPORT OF ANALYSIS

July 16, 2010

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : MW-1
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-01
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Antimony	2.3	1.0	ug/l	6020	07/12/10	1
Arsenic	53.	10.	ug/l	6020	07/12/10	10
Thallium	4.0	1.0	ug/l	6020	07/12/10	1
Mercury	20.	2.0	ug/l	7470A	07/10/10	10
Aluminum	250000	100	ug/l	6010B	07/11/10	1
Barium	2000	5.0	ug/l	6010B	07/11/10	1
Beryllium	17.	2.0	ug/l	6010B	07/11/10	1
Cadmium	16.	5.0	ug/l	6010B	07/11/10	1
Calcium	220000	500	ug/l	6010B	07/11/10	1
Chromium	1000	10.	ug/l	6010B	07/11/10	1
Cobalt	620	10.	ug/l	6010B	07/11/10	1
Copper	2400	20.	ug/l	6010B	07/11/10	1
Iron	210000	100	ug/l	6010B	07/11/10	1
Lead	3200	5.0	ug/l	6010B	07/11/10	1
Magnesium	60000	100	ug/l	6010B	07/11/10	1
Manganese	2900	10.	ug/l	6010B	07/11/10	1
Nickel	930	20.	ug/l	6010B	07/11/10	1
Potassium	79000	500	ug/l	6010B	07/11/10	1
Selenium	94.	20.	ug/l	6010B	07/11/10	1
Silver	BDL	10.	ug/l	6010B	07/11/10	1
Sodium	500000	500	ug/l	6010B	07/11/10	1
Vanadium	1400	10.	ug/l	6010B	07/11/10	1
Zinc	5200	30.	ug/l	6010B	07/11/10	1
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	07/14/10	1
Acrolein	BDL	50.	ug/l	8260B	07/14/10	1
Acrylonitrile	BDL	10.	ug/l	8260B	07/14/10	1
Benzene	BDL	1.0	ug/l	8260B	07/14/10	1
Bromobenzene	BDL	1.0	ug/l	8260B	07/14/10	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	07/14/10	1
Bromoform	BDL	1.0	ug/l	8260B	07/14/10	1
Bromomethane	BDL	5.0	ug/l	8260B	07/14/10	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	07/14/10	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	07/14/10	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	07/14/10	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	07/14/10	1
Chlorobenzene	BDL	1.0	ug/l	8260B	07/14/10	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	07/14/10	1
Chloroethane	BDL	5.0	ug/l	8260B	07/14/10	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	07/14/10	1
Chloroform	BDL	5.0	ug/l	8260B	07/14/10	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : MW-1
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-01
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloromethane	BDL	2.5	ug/l	8260B	07/14/10	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	07/14/10	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	07/14/10	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	07/14/10	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	07/14/10	1
Dibromomethane	BDL	1.0	ug/l	8260B	07/14/10	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/14/10	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/14/10	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/14/10	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	07/14/10	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	07/14/10	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	07/14/10	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	07/14/10	1
cis-1,2-Dichloroethene	1.1	1.0	ug/l	8260B	07/14/10	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	07/14/10	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	07/14/10	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	07/14/10	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	07/14/10	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	07/14/10	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	07/14/10	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	07/14/10	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	07/14/10	1
Ethylbenzene	BDL	1.0	ug/l	8260B	07/14/10	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	8260B	07/14/10	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	07/14/10	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	07/14/10	1
2-Butanone (MEK)	BDL	10.	ug/l	8260B	07/14/10	1
Methylene Chloride	BDL	5.0	ug/l	8260B	07/14/10	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	07/14/10	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	07/14/10	1
Naphthalene	BDL	5.0	ug/l	8260B	07/14/10	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	07/14/10	1
Styrene	BDL	1.0	ug/l	8260B	07/14/10	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	07/14/10	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	07/14/10	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	1.0	ug/l	8260B	07/14/10	1
Tetrachloroethene	140	1.0	ug/l	8260B	07/14/10	1
Toluene	BDL	5.0	ug/l	8260B	07/14/10	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	07/14/10	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	07/14/10	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	07/14/10	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	07/14/10	1
Trichloroethene	1.4	1.0	ug/l	8260B	07/14/10	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	07/14/10	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : MW-1
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-01
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	07/14/10	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/14/10	1
1,2,3-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/14/10	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/14/10	1
Vinyl chloride	BDL	1.0	ug/l	8260B	07/14/10	1
Xylenes, Total	BDL	3.0	ug/l	8260B	07/14/10	1
Surrogate Recovery						
Toluene-d8	93.2		% Rec.	8260B	07/14/10	1
Dibromofluoromethane	91.1		% Rec.	8260B	07/14/10	1
4-Bromofluorobenzene	101.		% Rec.	8260B	07/14/10	1
Polychlorinated Biphenyls						
PCB 1016	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1221	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1232	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1242	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1248	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1254	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1260	BDL	0.50	ug/l	8082	07/09/10	1
PCBs Surrogates						
Decachlorobiphenyl	60.3		% Rec.	8082	07/09/10	1
Tetrachloro-m-xylene	72.6		% Rec.	8082	07/09/10	1
Base/Neutral Extractables						
Acenaphthene	BDL	1.0	ug/l	8270C	07/07/10	1
Acenaphthylene	BDL	1.0	ug/l	8270C	07/07/10	1
Anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzidine	BDL	10.	ug/l	8270C	07/07/10	1
Benzo(a)anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(b)fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(k)fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(g,h,i)perylene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(a)pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
Bis(2-chlorethoxy)methane	BDL	10.	ug/l	8270C	07/07/10	1
Bis(2-chloroethyl)ether	BDL	10.	ug/l	8270C	07/07/10	1
Bis(2-chloroisopropyl)ether	BDL	10.	ug/l	8270C	07/07/10	1
4-Bromophenyl-phenylether	BDL	10.	ug/l	8270C	07/07/10	1
2-Chloronaphthalene	BDL	1.0	ug/l	8270C	07/07/10	1
4-Chlorophenyl-phenylether	BDL	10.	ug/l	8270C	07/07/10	1
Chrysene	BDL	1.0	ug/l	8270C	07/07/10	1
Dibenz(a,h)anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
3,3-Dichlorobenzidine	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dinitrotoluene	BDL	10.	ug/l	8270C	07/07/10	1
2,6-Dinitrotoluene	BDL	10.	ug/l	8270C	07/07/10	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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Est. 1970

REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : MW-1
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-01
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Fluorene	BDL	1.0	ug/l	8270C	07/07/10	1
Hexachlorobenzene	BDL	1.0	ug/l	8270C	07/07/10	1
Hexachloro-1,3-butadiene	BDL	10.	ug/l	8270C	07/07/10	1
Hexachlorocyclopentadiene	BDL	10.	ug/l	8270C	07/07/10	1
Hexachloroethane	BDL	10.	ug/l	8270C	07/07/10	1
Indeno(1,2,3-cd)pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
Isophorone	BDL	10.	ug/l	8270C	07/07/10	1
Naphthalene	BDL	1.0	ug/l	8270C	07/07/10	1
Nitrobenzene	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodimethylamine	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodiphenylamine	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodi-n-propylamine	BDL	10.	ug/l	8270C	07/07/10	1
Phenanthrene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzylbutyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Bis(2-ethylhexyl)phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Di-n-butyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Diethyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Dimethyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Di-n-octyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
1,2,4-Trichlorobenzene	BDL	10.	ug/l	8270C	07/07/10	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	10.	ug/l	8270C	07/07/10	1
2-Chlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dichlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dimethylphenol	BDL	10.	ug/l	8270C	07/07/10	1
4,6-Dinitro-2-methylphenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dinitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
2-Nitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
4-Nitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
Pentachlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
Phenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4,6-Trichlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
Surrogate Recovery						
2-Fluorophenol	17.7		% Rec.	8270C	07/07/10	1
Phenol-d5	11.8		% Rec.	8270C	07/07/10	1
Nitrobenzene-d5	68.5		% Rec.	8270C	07/07/10	1
2-Fluorobiphenyl	79.0		% Rec.	8270C	07/07/10	1
2,4,6-Tribromophenol	57.1		% Rec.	8270C	07/07/10	1
p-Terphenyl-d14	105.		% Rec.	8270C	07/07/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Est. 1970

REPORT OF ANALYSIS

July 16, 2010

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : MW-3
 Collected By : James Baxter
 Collection Date : 07/02/10 13:30

ESC Sample # : L467548-02
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Antimony	BDL	1.0	ug/l	6020	07/12/10	1
Arsenic	7.6	1.0	ug/l	6020	07/12/10	1
Thallium	BDL	1.0	ug/l	6020	07/12/10	1
Mercury	BDL	0.20	ug/l	7470A	07/10/10	1
Aluminum	6700	100	ug/l	6010B	07/12/10	1
Barium	330	5.0	ug/l	6010B	07/12/10	1
Beryllium	BDL	2.0	ug/l	6010B	07/12/10	1
Cadmium	BDL	5.0	ug/l	6010B	07/12/10	1
Calcium	250000	500	ug/l	6010B	07/12/10	1
Chromium	23.	10.	ug/l	6010B	07/12/10	1
Cobalt	95.	10.	ug/l	6010B	07/12/10	1
Copper	34.	20.	ug/l	6010B	07/12/10	1
Iron	25000	100	ug/l	6010B	07/12/10	1
Lead	12.	5.0	ug/l	6010B	07/12/10	1
Magnesium	68000	100	ug/l	6010B	07/12/10	1
Manganese	3800	10.	ug/l	6010B	07/12/10	1
Nickel	140	20.	ug/l	6010B	07/12/10	1
Potassium	11000	500	ug/l	6010B	07/12/10	1
Selenium	24.	20.	ug/l	6010B	07/12/10	1
Silver	BDL	10.	ug/l	6010B	07/12/10	1
Sodium	160000	500	ug/l	6010B	07/12/10	1
Vanadium	18.	10.	ug/l	6010B	07/12/10	1
Zinc	250	30.	ug/l	6010B	07/12/10	1
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	07/15/10	1
Acrolein	BDL	50.	ug/l	8260B	07/15/10	1
Acrylonitrile	BDL	10.	ug/l	8260B	07/15/10	1
Benzene	1.1	1.0	ug/l	8260B	07/15/10	1
Bromobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	07/15/10	1
Bromoform	BDL	1.0	ug/l	8260B	07/15/10	1
Bromomethane	BDL	5.0	ug/l	8260B	07/15/10	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	07/15/10	1
Chlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	07/15/10	1
Chloroethane	BDL	5.0	ug/l	8260B	07/15/10	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	07/15/10	1
Chloroform	BDL	5.0	ug/l	8260B	07/15/10	1

BDL - Below Detection Limit
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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : MW-3
 Collected By : James Baxter
 Collection Date : 07/02/10 13:30

ESC Sample # : L467548-02
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloromethane	BDL	2.5	ug/l	8260B	07/15/10	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	07/15/10	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	07/15/10	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	07/15/10	1
Dibromomethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	07/15/10	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	07/15/10	1
Ethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	8260B	07/15/10	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	07/15/10	1
2-Butanone (MEK)	BDL	10.	ug/l	8260B	07/15/10	1
Methylene Chloride	BDL	5.0	ug/l	8260B	07/15/10	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	07/15/10	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	07/15/10	1
Naphthalene	BDL	5.0	ug/l	8260B	07/15/10	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Styrene	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	1.0	ug/l	8260B	07/15/10	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
Toluene	BDL	5.0	ug/l	8260B	07/15/10	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
Trichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	07/15/10	1

BDL - Below Detection Limit
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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : MW-3
 Collected By : James Baxter
 Collection Date : 07/02/10 13:30

ESC Sample # : L467548-02
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2,3-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Vinyl chloride	BDL	1.0	ug/l	8260B	07/15/10	1
Xylenes, Total	BDL	3.0	ug/l	8260B	07/15/10	1
Surrogate Recovery						
Toluene-d8	95.9		% Rec.	8260B	07/15/10	1
Dibromofluoromethane	101.		% Rec.	8260B	07/15/10	1
4-Bromofluorobenzene	94.7		% Rec.	8260B	07/15/10	1
Pesticide/PCBs						
Aldrin	BDL	0.050	ug/l	8081/8082	07/08/10	1
Alpha BHC	BDL	0.050	ug/l	8081/8082	07/08/10	1
Beta BHC	BDL	0.050	ug/l	8081/8082	07/08/10	1
Delta BHC	BDL	0.050	ug/l	8081/8082	07/08/10	1
Gamma BHC	BDL	0.050	ug/l	8081/8082	07/08/10	1
Chlordane	BDL	0.50	ug/l	8081/8082	07/08/10	1
4,4-DDD	BDL	0.050	ug/l	8081/8082	07/08/10	1
4,4-DDE	BDL	0.050	ug/l	8081/8082	07/08/10	1
4,4-DDT	BDL	0.050	ug/l	8081/8082	07/08/10	1
Dieldrin	BDL	0.050	ug/l	8081/8082	07/08/10	1
Endosulfan I	BDL	0.050	ug/l	8081/8082	07/08/10	1
Endosulfan II	BDL	0.050	ug/l	8081/8082	07/08/10	1
Endosulfan sulfate	BDL	0.050	ug/l	8081/8082	07/08/10	1
Endrin	BDL	0.050	ug/l	8081/8082	07/08/10	1
Endrin aldehyde	BDL	0.050	ug/l	8081/8082	07/08/10	1
Endrin ketone	BDL	0.050	ug/l	8081/8082	07/08/10	1
Heptachlor	BDL	0.050	ug/l	8081/8082	07/08/10	1
Heptachlor epoxide	BDL	0.050	ug/l	8081/8082	07/08/10	1
Hexachlorobenzene	BDL	0.050	ug/l	8081/8082	07/08/10	1
Methoxychlor	BDL	0.050	ug/l	8081/8082	07/08/10	1
Toxaphene	BDL	0.50	ug/l	8081/8082	07/08/10	1
PCB 1016	BDL	0.50	ug/l	8081/8082	07/09/10	1
PCB 1221	BDL	0.50	ug/l	8081/8082	07/09/10	1
PCB 1232	BDL	0.50	ug/l	8081/8082	07/09/10	1
PCB 1242	BDL	0.50	ug/l	8081/8082	07/09/10	1
PCB 1248	BDL	0.50	ug/l	8081/8082	07/09/10	1
PCB 1254	BDL	0.50	ug/l	8081/8082	07/09/10	1
PCB 1260	BDL	0.50	ug/l	8081/8082	07/09/10	1
Pest/PCBs Surrogates						
Decachlorobiphenyl	86.8		% Rec.	8081/8082	07/08/10	1
Tetrachloro-m-xylene	82.3		% Rec.	8081/8082	07/08/10	1

BDL - Below Detection Limit
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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : MW-3
 Collected By : James Baxter
 Collection Date : 07/02/10 13:30

ESC Sample # : L467548-02
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Base/Neutral Extractables						
Acenaphthene	BDL	1.0	ug/l	8270C	07/07/10	1
Acenaphthylene	BDL	1.0	ug/l	8270C	07/07/10	1
Anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzidine	BDL	10.	ug/l	8270C	07/07/10	1
Benzo(a)anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(b)fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(k)fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(g,h,i)perylene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(a)pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
Bis(2-chloroethoxy)methane	BDL	10.	ug/l	8270C	07/07/10	1
Bis(2-chloroethyl)ether	BDL	10.	ug/l	8270C	07/07/10	1
Bis(2-chloroisopropyl)ether	BDL	10.	ug/l	8270C	07/07/10	1
4-Bromophenyl-phenylether	BDL	10.	ug/l	8270C	07/07/10	1
2-Chloronaphthalene	BDL	1.0	ug/l	8270C	07/07/10	1
4-Chlorophenyl-phenylether	BDL	10.	ug/l	8270C	07/07/10	1
Chrysene	BDL	1.0	ug/l	8270C	07/07/10	1
Dibenz(a,h)anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
3,3-Dichlorobenzidine	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dinitrotoluene	BDL	10.	ug/l	8270C	07/07/10	1
2,6-Dinitrotoluene	BDL	10.	ug/l	8270C	07/07/10	1
Fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Fluorene	BDL	1.0	ug/l	8270C	07/07/10	1
Hexachlorobenzene	BDL	1.0	ug/l	8270C	07/07/10	1
Hexachloro-1,3-butadiene	BDL	10.	ug/l	8270C	07/07/10	1
Hexachlorocyclopentadiene	BDL	10.	ug/l	8270C	07/07/10	1
Hexachloroethane	BDL	10.	ug/l	8270C	07/07/10	1
Indeno(1,2,3-cd)pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
Isophorone	BDL	10.	ug/l	8270C	07/07/10	1
Naphthalene	BDL	1.0	ug/l	8270C	07/07/10	1
Nitrobenzene	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodimethylamine	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodiphenylamine	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodi-n-propylamine	BDL	10.	ug/l	8270C	07/07/10	1
Phenanthrene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzylbutyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Bis(2-ethylhexyl)phthalate	3.4	1.0	ug/l	8270C	07/07/10	1
Di-n-butyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Diethyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Dimethyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Di-n-octyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
1,2,4-Trichlorobenzene	BDL	10.	ug/l	8270C	07/07/10	1
Acid Extractables						

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : MW-3
 Collected By : James Baxter
 Collection Date : 07/02/10 13:30

ESC Sample # : L467548-02

Site ID :

Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Chloro-3-methylphenol	BDL	10.	ug/l	8270C	07/07/10	1
2-Chlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dichlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dimethylphenol	BDL	10.	ug/l	8270C	07/07/10	1
4,6-Dinitro-2-methylphenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dinitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
2-Nitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
4-Nitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
Pentachlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
Phenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4,6-Trichlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
Surrogate Recovery						
2-Fluorophenol	21.3		% Rec.	8270C	07/07/10	1
Phenol-d5	12.9		% Rec.	8270C	07/07/10	1
Nitrobenzene-d5	72.2		% Rec.	8270C	07/07/10	1
2-Fluorobiphenyl	80.8		% Rec.	8270C	07/07/10	1
2,4,6-Tribromophenol	67.4		% Rec.	8270C	07/07/10	1
p-Terphenyl-d14	98.6		% Rec.	8270C	07/07/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : DUPLICATE
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-03
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Antimony	2.5	1.0	ug/l	6020	07/12/10	1
Arsenic	54.	10.	ug/l	6020	07/12/10	10
Thallium	3.1	1.0	ug/l	6020	07/12/10	1
Mercury	20.	1.0	ug/l	7470A	07/10/10	5
Aluminum	110000	100	ug/l	6010B	07/12/10	1
Barium	1200	5.0	ug/l	6010B	07/12/10	1
Beryllium	11.	2.0	ug/l	6010B	07/12/10	1
Cadmium	BDL	5.0	ug/l	6010B	07/12/10	1
Calcium	220000	500	ug/l	6010B	07/12/10	1
Chromium	380	10.	ug/l	6010B	07/12/10	1
Cobalt	440	10.	ug/l	6010B	07/12/10	1
Copper	2300	20.	ug/l	6010B	07/12/10	1
Iron	120000	100	ug/l	6010B	07/12/10	1
Lead	2900	5.0	ug/l	6010B	07/12/10	1
Magnesium	51000	100	ug/l	6010B	07/12/10	1
Manganese	2600	10.	ug/l	6010B	07/12/10	1
Nickel	550	20.	ug/l	6010B	07/12/10	1
Potassium	45000	500	ug/l	6010B	07/12/10	1
Selenium	BDL	20.	ug/l	6010B	07/12/10	1
Silver	22.	10.	ug/l	6010B	07/12/10	1
Sodium	560000	500	ug/l	6010B	07/12/10	1
Vanadium	530	10.	ug/l	6010B	07/12/10	1
Zinc	3900	30.	ug/l	6010B	07/12/10	1
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	07/15/10	1
Acrolein	BDL	50.	ug/l	8260B	07/15/10	1
Acrylonitrile	BDL	10.	ug/l	8260B	07/15/10	1
Benzene	BDL	1.0	ug/l	8260B	07/15/10	1
Bromobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	07/15/10	1
Bromoform	BDL	1.0	ug/l	8260B	07/15/10	1
Bromomethane	BDL	5.0	ug/l	8260B	07/15/10	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	07/15/10	1
Chlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	07/15/10	1
Chloroethane	BDL	5.0	ug/l	8260B	07/15/10	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	07/15/10	1
Chloroform	BDL	5.0	ug/l	8260B	07/15/10	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : DUPLICATE
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-03
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloromethane	BDL	2.5	ug/l	8260B	07/15/10	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	07/15/10	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	07/15/10	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	07/15/10	1
Dibromomethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	07/15/10	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
cis-1,2-Dichloroethene	1.1	1.0	ug/l	8260B	07/15/10	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
1,3-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	07/15/10	1
Ethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	8260B	07/15/10	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	07/15/10	1
2-Butanone (MEK)	BDL	10.	ug/l	8260B	07/15/10	1
Methylene Chloride	BDL	5.0	ug/l	8260B	07/15/10	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	07/15/10	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	07/15/10	1
Naphthalene	BDL	5.0	ug/l	8260B	07/15/10	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Styrene	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	1.0	ug/l	8260B	07/15/10	1
Tetrachloroethene	130	1.0	ug/l	8260B	07/15/10	1
Toluene	BDL	5.0	ug/l	8260B	07/15/10	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
Trichloroethene	1.7	1.0	ug/l	8260B	07/15/10	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	07/15/10	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

July 16, 2010

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

ESC Sample # : L467548-03

Date Received : July 03, 2010
 Description : Skinner Block

Site ID :

Sample ID : DUPLICATE

Project # : 07067060

Collected By : James Baxter
 Collection Date : 07/02/10 11:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2,3-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Vinyl chloride	BDL	1.0	ug/l	8260B	07/15/10	1
Xylenes, Total	BDL	3.0	ug/l	8260B	07/15/10	1
Surrogate Recovery						
Toluene-d8	95.5		% Rec.	8260B	07/15/10	1
Dibromofluoromethane	100.		% Rec.	8260B	07/15/10	1
4-Bromofluorobenzene	97.8		% Rec.	8260B	07/15/10	1
Polychlorinated Biphenyls						
PCB 1016	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1221	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1232	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1242	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1248	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1254	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1260	BDL	0.50	ug/l	8082	07/09/10	1
PCBs Surrogates						
Decachlorobiphenyl	76.5		% Rec.	8082	07/09/10	1
Tetrachloro-m-xylene	76.9		% Rec.	8082	07/09/10	1
Base/Neutral Extractables						
Acenaphthene	BDL	1.0	ug/l	8270C	07/07/10	1
Acenaphthylene	BDL	1.0	ug/l	8270C	07/07/10	1
Anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzidine	BDL	10.	ug/l	8270C	07/07/10	1
Benzo(a)anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(b)fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(k)fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(g,h,i)perylene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(a)pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
Bis(2-chloroethoxy)methane	BDL	10.	ug/l	8270C	07/07/10	1
Bis(2-chloroethyl)ether	BDL	10.	ug/l	8270C	07/07/10	1
Bis(2-chloroisopropyl)ether	BDL	10.	ug/l	8270C	07/07/10	1
4-Bromophenyl-phenylether	BDL	10.	ug/l	8270C	07/07/10	1
2-Chloronaphthalene	BDL	1.0	ug/l	8270C	07/07/10	1
4-Chlorophenyl-phenylether	BDL	10.	ug/l	8270C	07/07/10	1
Chrysene	BDL	1.0	ug/l	8270C	07/07/10	1
Dibenz(a,h)anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
3,3-Dichlorobenzidine	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dinitrotoluene	BDL	10.	ug/l	8270C	07/07/10	1
2,6-Dinitrotoluene	BDL	10.	ug/l	8270C	07/07/10	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : DUPLICATE
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-03
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Fluorene	BDL	1.0	ug/l	8270C	07/07/10	1
Hexachlorobenzene	BDL	1.0	ug/l	8270C	07/07/10	1
Hexachloro-1,3-butadiene	BDL	10.	ug/l	8270C	07/07/10	1
Hexachlorocyclopentadiene	BDL	10.	ug/l	8270C	07/07/10	1
Hexachloroethane	BDL	10.	ug/l	8270C	07/07/10	1
Indeno(1,2,3-cd)pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
Isophorone	BDL	10.	ug/l	8270C	07/07/10	1
Naphthalene	BDL	1.0	ug/l	8270C	07/07/10	1
Nitrobenzene	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodimethylamine	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodiphenylamine	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodi-n-propylamine	BDL	10.	ug/l	8270C	07/07/10	1
Phenanthrene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzylbutyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Bis(2-ethylhexyl)phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Di-n-butyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Diethyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Dimethyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Di-n-octyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
1,2,4-Trichlorobenzene	BDL	10.	ug/l	8270C	07/07/10	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	10.	ug/l	8270C	07/07/10	1
2-Chlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dichlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dimethylphenol	BDL	10.	ug/l	8270C	07/07/10	1
4,6-Dinitro-2-methylphenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dinitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
2-Nitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
4-Nitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
Pentachlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
Phenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4,6-Trichlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
Surrogate Recovery						
2-Fluorophenol	18.3		% Rec.	8270C	07/07/10	1
Phenol-d5	11.6		% Rec.	8270C	07/07/10	1
Nitrobenzene-d5	63.0		% Rec.	8270C	07/07/10	1
2-Fluorobiphenyl	73.8		% Rec.	8270C	07/07/10	1
2,4,6-Tribromophenol	67.6		% Rec.	8270C	07/07/10	1
p-Terphenyl-d14	90.8		% Rec.	8270C	07/07/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : DUPLICATE
 Collected By : James Baxter
 Collection Date : 07/02/10 13:30

ESC Sample # : L467548-04
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Pesticides						
Aldrin	BDL	0.050	ug/l	8081A	07/08/10	1
Alpha BHC	BDL	0.050	ug/l	8081A	07/08/10	1
Beta BHC	BDL	0.050	ug/l	8081A	07/08/10	1
Delta BHC	BDL	0.050	ug/l	8081A	07/08/10	1
Gamma BHC	BDL	0.050	ug/l	8081A	07/08/10	1
Chlordane	BDL	0.50	ug/l	8081A	07/08/10	1
4,4-DDD	BDL	0.050	ug/l	8081A	07/08/10	1
4,4-DDE	BDL	0.050	ug/l	8081A	07/08/10	1
4,4-DDT	BDL	0.050	ug/l	8081A	07/08/10	1
Dieldrin	BDL	0.050	ug/l	8081A	07/08/10	1
Endosulfan I	BDL	0.050	ug/l	8081A	07/08/10	1
Endosulfan II	BDL	0.050	ug/l	8081A	07/08/10	1
Endosulfan sulfate	BDL	0.050	ug/l	8081A	07/08/10	1
Endrin	BDL	0.050	ug/l	8081A	07/08/10	1
Endrin aldehyde	BDL	0.050	ug/l	8081A	07/08/10	1
Heptachlor	BDL	0.050	ug/l	8081A	07/08/10	1
Heptachlor epoxide	BDL	0.050	ug/l	8081A	07/08/10	1
Methoxychlor	BDL	0.050	ug/l	8081A	07/08/10	1
Toxaphene	BDL	0.50	ug/l	8081A	07/08/10	1
Pesticides Surrogates						
Decachlorobiphenyl	74.7		% Rec.	8081A	07/08/10	1
Tetrachloro-m-xylene	58.3		% Rec.	8081A	07/08/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

July 16, 2010

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : BLANK
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-05
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Antimony	BDL	1.0	ug/l	6020	07/12/10	1
Arsenic	BDL	1.0	ug/l	6020	07/12/10	1
Thallium	BDL	1.0	ug/l	6020	07/12/10	1
Mercury	BDL	0.20	ug/l	7470A	07/10/10	1
Aluminum	130	100	ug/l	6010B	07/12/10	1
Barium	BDL	5.0	ug/l	6010B	07/12/10	1
Beryllium	BDL	2.0	ug/l	6010B	07/12/10	1
Cadmium	BDL	5.0	ug/l	6010B	07/12/10	1
Calcium	BDL	500	ug/l	6010B	07/12/10	1
Chromium	BDL	10.	ug/l	6010B	07/12/10	1
Cobalt	BDL	10.	ug/l	6010B	07/12/10	1
Copper	BDL	20.	ug/l	6010B	07/12/10	1
Iron	BDL	100	ug/l	6010B	07/12/10	1
Lead	BDL	5.0	ug/l	6010B	07/12/10	1
Magnesium	BDL	100	ug/l	6010B	07/12/10	1
Manganese	BDL	10.	ug/l	6010B	07/12/10	1
Nickel	BDL	20.	ug/l	6010B	07/12/10	1
Potassium	BDL	500	ug/l	6010B	07/12/10	1
Selenium	BDL	20.	ug/l	6010B	07/12/10	1
Silver	BDL	10.	ug/l	6010B	07/12/10	1
Sodium	1500	500	ug/l	6010B	07/12/10	1
Vanadium	BDL	10.	ug/l	6010B	07/12/10	1
Zinc	BDL	30.	ug/l	6010B	07/12/10	1
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	07/15/10	1
Acrolein	BDL	50.	ug/l	8260B	07/15/10	1
Acrylonitrile	BDL	10.	ug/l	8260B	07/15/10	1
Benzene	BDL	1.0	ug/l	8260B	07/15/10	1
Bromobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	07/15/10	1
Bromoform	BDL	1.0	ug/l	8260B	07/15/10	1
Bromomethane	BDL	5.0	ug/l	8260B	07/15/10	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	07/15/10	1
Chlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	07/15/10	1
Chloroethane	BDL	5.0	ug/l	8260B	07/15/10	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	07/15/10	1
Chloroform	BDL	5.0	ug/l	8260B	07/15/10	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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Est. 1970

REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : BLANK
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-05
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloromethane	BDL	2.5	ug/l	8260B	07/15/10	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	07/15/10	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	07/15/10	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	07/15/10	1
Dibromomethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	07/15/10	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	07/15/10	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	07/15/10	1
Ethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	8260B	07/15/10	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	07/15/10	1
2-Butanone (MEK)	BDL	10.	ug/l	8260B	07/15/10	1
Methylene Chloride	BDL	5.0	ug/l	8260B	07/15/10	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	07/15/10	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	07/15/10	1
Naphthalene	BDL	5.0	ug/l	8260B	07/15/10	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Styrene	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	1.0	ug/l	8260B	07/15/10	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
Toluene	BDL	5.0	ug/l	8260B	07/15/10	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	07/15/10	1
Trichloroethene	BDL	1.0	ug/l	8260B	07/15/10	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	07/15/10	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

July 16, 2010

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

ESC Sample # : L467548-05

Date Received : July 03, 2010
 Description : Skinner Block

Site ID :

Sample ID : BLANK

Project # : 07067060

Collected By : James Baxter
 Collection Date : 07/02/10 11:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	07/15/10	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,2,3-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	07/15/10	1
Vinyl chloride	BDL	1.0	ug/l	8260B	07/15/10	1
Xylenes, Total	BDL	3.0	ug/l	8260B	07/15/10	1
Surrogate Recovery						
Toluene-d8	95.5		% Rec.	8260B	07/15/10	1
Dibromofluoromethane	104.		% Rec.	8260B	07/15/10	1
4-Bromofluorobenzene	99.9		% Rec.	8260B	07/15/10	1
Polychlorinated Biphenyls						
PCB 1016	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1221	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1232	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1242	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1248	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1254	BDL	0.50	ug/l	8082	07/09/10	1
PCB 1260	BDL	0.50	ug/l	8082	07/09/10	1
PCBs Surrogates						
Decachlorobiphenyl	83.8		% Rec.	8082	07/09/10	1
Tetrachloro-m-xylene	84.5		% Rec.	8082	07/09/10	1
Base/Neutral Extractables						
Acenaphthene	BDL	1.0	ug/l	8270C	07/07/10	1
Acenaphthylene	BDL	1.0	ug/l	8270C	07/07/10	1
Anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzidine	BDL	10.	ug/l	8270C	07/07/10	1
Benzo(a)anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(b)fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(k)fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(g,h,i)perylene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzo(a)pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
Bis(2-chloroethoxy)methane	BDL	10.	ug/l	8270C	07/07/10	1
Bis(2-chloroethyl)ether	BDL	10.	ug/l	8270C	07/07/10	1
Bis(2-chloroisopropyl)ether	BDL	10.	ug/l	8270C	07/07/10	1
4-Bromophenyl-phenylether	BDL	10.	ug/l	8270C	07/07/10	1
2-Chloronaphthalene	BDL	1.0	ug/l	8270C	07/07/10	1
4-Chlorophenyl-phenylether	BDL	10.	ug/l	8270C	07/07/10	1
Chrysene	BDL	1.0	ug/l	8270C	07/07/10	1
Dibenz(a,h)anthracene	BDL	1.0	ug/l	8270C	07/07/10	1
3,3-Dichlorobenzidine	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dinitrotoluene	BDL	10.	ug/l	8270C	07/07/10	1
2,6-Dinitrotoluene	BDL	10.	ug/l	8270C	07/07/10	1

BDL - Below Detection Limit
 Det. Limit - Practical Quantitation Limit(PQL)



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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : BLANK
 Collected By : James Baxter
 Collection Date : 07/02/10 11:45

ESC Sample # : L467548-05
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Fluoranthene	BDL	1.0	ug/l	8270C	07/07/10	1
Fluorene	BDL	1.0	ug/l	8270C	07/07/10	1
Hexachlorobenzene	BDL	1.0	ug/l	8270C	07/07/10	1
Hexachloro-1,3-butadiene	BDL	10.	ug/l	8270C	07/07/10	1
Hexachlorocyclopentadiene	BDL	10.	ug/l	8270C	07/07/10	1
Hexachloroethane	BDL	10.	ug/l	8270C	07/07/10	1
Indeno(1,2,3-cd)pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
Isophorone	BDL	10.	ug/l	8270C	07/07/10	1
Naphthalene	BDL	1.0	ug/l	8270C	07/07/10	1
Nitrobenzene	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodimethylamine	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodiphenylamine	BDL	10.	ug/l	8270C	07/07/10	1
n-Nitrosodi-n-propylamine	BDL	10.	ug/l	8270C	07/07/10	1
Phenanthrene	BDL	1.0	ug/l	8270C	07/07/10	1
Benzylbutyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Bis(2-ethylhexyl)phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Di-n-butyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Diethyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Dimethyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Di-n-octyl phthalate	BDL	1.0	ug/l	8270C	07/07/10	1
Pyrene	BDL	1.0	ug/l	8270C	07/07/10	1
1,2,4-Trichlorobenzene	BDL	10.	ug/l	8270C	07/07/10	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	10.	ug/l	8270C	07/07/10	1
2-Chlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dichlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dimethylphenol	BDL	10.	ug/l	8270C	07/07/10	1
4,6-Dinitro-2-methylphenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4-Dinitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
2-Nitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
4-Nitrophenol	BDL	10.	ug/l	8270C	07/07/10	1
Pentachlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
Phenol	BDL	10.	ug/l	8270C	07/07/10	1
2,4,6-Trichlorophenol	BDL	10.	ug/l	8270C	07/07/10	1
Surrogate Recovery						
2-Fluorophenol	61.4		% Rec.	8270C	07/07/10	1
Phenol-d5	45.9		% Rec.	8270C	07/07/10	1
Nitrobenzene-d5	71.8		% Rec.	8270C	07/07/10	1
2-Fluorobiphenyl	84.1		% Rec.	8270C	07/07/10	1
2,4,6-Tribromophenol	83.4		% Rec.	8270C	07/07/10	1
p-Terphenyl-d14	104.		% Rec.	8270C	07/07/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

John Brimeyer
 Terracon - Bettendorf
 870 40th Avenue
 Bettendorf, IA 52722

July 16, 2010

Date Received : July 03, 2010
 Description : Skinner Block
 Sample ID : BLANK
 Collected By : James Baxter
 Collection Date : 07/02/10 13:30

ESC Sample # : L467548-06
 Site ID :
 Project # : 07067060

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Pesticides						
Aldrin	BDL	0.050	ug/l	8081A	07/08/10	1
Alpha BHC	BDL	0.050	ug/l	8081A	07/08/10	1
Beta BHC	BDL	0.050	ug/l	8081A	07/08/10	1
Delta BHC	BDL	0.050	ug/l	8081A	07/08/10	1
Gamma BHC	BDL	0.050	ug/l	8081A	07/08/10	1
Chlordane	BDL	0.50	ug/l	8081A	07/08/10	1
4,4-DDD	BDL	0.050	ug/l	8081A	07/08/10	1
4,4-DDE	BDL	0.050	ug/l	8081A	07/08/10	1
4,4-DDT	BDL	0.050	ug/l	8081A	07/08/10	1
Dieldrin	BDL	0.050	ug/l	8081A	07/08/10	1
Endosulfan I	BDL	0.050	ug/l	8081A	07/08/10	1
Endosulfan II	BDL	0.050	ug/l	8081A	07/08/10	1
Endosulfan sulfate	BDL	0.050	ug/l	8081A	07/08/10	1
Endrin	BDL	0.050	ug/l	8081A	07/08/10	1
Endrin aldehyde	BDL	0.050	ug/l	8081A	07/08/10	1
Heptachlor	BDL	0.050	ug/l	8081A	07/08/10	1
Heptachlor epoxide	BDL	0.050	ug/l	8081A	07/08/10	1
Methoxychlor	BDL	0.050	ug/l	8081A	07/08/10	1
Toxaphene	BDL	0.50	ug/l	8081A	07/08/10	1
Pesticides Surrogates						
Decachlorobiphenyl	84.2		% Rec.	8081A	07/08/10	1
Tetrachloro-m-xylene	84.6		% Rec.	8081A	07/08/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier	
L467548-01	WG487506	SAMP	Antimony	R1283528	J6	
	WG487506	SAMP	Arsenic	R1283528	J3J6	
	WG487506	SAMP	Thallium	R1283528	P1	
	WG487705	SAMP	Aluminum	R1281628	VJ3	
	WG487705	SAMP	Barium	R1281628	J3	
	WG487705	SAMP	Calcium	R1281628	V	
	WG487705	SAMP	Chromium	R1281628	J6J3	
	WG487705	SAMP	Iron	R1281628	V	
	WG487705	SAMP	Magnesium	R1281628	J6	
	WG487705	SAMP	Potassium	R1281628	VJ3	
	WG487705	SAMP	Silver	R1281628	J6J3	
	WG487705	SAMP	Sodium	R1281628	V	
	WG487705	SAMP	Vanadium	R1281628	J6J3	
	WG487705	SAMP	Zinc	R1281628	V	
	WG487653	SAMP	Mercury	R1282169	J3V	
	WG487212	SAMP	Anthracene	R1278595	J3	
	WG487212	SAMP	Benzo(a)anthracene	R1278595	J3	
	WG487212	SAMP	Bis(2-chloroisopropyl)ether	R1278595	J3	
	WG487212	SAMP	4-Bromophenyl-phenylether	R1278595	J3	
	WG487212	SAMP	Chrysene	R1278595	J3	
	WG487212	SAMP	Fluoranthene	R1278595	J3	
	WG487212	SAMP	Fluorene	R1278595	J3	
	WG487212	SAMP	Hexachlorobenzene	R1278595	J3	
	WG487212	SAMP	Nitrobenzene	R1278595	J3	
	WG487212	SAMP	n-Nitrosodiphenylamine	R1278595	J4J3	
	WG487212	SAMP	Phenanthrene	R1278595	J3	
	WG487212	SAMP	Di-n-butyl phthalate	R1278595	J3	
	WG487212	SAMP	Dimethyl phthalate	R1278595	J3	
	WG487212	SAMP	2,4-Dimethylphenol	R1278595	J3	
	WG487212	SAMP	2,4-Dinitrophenol	R1278595	J5	
	WG487212	SAMP	Pentachlorophenol	R1278595	J4J3	
	WG487212	SAMP	Phenol	R1278595	J6J3	
	L467548-02	WG487212	SAMP	Acenaphthene	R1278595	J3
		WG487212	SAMP	Acenaphthylene	R1278595	J3
		WG487212	SAMP	Anthracene	R1278595	J3
		WG487212	SAMP	Benzo(a)anthracene	R1278595	J3
		WG487212	SAMP	Benzo(a)pyrene	R1278595	J3
		WG487212	SAMP	4-Bromophenyl-phenylether	R1278595	J3
		WG487212	SAMP	2-Chloronaphthalene	R1278595	J3
		WG487212	SAMP	4-Chlorophenyl-phenylether	R1278595	J3
		WG487212	SAMP	Chrysene	R1278595	J3
		WG487212	SAMP	3,3-Dichlorobenzidine	R1278595	J3
		WG487212	SAMP	2,4-Dinitrotoluene	R1278595	J3
WG487212		SAMP	2,6-Dinitrotoluene	R1278595	J3	
WG487212		SAMP	Fluoranthene	R1278595	J3	
WG487212		SAMP	Fluorene	R1278595	J3	
WG487212		SAMP	Hexachlorobenzene	R1278595	J3	
WG487212		SAMP	Isophorone	R1278595	J3	
WG487212		SAMP	n-Nitrosodiphenylamine	R1278595	J3J4	
WG487212		SAMP	Phenanthrene	R1278595	J3	
WG487212		SAMP	Benzylbutyl phthalate	R1278595	J3	
WG487212		SAMP	Bis(2-ethylhexyl)phthalate	R1278595	J3	
WG487212		SAMP	Di-n-butyl phthalate	R1278595	J3	
WG487212		SAMP	Diethyl phthalate	R1278595	J3	
WG487212		SAMP	Dimethyl phthalate	R1278595	J3	
WG487212		SAMP	Di-n-octyl phthalate	R1278595	J3	
WG487212		SAMP	Pyrene	R1278595	J3	
WG487212		SAMP	1,2,4-Trichlorobenzene	R1278595	J3	
WG487212		SAMP	4-Chloro-3-methylphenol	R1278595	J3	
WG487212		SAMP	2,4-Dichlorophenol	R1278595	J3	
WG487212		SAMP	Pentachlorophenol	R1278595	J4	
L467548-03		WG487212	SAMP	Acenaphthene	R1278595	J3
		WG487212	SAMP	Acenaphthylene	R1278595	J3
		WG487212	SAMP	Anthracene	R1278595	J3
		WG487212	SAMP	Benzo(a)anthracene	R1278595	J3
	WG487212	SAMP	Benzo(a)pyrene	R1278595	J3	
	WG487212	SAMP	4-Bromophenyl-phenylether	R1278595	J3	
	WG487212	SAMP	2-Chloronaphthalene	R1278595	J3	
	WG487212	SAMP	4-Chlorophenyl-phenylether	R1278595	J3	

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier	
		WG487212	SAMP	Chrysene	R1278595	J3
		WG487212	SAMP	3,3-Dichlorobenzidine	R1278595	J3
		WG487212	SAMP	2,4-Dinitrotoluene	R1278595	J3
		WG487212	SAMP	2,6-Dinitrotoluene	R1278595	J3
		WG487212	SAMP	Fluoranthene	R1278595	J3
		WG487212	SAMP	Fluorene	R1278595	J3
		WG487212	SAMP	Hexachlorobenzene	R1278595	J3
		WG487212	SAMP	Isophorone	R1278595	J3
		WG487212	SAMP	n-Nitrosodiphenylamine	R1278595	J3J4
		WG487212	SAMP	Phenanthrene	R1278595	J3
		WG487212	SAMP	Benzylbutyl phthalate	R1278595	J3
		WG487212	SAMP	Bis(2-ethylhexyl)phthalate	R1278595	J3
		WG487212	SAMP	Di-n-butyl phthalate	R1278595	J3
		WG487212	SAMP	Diethyl phthalate	R1278595	J3
		WG487212	SAMP	Dimethyl phthalate	R1278595	J3
		WG487212	SAMP	Di-n-octyl phthalate	R1278595	J3
		WG487212	SAMP	Pyrene	R1278595	J3
		WG487212	SAMP	1,2,4-Trichlorobenzene	R1278595	J3
		WG487212	SAMP	4-Chloro-3-methylphenol	R1278595	J3
		WG487212	SAMP	2,4-Dichlorophenol	R1278595	J3
L467548-05		WG487212	SAMP	Pentachlorophenol	R1278595	J4
		WG487212	SAMP	Acenaphthene	R1278595	J3
		WG487212	SAMP	Acenaphthylene	R1278595	J3
		WG487212	SAMP	Anthracene	R1278595	J3
		WG487212	SAMP	Benzo(a)anthracene	R1278595	J3
		WG487212	SAMP	Benzo(a)pyrene	R1278595	J3
		WG487212	SAMP	4-Bromophenyl-phenylether	R1278595	J3
		WG487212	SAMP	2-Chloronaphthalene	R1278595	J3
		WG487212	SAMP	4-Chlorophenyl-phenylether	R1278595	J3
		WG487212	SAMP	Chrysene	R1278595	J3
		WG487212	SAMP	3,3-Dichlorobenzidine	R1278595	J3
		WG487212	SAMP	2,4-Dinitrotoluene	R1278595	J3
		WG487212	SAMP	2,6-Dinitrotoluene	R1278595	J3
		WG487212	SAMP	Fluoranthene	R1278595	J3
		WG487212	SAMP	Fluorene	R1278595	J3
		WG487212	SAMP	Hexachlorobenzene	R1278595	J3
		WG487212	SAMP	Isophorone	R1278595	J3
		WG487212	SAMP	n-Nitrosodiphenylamine	R1278595	J3J4
		WG487212	SAMP	Phenanthrene	R1278595	J3
		WG487212	SAMP	Benzylbutyl phthalate	R1278595	J3
		WG487212	SAMP	Bis(2-ethylhexyl)phthalate	R1278595	J3
		WG487212	SAMP	Di-n-butyl phthalate	R1278595	J3
		WG487212	SAMP	Diethyl phthalate	R1278595	J3
		WG487212	SAMP	Dimethyl phthalate	R1278595	J3
		WG487212	SAMP	Di-n-octyl phthalate	R1278595	J3
		WG487212	SAMP	Pyrene	R1278595	J3
		WG487212	SAMP	1,2,4-Trichlorobenzene	R1278595	J3
		WG487212	SAMP	4-Chloro-3-methylphenol	R1278595	J3
		WG487212	SAMP	2,4-Dichlorophenol	R1278595	J3
		WG487212	SAMP	Pentachlorophenol	R1278595	J4

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
V	(ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
07/16/10 at 13:17:04

TSR Signing Reports: 206
R5 - Desired TAT

Sample: L467548-01 Account: TERRABIA Received: 07/03/10 09:00 Due Date: 07/12/10 00:00 RPT Date: 07/16/10 11:19
MS/MSD SV8270, Metals, and V8260 only. No MS/MSD on SV8082.

Sample: L467548-02 Account: TERRABIA Received: 07/03/10 09:00 Due Date: 07/12/10 00:00 RPT Date: 07/16/10 11:19

Sample: L467548-03 Account: TERRABIA Received: 07/03/10 09:00 Due Date: 07/12/10 00:00 RPT Date: 07/16/10 11:19

Sample: L467548-04 Account: TERRABIA Received: 07/03/10 09:00 Due Date: 07/12/10 00:00 RPT Date: 07/16/10 11:19

Sample: L467548-05 Account: TERRABIA Received: 07/03/10 09:00 Due Date: 07/12/10 00:00 RPT Date: 07/16/10 11:19

Sample: L467548-06 Account: TERRABIA Received: 07/03/10 09:00 Due Date: 07/12/10 00:00 RPT Date: 07/16/10 11:19

ENVIRONMENTAL SCIENCE CORP.

SAMPLE NON-CONFORMANCE FORM

Sample No. : 4467548

J. Carr

Date: 07-03-10

Evaluated by: J. Fuller

Client: TERRABIA

Non-Conformance (check applicable items)

- | | | | |
|--------------------------|--|-------------------------------------|---|
| <input type="checkbox"/> | Chain of Custody is missing | <input checked="" type="checkbox"/> | Login Clarification Needed |
| <input type="checkbox"/> | Improper container type | <input type="checkbox"/> | Improper preservation |
| <input type="checkbox"/> | Chain of custody is incomplete | <input type="checkbox"/> | Container lid not intact |
| <input type="checkbox"/> | Parameter(s) past holding time | <input type="checkbox"/> | Improper temperature |
| <input type="checkbox"/> | Broken container(s) see below | <input type="checkbox"/> | Broken container: sufficient sample volume remains for analysis requested |
| <input type="checkbox"/> | Insufficient packing material around container | | |
| <input type="checkbox"/> | Insufficient packing material inside cooler | | |
| <input type="checkbox"/> | Improper handling by carrier (FedEx / UPS / Courier) | | |
| <input type="checkbox"/> | Sample was frozen | | |

Comments: Insufficient Sample for MS/MSD

Login Instructions:

TSR Initials: JK

Client informed by (call) email / fax / voice mail date: 7/6/10 time: 1130

Client contact: log in VOC's, SVOC's and metals for MS/MSD of MW-1.

Do NOT log in MS/MSD for PCB's of MW-1 or Pesticides of MW-3.