ILLINOIS SITE REMEDIATION PROGRAM

COMPREHENSIVE SITE INVESTIGATION REPORT

PROJECT SITE:

CITY OF BLUE ISLAND SOUTH COD & TOD AREAS – SITE 5 AND SITE 6

13701 – 13721 S. SACRAMENTO AVENUE
BLUE ISLAND, COOK COUNTY, ILLINOIS

USEPA GRANT# BF – 00E63601-0

PREPARED FOR:

CITY OF BLUE ISLAND
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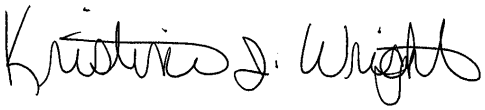
SEPTEMBER 2012, REVISED FEBRUARY 2013

This report has been prepared by V3 Companies (V3), on behalf of the Remediation Applicant, in conformance with the requirements of 35 IAC Sections 740.425 for the purpose of documenting completion of the Comprehensive Site Investigation Report.

Prepared by:



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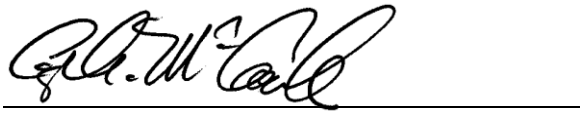

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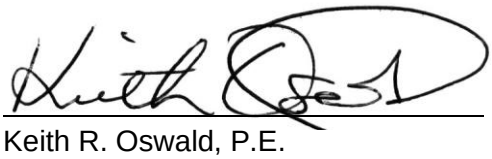

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EXECUTIVE SUMMARY

Introduction

V3 Companies has prepared this Comprehensive Site Investigation Report (CSIR) on behalf of the City of Blue Island, the Remediation Applicant (RA), for the Remediation Site referred to as City of Blue Island South COD & TOD Areas - Site 5 and Site 6, formerly the location of J&D Auto Parts (Site). The Site is located at 13701 – 13721 S. Sacramento Avenue, southeast of the intersection of W. 137th Street and Sacramento Avenue, Blue Island, Cook County, Illinois as depicted in **Figures 1.1 and 1.2**. The CSIR is intended to support Site Remediation Program (SRP) closure of the Site in accordance with 35 IAC Part 740.

The Site is planned to be enrolled in the SRP at the time of this submittal. The purpose of the enrollment is to secure "comprehensive" No Further Remediation (NFR) letters for the Site. The Site is currently vacant and the planned re-use of the Site is industrial-commercial and/or future road extension.

From April to July 2012, V3 compiled historical data and performed several investigations at the Site. This report addresses the site characterization performed in pursuit of a comprehensive NFR letter for the Site.

Site Characterization

Site Description and History: The Site consists of approximately 3.18 acres of recently vacated automotive junkyard land. It is located in the northwest quarter of Section 1, Township 36 North, Range 13 East of the third principal meridian, Cook County, Illinois **(Figure 1.2)**. Ground conditions of the Site primarily contain areas of automotive junk and scrap metal.

The Site is comprised of 4 parcels of land. A Phase I Environmental Site Assessment (ESA) of the Site was performed in 2010, that divided the overall Remediation Site (the Site) into two different "sub-sites", based upon current / historical land use, ownership, etc. These two sites, Site 5 and Site 6, comprise the overall Remediation Site, are referred to periodically within this report, and are described as follows:

- Site 5: This area is comprised of three parcels located beginning at the north boundary of the Site along Midlothian Creek, and extending to the south, abutting Site 6. Site 5 was most recently occupied by automotive repair and junk yard operations.
- Site 6: This area is comprised of one parcel located beginning at the south boundary of Site 5 and extending to the south, abutting the south-adjacent property. The most recent land use for Site 6 was as a junk yard.

The following briefly summarizes the site history developed from the Phase I ESA historical research:

- From 1929-1948, the site appears to be undeveloped and vegetated.
- From 1953 to 1963, a residence is constructed on Site 6 in 1963. The balance of the Site is undeveloped.
- The Site has been occupied by an automotive junk yard from as early as the 1970s. Significant staining to the soils, pooling of automotive liquid wastes and dumping of

automotive parts and debris was observed during the site walkover. As observed in 2012, the dismantling and automotive repair practices have contributed to the environmental impact to the sites.

Geology and Hydrogeology: Site borings provide geologic interpretation to approximately 20 feet below ground surface (bgs). A total of 64 soil borings and monitoring wells were installed as well as eight test pits excavated. The lowermost unit encountered during soil borings is a soft to hard dark gray silty clay with sand and gravel of the Wedron Formation. This material is present underlying varying lenses of clayey sands and silts.

At the surface of the Site, there is a layer of fill material that generally thickens from about 2 feet in the southwestern portion of the Site to a depth of about 12 feet at Midlothian Creek to the north. This fill contains re-worked gravel, sands, clay, asphalt, glass, wood, brick and construction debris (e.g., in the northeast portion of the Site).

Groundwater monitoring undertaken on-site is typically at the interface of the upper-most native soil (Wedron Formation clayey soils) and the site fills located approximately 10 bgs of the Site. Based upon field observations, it appears that the shallow saturated zone often begins with perched water within the site fills that overlie the native clayey soils. The on-site saturated zone flows towards Midlothian Creek.

Site-Specific Sampling Plan

Recognized Environmental Conditions: For the purposes of this CSIR, the following were identified as potential recognized environmental conditions (RECs) requiring further Site evaluation:

- *REC 1 – Historical Junk Yard Operations*
- *REC 2 – Site-Wide Fill and Debris*

Sampling Objectives: A Site-Specific Sampling Plan was developed to investigate the aforementioned RECs and obtain the data necessary to accomplish the following objectives:

- Evaluate environmental conditions at the identified Site RECs,
- Obtain comprehensive analytical data throughout the Site, and refine the list of constituents of concern (COCs),
- Enable a comparison of Site data to applicable TACO Tier 1 ROs,
- Evaluate potential pathway exclusions, including potential contaminant source and free product, and
- Enable the development of Tier 2 or 3 ROs, as applicable.

V3 conducted three investigations at the Site from April 2012 to July 2012. Refer to **Figure 3.1** for the boring locations for all the subsurface investigations.

Following the April 2012 investigation of the Site, the focus of the June-July 2012 investigations was to:

- Obtain additional soil information along the petroleum pipeline and shallow soils for petroleum hydrocarbons,
- Determine the extent of BTEX impacts and petroleum odors identified throughout the Site during the April 2012 Site Investigation.

- Obtain soils information and collect a soil sample on the north side of Midlothian Creek,
- Excavate test pits to find limits of observed construction debris and poorly graded medium (cemented) blue sand with sulfur odors identified in the northeast portion of the site.
- Re-install MW-01, as it became blocked on its initial installation in April 2012, and convert it from a ¾" to a two inch well
- Install one additional two-inch permanent monitoring well and one one-inch temporary groundwater monitoring well to obtain more groundwater information at the Site,
- Perform micro-purge sampling on groundwater wells,
- Perform in-situ hydraulic conductivity test; and
- Survey groundwater elevations.

Documentation of Field Activities

The investigative activities consisted of 71 soil samples collected from 64 soil boring and monitoring well locations drilled on two separate occasions using Geoprobe® and hand auger methods, as well as eight test pits excavated using a backhoe. The investigation also included groundwater samples collected from six permanent and one temporary monitoring wells following ASTM methods. Details related to these sampling efforts are provided in **Section 4.0**, and a summary of samples and sampling analyses is provided on **Table 1.1**. The locations of soil borings, monitoring wells, and test pits are shown on **Figure 3.1**.

Endangerment Assessment

The Site investigation targeted the investigation of the identified RECs:

- **REC 1: Historical Junk Yard Operations**
- **REC 2: Site-Wide Fill and Debris**

Following site investigation activities, a third REC was added.

- **REC 3 – Apparent Petroleum Pipeline Release**: This REC includes identified soil and groundwater petroleum impacts at a depth at or below the buried petroleum pipeline that transects Site 5.

Based upon the Site investigation, field observations and analytical results, the Site COCs and distribution/nature of contamination are described as follows (**Section 5.0**):

- Site COCs
  The analytical data obtained from respective RECs indicates the COCs within Site soils are:
  - PAHs: benzo(a)pyrene and dibenzo(a,h)anthracene
  - VOCs: benzene and xylene
  - Metals: arsenic and mercury

Site Groundwater COCs are:

- PAHs: benzo(a)anthracene and benzo(b)fluoranthene
- VOCs: benzene
- Metals: aluminum, iron and lead
- PCBs

- Physical Characteristics: The Site has been filled, and was originally a predominantly low-lying area gently rising in directions away from the current Midlothian Creek. Site fills consist of varying soils, including sands, gravels and clays intermixed with some brick asphalt and other debris. Two areas in the eastern portion of the Site fill are notable:
  - Blue (Cemented) Sand: A bluish poorly graded, cemented sandy material is located as indicated on **Figure 3.1**. The material generally is observed with a sulfurous odor. COCs were not observed in specific association with this material.
  - Construction / Debris Fill: The northeast portion of the Site contains an area of debris fill. The debris is predominantly lumber, with some concrete, wire, auto parts and such, intermixed with some soil. The surface of this area generally contains several feet of soil cover. Evidence of environmental impact or deleterious sources of potential environmental impacts were not observed.

- **VOCs** (Benzene and Xylene): Identified in soil at nine locations within the north half of the Site from three areas. The areas of VOC soil impacts are shallow and likely the result of historic, localized surface releases during the junk yard operations. An area in the northwest corner is adjacent to a petroleum pipeline that crosses the Site.

- **PAHs** (benzo(a)anthracene, benzo(a)pyrene, benzo(b)anthracene and dibenzo(a,h)anthracene): Identified at three locations in soil and one location in groundwater. The presence of shallow PAHs appears to be the result of shallow localized historic releases.

- **Metals** (arsenic, aluminum, iron, lead and mercury): Arsenic and mercury were identified site-wide in soils, with aluminum, iron and lead identified above Tier 1 ROs in groundwater. The arsenic concentrations encountered appear within normal background ranges for naturally occurring arsenic and do not appear indicative of site contamination. A specific source that would suggest elemental mercury is present at the Site has not been identified, and as a result the observed concentration may not be indicative of a construction worker risk. It is not apparent that the encountered aluminum, iron, lead groundwater concentrations represent a notable groundwater concern, as they may be the result of relatively high suspended solids present within collected groundwater samples.

- PCBs: PCBs were identified in one groundwater sample at concentrations in excess of the Class II Tier 1 RO from temporary well, MW-07. However, it is not likely that the encountered concentration represents actual dissolved-phase PCBs in groundwater. The sample collected at this location had a high suspended solids load; low-flow sampling was not possible from this temporary well. PCBs were not detected in soils, except two low concentrations detected well below the Tier 1 RO within two samples away from MW-07.

Pesticide concentrations were not detected in soil or groundwater samples above Tier 1 ROs.

Tier 1 Evaluation

Section 6.0 of this report establishes the baseline conditions at the Site determined through the Site Investigation, and compares analytical sampling results to Tier 1 TACO ROs. The TACO evaluation is briefly summarized below:

Evaluation of Site data indicates that conditions achieve the TACO Subpart C criteria for demonstrating that source material is not present. As a result, pathway exclusion is allowable per *IAC Section 742.300 (Subpart C: Exposure Route Evaluation)*.

Tier 1 Evaluations
Investigation analytical results were compared to Tier 1 ROs for industrial-commercial land use and the construction worker scenario.

Evaluation of the site data indicates the Tier 1 soil ingestion ROs for the industrial-commercial scenario is exceeded for the following COCs:

- PAHs: benzo(a)pyrene and dibenzo(a,h)anthracene
- Metals: arsenic

Evaluation of the site data indicates the Tier 1 soil inhalation ROs for the industrial-commercial scenario is exceeded for the following COCs:

- VOCs: benzene

Evaluation of the site data indicates the Tier 1 inhalation RO for the construction worker scenario is exceeded for the following COCs:

- mercury
- benzene and xylene

Evaluation of the site data indicates the Tier 1 soil component of the Class II groundwater ingestion route RO are exceeded for the following COCs:

- VOCs / BTEX: benzene

Evaluation of the site data indicates the Tier 1 Class II groundwater pathway RO is exceeded for the following COCs:

- VOCs / BTEX: benzene
- PAHs: benzo(a)anthracene and benzo(b)fluoranthene
- Metals: aluminum, iron and lead
- PCBs

Preliminary Remediation Objectives
Active remedial measures (e.g., dig and haul) and/or engineered barriers, and site-specific soil and groundwater ROs are proposed to address and exclude exposure routes at the Site.

Groundwater Pathway Exclusion: Transecting the Site is Midlothian Creek, the potential receiving water for COCs at the Site and a potential exposure pathway for human and aquatic receptors. Following a Tier 2 remediation objectives evaluation, a Tier 3 evaluation of potential organics and inorganics in groundwater may be proposed. The Tier 3 proposal (as part of a future Remediation Objectives Report and Remedial Action Plan) would provide the basis for demonstrating "no adverse impact" to Midlothian Creek as a result of organic and inorganic COCs present within groundwater at the Site. Demonstrating "no adverse impact" to the Midlothian Creek is a prerequisite to excluding the groundwater exposure pathway at the Site.

Remediation Objectives: Considering the pathway exclusion planned for addressing site concerns, the following ROs are proposed:

- Tier 1 ROs: Tier 1 industrial-commercial and construction worker ROs for the soil inhalation and ingestion exposure pathways and Class II groundwater ingestion ROs. A construction worker notification is intended to exclude the construction worker inhalation exposure route.

- Tier 2 ROs:
  - Tier 2 soil inhalation ROs may be developed to determine whether benzene impacts at the Site require soil removal or barriers as a solution. It's anticipated, that calculated Tier 2 ROs will allow the RA the option of not removing the soils or maintaining engineered barriers in these locations.
  - Tier 2 soil component of the Class II groundwater ingestion and Tier 2 Class II direct ingestion groundwater ROs on-site. A groundwater use restriction at the Site will move the compliance point to the Site boundaries. Tier 2 simulations will be provided in a subsequent Remediation Objectives Report and Remedial Action Plan to demonstrate if Tier 2 site-specific ROs, surface water quality criteria and residual concentrations are protective (e.g., Tier 1, Class II direct ingestion groundwater ROs are achieved at the Site boundaries.).

- Tier 3 Evaluation: A Tier 3 incomplete exposure pathway demonstration related to the COCs in soils (PAHs, metals, BTEX) with residual concentrations at select locations exceeding the Tier 1 and Tier 2, Class II soil to groundwater exposure route may be proposed, as needed. This demonstration may include surface water samples or the installation of wells along the bank of the Creek.

Based on the approval of Tier 1, 2 and 3 evaluations, as needed, and the successful implementation of remedial measures and institutional controls, the Site can qualify for comprehensive NFR letter determination. Anticipated cleanup and/or exposure pathway resolution alternatives for COCs exceeding Tier 1 ROs are provided in the right-hand column of **Table 1.1**.

Data Gaps and Next Steps

Based on the investigation results and evaluation, V3 has identified a number of data gaps that need to be addressed to complete the TACO evaluation of the identified Site RECs. See Section 7.2 for the data gaps.

The RA anticipates that Tier 2 and/or Tier 3 evaluations will be performed in the future and submitted under a Remediation Objectives Report and Remedial Action Plan once the RA has procured the funding necessary to continue. Additional public funding may be sought to implement cleanup actions for site re-use. In the interim, the RA is requesting approval / conditional approval of the CSIR. Approval/ conditional approval of the CSIR will assist the RA's eligibility to pursue funding for remedial planning and remedial actions at the Site.

Anticipated cleanup and/or exposure pathway resolution alternatives for COCs exceeding Tier 1 ROs are provided in the right-hand column of **Table 1.1**.

The pipeline company has been notified of the petroleum release to soils identified in the northwest corner of the Site. The City may approach the pipeline company as the Responsible Party for REC 3. As such, it is possible that this concern will be addressed separately or in conjunction with the City's SRP activities for the balance of the Site.

1.0 INTRODUCTION

V3 Companies has prepared this Comprehensive Site Investigation Report (CSIR) on behalf of City of Blue Island, the Remediation Applicant (RA), for the Remediation Site referred to as City of Blue Island South COD & TOD Areas - Site 5 and Site 6, formerly the location of J&D Auto Parts (Site). The Site is located at 13701 - 13721 S. Sacramento Avenue, southeast of the intersection of W. 137th Street and Sacramento Avenue, Blue Island, Cook County, Illinois as depicted in **Figures 1.1 and 1.2**. The reporting provided herein, has been developed in conformance with the requirements of 35 IAC Section 740.425 to provide a complete presentation of site characterization data.

The CSIR is intended to support Site Remediation Program (SRP) closure of the Site in accordance with 35 IAC Part 740. This report provides the basis for the RA's pursuit of a comprehensive NFR letter for the Site.

1.1 BACKGROUND

The Site is planned to be enrolled in the SRP at the time of this submittal. The purpose of the enrollment is to secure "comprehensive" No Further Remediation (NFR) letter(s) for the Site. The Site is currently vacant and the planned re-use of the Site is industrial-commercial and/or future road extension.

During the summer of 2010, V3 performed a Phase I Environmental Site Assessment of the Site. From April to July 2012, V3 and the IEPA Office of Site Evaluation (OSE) performed site investigations to collect the data needed to obtain a comprehensive characterization of environmental conditions at the Site. This report addresses the site characterization performed to support the pursuit of comprehensive NFR letter(s) for the Site.

1.2 REPORT ORGANIZATION

The following sections of the report are organized in the following manner:

Section 2 –Site Characterization: Provides a description of the Site, the sources reviewed in developing the " Comprehensive" Site Investigation Report (CSIR), a summary of the Site's history, physical setting, geology and hydrogeology, current and future land use, and previous site investigations. Much of this section describes the information evaluated and used as a basis for developing the Site Investigation described in **Sections 3** and **4**.

Section 3 – Site-Specific Sampling Plan: Summarizes the recognized environmental conditions (RECs) identified at the Site and their basis, the sampling objectives, methods and methodologies (field and laboratory) of the CSI.

Section 4 – Documentation of Field Activities: Documents the performance of the field activities related to the CSI, and summarizes this information for each respective REC.

Section 5 - Endangerment Assessment: Provides an assessment of field observations and laboratory results, including the significant physical features of the Site and the general distribution, nature, degree and extent of site contamination for each respective REC and COCs. The assessment is also used (as necessary) to more specifically define (or revise) Site RECs.

Section 6 – Tier 1 Evaluation: This section presents any potential receptors and exposure route pathways and exclusions and provides a brief "pre-remediation" TACO evaluation, including a discussion of applicable exposure routes and related evaluations. The Tier 1 Remediation Objectives (ROs) selected for closure of the Site are also discussed. The section briefly discusses those areas requiring remediation, as well as the institutional controls required to achieve specified site ROs.

Section 7 – Conclusions: Summarizes the findings of the Site Investigation along with the RA's goals and plans for resolving identified Site RECs, as they relate to the planned redevelopment of the property.

Section 8 – Licensed Professional Engineer (LPE) Affirmation: Affirmation by the LPE directing the investigation and remediation of the Site.

2.0 SITE CHARACTERIZATION

2.1 SITE LOCATION AND DESCRIPTION

The Site's physical setting is represented on the 1997 Blue Island, Illinois 7.5' United States Geological Survey (USGS) Quadrangle (**Figure 1.1**) and consists of approximately 3.18 acres of recently vacated automotive junkyard land. It is located in the northwest quarter of Section 1, Township 36 North, Range 13 East of the third principal meridian, Cook County, Illinois. The current layout of the Site and the surrounding area is presented in **Figure 1.2**.

The Site is comprised of 4 parcels of land. A Phase I Environmental Site Assessment (ESA) of the Site was performed in 2010, that divided the overall Remediation Site (the Site) into two different "sub-sites", based upon current / historical land use, ownership, etc. These two sites, Site 5 and Site 6, comprise the overall Remediation Site, are referred to periodically within this report, and are described as follows:

- Site 5: This area is comprised of three parcels located beginning at the north boundary of the Site along Midlothian Creek, and extending to the south, abutting Site 6. Site 5 was most recently occupied by automotive repair and junk yard operations.
- Site 6: This area is comprised of one parcel located beginning at the south boundary of Site 5 and extending to the south, abutting the south-adjacent property. The most recent land use for Site 6 was as a junk yard.

The Site primarily consists of an unpaved automotive junk yard with heavily vegetated areas along the north and southwest portions of the property. J & D Auto Parts (J & D) utilized 13715 S. Sacramento Avenue as a business address, and is/was located on Sites 5 and 6. Operations consist primarily of off-site towing services. As a secondary business, junked cars are rebuilt and subsequently sold. Rebuilt operations include automotive repair as well as body work.

Midlothian Creek runs along the northern edge of Site 5 in an east-west direction. A loosely-constructed, three-sided wood garage with an earthen base, along with a truck trailer, is located on the west side of Site 5, over exposed soils. A mobile trailer is located near the garage.

A dilapidated, unoccupied residential home and a detached garage/shed were observed on the central portion of Site 6. According to local assessing records, the residence was constructed in 1956 and consists of a 1,709-square-foot frame and masonry structure situated over a basement crawl.

The Site is located in a mixed-use area consisting of commercial and industrial developments. Four Star Auto Parts & Glass (automotive junk yard) and ACME Refining (a scrap metal recycling facility) are located immediately north of Site 5, across Midlothian Creek. Railroad tracks are located east of the Site, followed by Hysan Corporation, a closed heavy industrial facility. Sacramento Avenue borders the Site on the west followed by junk cars, abandoned residences and vacant land, all located in the adjacent City of Robbins limits. Vacant land also located in Robbins borders Site 6 on the south.

2.2 SOURCES REVIEWED

A number of data sources were reviewed to initially characterize conditions at the Site. These sources include a Phase I environmental site investigation directly related to the Site, and physical setting publications. Information regarding historical operations and initial data regarding site conditions was obtained from previous investigations.

Previous Investigations:

- Phase I Environmental Site Assessment, J & D Auto Parts, South COD - Area 2 – Sites 5 & 6, S. Sacramento Avenue, Blue Island, IL, July 2010, V3 Companies.

Physical Setting Sources:

- Berg R.C., Kempton J.P., and Keros C. 1984. Potential for Contamination of Shallow Aquifers in Illinois. Illinois Department of Energy and Natural Resources, State Geological Survey Division: Champaign, Ill. Circular 532.
- Berg R.C., and Kempton J.P. 1988. Stack-Unit Mapping of Geologic Materials in Illinois to a depth of 15 Meter. Illinois Department of Natural Resources, Illinois State Geological Survey: Champaign, Ill.
- Csallany, S and Walton, WC. 1965. Yields of Shallow Dolomite Wells in Northern Illinois. Department of Natural Resources, Illinois State Geological Survey: Champaign, Ill. Report of Investigation 46.
- Leetaru H, Sargent M, and Kolata D. 2004. Geologic Atlas of Cook County for Planning Purposes. Department of Natural Resources, Illinois State Geological Survey: Champaign, Ill.
- Willman HB and Frye JC, 1970. Pleistocene Stratigraphy of Illinois. Department of Natural Resources, Illinois State Geological Survey: Champaign, Ill. Bulletin 94.
- Piskin, K. and Bergstrom R.E. 1975. Glacial Drift in Illinois: Thickness and Character. Illinois Department of Registration and Education, State Geological Survey Division: Urbana, Ill. Circular 490.
- USGS 7.5 Minute Topographic Maps, Blue Island Quadrangle, 1970, photo-revised 1993.
- Burch, Stephen L., 2002. A comparison of Potentiometric Surfaces for the Cambrian-Ordovician Aquifers of Northeastern Illinois, 1995 and 2000. Illinois State Water Survey, Division of the Illinois Department of Natural Resources, Data Case Study 2002-02.

2.3 SITE HISTORY

V3 performed a Phase I Environmental Site Assessment (Phase I ESA) of the Site in July 2010 (**Appendix A**). See **Section 2.7.1** for a summary of findings and more in-depth historical commentary. The following briefly summarizes the site history developed from the Phase I ESA historical research (historical aerial photographs, fire insurance maps, property tax files, and topographic maps, as well as interviews):

Year(s)	Property Use	Reference Source
1929-1948	The Sites appear to be undeveloped and vegetated. What appears to be a drainage-way running in a general northeast-southwest direction is visible on Sites 5 and 6.	Topo Maps and Historical Aerials
1953 to 1967	A residence is constructed on Site 6 in 1961 and some surficial disturbance is present on the western half of the site. The balance of Site 6 and all of Site 5 are undeveloped.	Topo Maps and Historical Aerials
1970's to 2012	Automotive junkyard activity is first apparent in aerial photographs as early as 1970, primarily on Site 6 since Site 5 is covered by trees / vegetation. More detailed information could not be obtained due to the poor resonance of the aerial photographs. Local building and fire department records also document junkyard activity in the 1980s.	Topo Maps, Local records and Historical Aerials

Based on anecdotal evidence, the land along Midlothian Creek (the northern edge of Site 5) was historically low lying wetland, and that much of the Site was topographically at a similar elevation to today's creek, rising slowly toward the south and southwest. However, Site 5 is presently level and about 10-15 feet above the current elevation of the creek, indicating that the area was built up (filled) in the past. The specific era when the Site was filled is not clear from available historic sources, but it may have been prior to 1929 (the 1929 USGS topographic map indicates a site elevation of 590 – 595 feet above sea level, which is the same as shown on modern maps). V3's field observations indicate the presence of some pockets of construction and other debris located in the northeastern portion of the Site along Midlothian Creek. It seems plausible that this area of the Site may have filled at a later date.

Additional information was obtained related to the timing of Site filling and junk yard operations through an interview with Mr. Bill Cooper, Supervisor with Valero Terminaling and Distribution (formerly Clark Oil). Mr. Cooper stated that the petroleum pipeline (shown on **Figures 1.3 and 3.1**) was installed in 1958, and that the land was level and vacant at the time (i.e., no junk yard operations had begun). Further, he stated that the pipeline lies about 8 feet deep at the west side of Site 5, and is much deeper at the east side of the Site owing to the fact that it lies below the ditch running along the east side of Site 5. Mr. Cooper said that over the years the pipeline has been used to distribute different types of refined petroleum products, most recently diesel fuel.

Based upon the above, the junk yard operations began after the original filling of the Site (e.g., operations occurred over top of the original site fill). The Site has been occupied by an automotive junk yard from as early as the 1970s. Staining of soils, pooling of automotive fluids and dumping of automotive parts and debris was observed during the Phase I ESA site walkover in 2010. As observed in 2012, the dismantling and automotive repair practices have been a contributor to the environmental impact of Site 5 and Site 6.

Please refer to the V3 Phase I ESA (**Appendix A**) for more details on the historical research.

2.4 TOPOGRAPHY

The Site is currently an unpaved former automotive junk yard. The ground surface is relatively flat across Sites 5 and 6, with a gentle slope to the north-northeast towards Midlothian Creek. The northern edge of Site 5 slopes steeply down to Midlothian Creek, which lies about 10-15 feet below the surface of Site 5. The northern edge of Site 5 is located in the floodway of Midlothian Creek. The Site's physical setting is depicted in **Figure 1.1**.

2.5 GEOLOGY AND HYDROGEOLOGY

2.5.1 REGIONAL GEOLOGY

Surficial geology of the region was formed by Pleistocene and Holocene aged glacial processes. Many of the uplands are basal and moraine glacial tills of the Wedron formation, which consist of clay and silt matrix diamictons with varying components of silts and sands. The lower lying areas and river valleys were subject to convey the water from advancing and retreating glaciers, which scoured through clay tills and deposited thick units of glaciofluvial materials (sand and gravel). ISGS Circular 490 (Piskin et al, 1975) states that unconsolidated unit varies from 100-200 feet bgs in the area. The surficial geology in northeastern Illinois is separated from regional bedrock by an unconformity due to glacial events.

The entire sequence of diamictons is attributed to several glacial advances and retreats during the Quaternary Period. The collective unit of glacial drift in this region is referred to as the Wedron Formation, which consists of several till members (Tiskilwa, Malden, Yorkville and Wadsworth). Berg and Kempton (1988), and local boring logs, indicate silty and clayey matrices support these units. Separating the individual till members within the Wedron Formation, it is not uncommon to discover thin sand and gravel deposits that were deposited during periods of glacier advance/retreat.

Based on a review of the geological map entitled Potential for Contamination of Shallow Aquifers in Illinois: *Ill. GS Circular 532*, 30 p., Berg, R.C., Kempton, J.P., and Cartwright, K. 1984, the predominant soil type in Area 2 is comprised of Type C1 soil, which is "Permeable bedrock within 20 to 50 feet of surface, overlain by till or other fine-grained material".

Regional bedrock geology consists of (from youngest to oldest) the Racine Formation, underlain by the Ordovician aged Maquoketa shale. The Racine Formation is a pure to silty dolomite approximately 300-400 feet thick. The Maquoketa shale acts as an aquitard for the underlying Galena/Platteville aquifer; however the shale has been eroded away in many of the larger river valleys of the area. Beneath the shale lies the Ordovician and Cambrian aged units termed the Galena Platteville, Glenwood-St. Peter, Prairie du Chien, Ironton, Eau Claire and Mt. Simon. The lithology of these units is variable but generally consists of fractured dolomitic shales, dolomites and sandstones. Beneath the Ordovician and Cambrian aged bedrock lies Precambrian crystalline igneous rock, likely a granite or granodiorite.

The regional bedrock dips to the southeast and the bedrock's surface has localized unconformities from tectonic, glacial and hydraulic processes. These unconformities are filled in glacial drift, weathered rock and colluvium. According to Report of Investigation 46 (Csallany et all, 1965) a bedrock valley is located below the Site and slopes to the east.

2.5.2 REGIONAL HYDROGEOLOGY

Aquifers within this region can be broken down into three categories, which are listed below (Suter et al. 1959) (Burch et al, 2002).

(i) Sand and gravel aquifers within glacial drift
(ii) Shallow dolomite formations, mainly of Silurian age, and
(iii) Deep sandstone and dolomite formations of Cambrian-Ordovician age,
(iv) Deep sandstone aquifer (Mt. Simon)

The main aquifers in the region are glacial drift aquifers and bedrock aquifers. The following bedrock aquifers exist in the region: Galena-Platteville, Saint Peter Sandstone of Ordovician Age, and Ironton-Galesville and Elmhurst-Mount Simon of Cambrian age.

The glacial drift aquifers in this region are limited to small glacial outwash/advance sand and gravel seams in between till units. These aquifers are generally low yielding, thin and non-continuous. The significant drift aquifer lies within the thick deposits of glacial outwash of the Henry formation. This aquifer exists in many of the major river valleys of the region and is generally encountered less than 50 feet from the ground surface.

The uppermost bedrock aquifer system in the region is located in the Racine Dolomite, however due to groundwater ordinances and the use of Lake Michigan water, the aquifer is rarely used to public water supply purposes. The porosity and permeability of the Racine Formation is the result of fractures and dissolution cavities. Yields in fracture zones can be greater than 1000 gallons per minute.

The main aquifer below the Racine formation is the Galena-Platteville aquifer. The Galena-Platteville aquifer is overlain by the Maquoketa shale which acts as an aquitard. Beneath the Galena-Platteville aquifer, several other bedrock aquifers exist which include the St. Peter Sandstone Aquifer, Ironton-Galesville Aquifer and the Mt. Simon Sandstone Aquifer.

2.5.3 SITE GEOLOGY

The bedrock geology below the Site is the Silurian Racine Formation. The Racine Formation is described as a dolomite, pure, gray, thin-bedded to massive; local reef structures; local areas of brownish gray, argillaceous dolomite. Based on boring logs (ISGS/ISWS Boring logs) from adjacent sites, the Racine Formation is encountered approximately 30 bgs and is 230 feet thick.

Boring logs also indicate that the units underlying the Racine Formation are typical of Northeastern Illinois Silurian sequence and include: Joliet Formation, Kankakee Formation and Edgewood formation to a depth of approximately 400 feet bgs. The Silurian rocks are underlain by the Maquoketa Shale Group and other Ordovician rocks to a depth of 900 feet bgs.

Site borings were completed by V3, OSE, and driller Johnson Probing in April to July 2012 and provide geologic interpretation to approximately 20 feet below ground surface (bgs). A total of 64 soil borings and monitoring wells were installed and eight test pits were excavated. The compilation of these boring, well construction, and test pit logs provides a descriptive understanding of the upper-most 20 feet of the Site's geology (see **Appendix C**).

The lowermost unit encountered during soil borings is a soft to hard dark gray silty clay with sand and gravel of the Wedron Formation. This material is present underlying varying lenses of clayey sands and silts.

At the surface of the Site, there is a layer of fill material that generally thickens from about 2 feet in the southwestern portion of the Site to a depth of about 12 feet at Midlothian Creek to the north. This fill contains re-worked gravel, sands, clay, asphalt, glass, wood, brick and construction debris (e.g., in the northeast portion of the Site).

2.5.4 SITE HYDROGEOLOGY

The shallow Silurian dolomite aquifer is present approximately 30 feet below ground surface. This aquifer is a limited source of water supply for private and non-community services within the area. Above that depth are smaller seams of sand and gravel that contain perched water. It is apparent that these shallow zones (within first 10 feet below ground surface) are not suitable for water supply development and are not representative of a local groundwater system at this depth. The following paragraphs summarize observed groundwater conditions within and adjacent to the Site.

Based on regional topography and physical setting, groundwater flow within near surface sediments is assumed to flow to the northeast, influenced by the presence of Midlothian Creek (located along the northern Site 5 boundary) and the Calumet Sag Channel (located approximately one-quarter mile north of the Site). Such local water bodies likely act as discharge points for shallow groundwater in the area.

Groundwater monitoring undertaken on-site is typically at the interface of the upper-most native soil (Wedron Formation clayey soils) and the site fills located approximately 10 bgs of the Site. Based upon field observations, it appears that the shallow saturated zone often begins with perched water within the site fills that overlie the native clayey soils. The on-site saturated zone flows towards Midlothian Creek.

V3 surveyed six permanent monitoring wells (**MW-01** to **MW-06**), one temporary well (**MW-07**) and the surface of the ditch and Midlothian Creek during the June investigation. Based on measured water levels, the groundwater is flowing to the north / northeast towards Midlothian Creek (**Figure 2.2** and **Table 3.0**). Based on the available water level data, it is reasonable to assume that the saturated zone typically extends into the fill material. Groundwater and surface water elevations suggest there there is a direct connection between the saturated site fills and native soils surface water in the Creek.

Well (Aquifer Properties) Testing: In July 2012, V3 performed a recovery / rising-head test at groundwater monitoring well MW-01 to obtain a representative hydraulic conductivity (K) estimate for the shallow saturated zone at the Site. The clay soils allow for long duration rising head tests as the non-porous soil medium promotes slow water level recovery. The logged water level recovery period from the well test was several hours.

Prior to the recovery / rising-head test, water levels and total well depth were measured to determine casing volume and zone of saturation. The well had been fully developed prior to testing. A purge pump was inserted into the well and MW-01 was pumped dry after 1 minute (in essence an instantaneous withdrawal related to the hydraulic conductivity of the subsurface

materials). After the pumping was terminated, the recovery of the well was recorded with a dedicated Level Troll 500 to record the groundwater elevation.

The post-processed data was imported into Aqtesolv 4.0 Pro for the Bouwer-Rice unconfined solution analysis. Early time data (e.g., data collected within the first minute of recovery) was judged most reliable data for curve fits. The data was curve fit against the data in this time span using the Bouwer-Rice solution, and the K values were calculated. The hydraulic conductivity for MW-01 is $K = 6.9 \times 10^{-5}$ cm/sec. The well test data and curve fit solution plot are presented in **Appendix E**.

Groundwater Classification:
The saturated zone directly beneath the Site is classified as a Class II: General Resource Groundwater, in accordance with Title 35: Environmental Protection, Subtitle F: Public Water Supplies, Chapter I: Pollution Control Board Part 620b: Groundwater Classification. The criteria and justifications for the Class II determination are provided below.

(i) The Site is not located within any minimum setback zones as identified by the Illinois State Geological Survey (ISGS), Illinois Department of Public Health and the City of Blue Island Water and Sewer Department. See **Section 2.5.5** and **Figure 2.1** for reference to closest setback zones.

(ii) Site investigations indicate no evidence of unconsolidated sand and gravel with less than 12% fine-grained material exists in units of five feet or more in thickness.

(iii) Sandstone has not been encountered in any of the borings advanced at the Site.

(iv) The site-specific hydraulic conductivity is 6.9×10^{-5}, which is lower than the Class I groundwater minimum of 1×10^{-4} cm/sec.

2.5.5 WATER WELL SURVEY

V3 contacted various local and state entities for water well records within a 2,500-foot radius of the Site. Well searches were conducted within Township 36 North, Range 13 East (Sections 1 & 2) and Township 37 North, Range 13 East (Sections 35 & 36). The following sources were contacted and provided information to complete this well survey:

- Illinois State Water Survey (non-municipal wells), and the Illinois Water Inventory Program (IWIP Database – includes municipal and commercial wells) – contacted, no response received at this time
- Illinois Environmental Protection Agency Records of Community Supply Wells (CWS)
- Illinois Department of Public Health Records for Non-Community Supply Wells (Non-CWS)
- Illinois Environmental Protection Agency Division of Public Water Supplies SWAP Database
- Illinois State Geological Survey – Water Well Database
- City of Blue Island – Water and Sewer Department
- City of Robbins – Public Works Department - contacted, no response received at this time

Test holes and environmental monitoring wells are not included in this survey and assessment

Figure 2.1 depicts the location of the identified wells within the 2,500-foot radius based on the reviewed data. **Appendix B** provides details related to these wells including owners, status, depths, and all water well survey correspondence information.

Well Survey Summary:
Five map ID locations were identified within the 2,500-foot radius of the site. In some cases a map ID can represent more than one well in that location. The five map ID locations represent seven private, non-potable, industrial/commercial/public wells identified within the 2,500-foot radius of the Site. These wells range in depths from 155 to 1,618 feet and are screened in white sandstone, limestone, and bedrock. ISGS drift thickness maps indicate between < 25 feet and 25-50 feet of unconsolidated material in the area. Of these wells none are located on the Site. The closest well to the site is Map ID 1, located approximately 819 feet southwest of the remediation site boundary.

No public or non-community wells were identified within the 2,500-foot radius of the Site.

An ordinance was passed by the City of Blue Island in 2000 establishing the definition of potable water and regulating the potable water supply system. The ordinance prohibits the use of groundwater as a potable water supply. The ordinance was approved for use as an institutional control by the IEPA and is provided in **Appendix B**.

Based on the survey results, the Site is not located within the setback of any potable water supply or private well. Please refer to **Figure 2.1** and **Appendix B** for further detail and all water well survey correspondence.

2.6 CURRENT AND FUTURE LAND USE

The Site is currently unoccupied and recently vacated automotive junkyard. The City is planning on keeping the property as industrial-commercial, along with a possible future roadway extension. No proposed land plan is available.

2.7 PREVIOUS SITE INVESTIGATIONS

The documentation from prior historic site investigations was reviewed for use in characterizing identified recognized environmental conditions (RECs), and was performed under the direction of V3 staff or the Licensed Professional Engineer (LPE).

Copies of all available documentation related to the investigations summarized below are located in **Appendix A**.

2.7.1 PHASE I ENVIRONMENTAL SITE ASSESSMENT, JULY 2010

V3 prepared a Phase I Environmental Site Assessment (ESA) on the Site in July 2010 for the City of Blue Island. The report meets the American Society of Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Standard E1527-05)* and the U.S. EPA November 1, 2005 *Standards and Practices for All Appropriate Inquiries; Final Rule* (40 CFR Part 312). Based on a historical land use review, a site reconnaissance, and regulatory review, the Phase I identified several potential sources of environmental conditions. The following RECs were listed for the Site:

- Sites 5 and 6 have been occupied by an automotive junk yard from as early as 1970. Significant staining to exposed soils and pooling of automotive liquid wastes on the ground and in ponded water were observed across the sites, as was the use of chemicals and petroleum products. As observed, the current dismantling and automotive repair practices continue to contribute to the environmental impact of the sites. The IEPA has documented a variety of violations related to open dumping, stained surface soils and potential impacts to the stormwater. Based on regulatory agency documentation, our visual observations, and the data obtained during this assessment, these environmental issues represent evidence of a REC.
- Solid waste dumping has occurred across both sites. The nature and origin of the dumped materials and fill soils are unknown. Therefore, solid waste represents evidence of a REC.
- Solid waste and junkyard debris were observed along the banks of Midlothian Creek, which is located along the north side of Site 5. Based on our visual observations, the impacts to Midlothian Creek as a result of junk yard operations on Site 5 represent evidence of a REC.

No historical RECs (HRECs) were identified onsite.

A copy of the reports is provided in **Appendix A**.

3.0 SITE-SPECIFIC SAMPLING PLAN

The investigations discussed as part of the site-specific sampling plan refer only to the site investigations performed by V3 Companies with the IEPA Office of Site Evaluation (OSE), and driller Johnson Probing from April through July 2012.

The field investigation was performed in accordance with the Sampling and Analysis Plan approved by USEPA (March 30, 2010). The discussions below provide the basic framework for implementation of the work plans (sampling plan) while overall Site Investigation activities are discussed in greater detail in **Section 4.0**.

3.1 SITE RECOGNIZED ENVIRONMENTAL CONDITIONS

For the purposes of this CSIR, the Phase I ESA RECs have been grouped on the basis of their general operational, historic and/or physical nature. The following were identified as potential RECs requiring further Site evaluation:

- ***REC 1 – Historical*** *Junk Yard* ***Operations****:* This REC includes former junk yard operations at the Site and the potential presence of automotive-related chemicals and petroleum products. Open dumping was also observed.

- ***REC 2 – Site-Wide Fill and Debris****:* This REC includes site-wide fill, as a result of historical redevelopment as man-made land and historical operations. The fill material is from an unknown location.

Refer to **Figure 3.1** for boring locations. Field investigations of these areas have been performed to confirm environmental conditions associated with these features. Documentation of field actions and a summary of the field investigation findings begin in **Section 4.0**.

3.2 SAMPLING OBJECTIVES

The Remediation Applicant (RA) plans to pursue a Comprehensive NFR Letter pursuant to the requirements of the SRP. Based on an evaluation of available Site data, the Site Investigation Sampling Plans were developed to obtain the data necessary to forward the following primary objectives:

- Provide a comprehensive characterization of physical and chemical conditions in soils and groundwater at the Site; and
- Develop an SRP closure strategy for the property.

More specifically, site data was collected for the following purposes:

- Evaluate environmental conditions at each of the identified Site RECs,
- Obtain comprehensive analytical data throughout the Site, and refine the list of COCs,
- Enable a comparison of site data to applicable TACO Tier 1 ROs,
- Evaluate potential pathway exclusions, including potential contaminant source and free product, and
- Enable the development of Tier 2 ROs, as applicable.

V3 conducted three investigations at the Site from April 2012 to July 2012. Refer to **Figure 3.1** for locations for all the subsurface investigations. Following is a brief summary of the objectives of each subsurface investigation:

Subsurface Investigation-April 2012. On April 2-12, 2012 V3 and the IEPA Office of Site Evaluation (OSE) advanced 41 soil borings and one monitoring well at the Site. Four of the soil borings were converted into permanent wells making a total of five permanent monitoring wells installed at the Site. The purpose was as follows:

- Characterize subsurface soils,
- Evaluate environmental conditions at RECs identified in ESA I report, and
- Install, develop, and sample five groundwater monitoring wells.

Supplemental Investigation-June 2012. On June 13-21, 2012, V3 and driller Johnson Probing advanced an additional 22 soil borings at the Site. Two of the borings were converted into permanent monitoring wells and one boring was converted into a temporary monitoring well. Eight test pits were also excavated with a backhoe. The focus of this Supplemental Investigation was:

- Obtain additional soil information along the petroleum pipeline and shallow soils for petroleum hydrocarbons,
- Determine the extent of BTEX impacts and petroleum odors identified during the April 2012 Site Investigation,
- Obtain soils information and collect a soil sample on the north side of Midlothian Creek,
- Excavate test pits to find limits of observed construction debris and poorly graded medium (cemented) blue sand with sulfur odors identified in the northeast portion of the site,
- Re-install MW-01, as it became blocked on its initial installation in April 2012, and convert it from a ¾" to a two inch well,
- Install one additional two-inch permanent monitoring well and one one-inch temporary groundwater monitoring well to obtain more site groundwater information,
- Perform micro-purge sampling on groundwater wells, and
- Survey groundwater elevations.

Supplemental Investigation-July 2012. On July 11-12, 2012, V3 performed rising-head well tests at the Site to obtain a representative hydraulic conductivity (K) estimate for the shallow saturated zone.

3.3 INVESTIGATION MONITORING AND EQUIPMENT DECONTAMINATION

A photoionization detector (PID) was used to monitor worker air quality at all sampling locations and screen soils for possible contaminants using the headspace technique. The PID was equipped with an 11.7 electron volt lamp and calibrated daily to a 100 parts per million (ppm) isobutylene to air standard. The headspace technique involves placing a representative portion of each sample in a Ziploc® quart-sized bag, agitating the sample, and sealing the bag. After sealing the bag, the sample is allowed to warm for ten minutes. The probe of the PID is then inserted through the bag and the maximum reading over a 15-second period is recorded in the field book.

All equipment that directly or indirectly came into contact with sample media was decontaminated prior to use and between each sample location. This included the macro core sampler and sampling shovels. Decontamination of sampling equipment was performed using a potable water and Liquinox ® solution wash, followed by a potable water rinse, and a distilled water rinse.

3.4 MANAGEMENT OF INVESTIGATION DERIVED MATERIALS

Soil cuttings were disposed at the Site, at the sampling location where generated; any surplus or visually impacted soils were drummed in DOT approved 55-gallon steel drums. Purge water or decontamination water was drummed in DOT approved 55-gallon steel drums for storage, pending laboratory analysis results. Used personal protective equipment was bagged and placed in the daily garbage, for municipal disposal, unless suspect of gross contamination.

3.5 SOIL SAMPLING

3.5.1 SOIL BORINGS

Soil borings were advanced by IEPA Office of Brownfield Assistance and Johnson Probing under the supervision of V3's site engineer/geologist, using hollow-stem auger and Geoprobe® direct push soil sampling methods. Prior to drilling, JULIE performed on-site location of utilities and a private utility locator confirmed utilities in some locations. Each boring was sampled continuously using a decontaminated 1.5 to 2-inch-diameter, 48 to 60-inch-long dual tube or macro-core sampler. Each soil sample was collected for headspace screening to determine the presence of volatile organic vapors, physical description, and possible laboratory chemical analysis. Results of the headspace screening and visual descriptions were recorded in the field notebook. Based upon the results of the headspace screening and visual observation, soil samples from each boring were retained for laboratory analysis relative to the RECs chemicals of concern.

Due to the rough terrain and inaccessibility along the northern property boundary of Site 5, north of Midlothian Creek, a hand auger was used instead of the Geoprobe 6600 DT by Johnson Probing to classify soils and collect a soil sample. Soil cuttings were used to backfill the boring hole and the hand auger was decontaminated after its use.

3.5.2 TEST PITS

Test pits were excavated with a backhoe by V3 Companies on June 18 and June 20, 2012, under the supervision of V3's site geologist (**Figure 3.1**). The backhoe was a John Deere 330C LC with an approximate 5 ft-wide bucket. The test pits were backfilled with their excavated soils. Test pits were used to visually log subsurface conditions and delineate construction debris and blue sand fill; only one soil sample was collected from the test pit excavations for laboratory analysis.

New disposable sampling gloves were donned prior to each sample collected from the soil borings, test pits, and during handling of sampling equipment. For each recovered soil sample, samples for possible VOCs analysis were collected directly from the recovered sample, in accordance with USEPA SW-846 Method 5035/8260. All samples collected for VOCs were

obtained directly from the recovered sampler at the specified sample interval using a disposable plastic 5-gram syringe barrel. The barrel was driven into the soil surface to remove the soil without exposure to air. A 5-gram soil sample was then extruded into one 40-ml vial preserved with methanol (CH_3OH). This process was repeated until two 40-ml vials preserved with sodium bisulfate were also filled with 5-grams of soil each. The samples were immediately capped, labeled, and placed on ice. For all additional analysis, including SVOCs, PAHs, PCBs and inorganic metals, the remaining portion of the recovered sample from the specified sample interval was placed into appropriate laboratory specified jars, labeled with the sample name, sample location, sample depth (if appropriate), date, time, preservative (if appropriate), and name of sampler. All samples were then immediately placed in a cooler filled with ice.

A V3 engineer/geologist logged the subsurface conditions encountered using the Unified Soil Classification System (USCS) (ASTM Method D2488). Additional information that was documented includes:

- Boring identification,
- Location in relation to an easily identifiable landmark,
- Name of drilling contractor,
- Drilling method,
- Depth at which saturated conditions are first encountered,
- Headspace screening results,
- Sample identification and depths,
- Soil weathering,
- Zones of caving or heaving, and/or
- Refusal.

Soil boring and test pit logs are provided in **Appendix C**. Site photos are presented in **Appendix D**.

3.6 MONITORING WELL INSTALLATION AND DEVELOPMENT

A total of seven permanent wells and one temporary monitoring well were installed from April to July 2012 (see **Figure 3.1**). A 6600 DT Geo-probe drill rig was used to install the permanent groundwater monitoring wells throughout the Site based on site-specific data. Permanent wells were utilized by V3 for groundwater sampling locations on the Site for reproducible and accurate groundwater constituent analysis and hydrogeologic analysis.

In April 2012, OSE constructed four permanent groundwater monitoring wells (**JD-GP-40/MW-01, JD-GP-35/MW-03, JD-GP-16/MW-04,** and **JD-GP-05/MW-05**) by installing ¾" pre-packed PVC screens into soil boreholes. An additional filter pack consisting of clean sand was placed around the pre-packed PVC screens. The wells were then completed with ¾" PVC riser, sealed with bentonite and flush mount well covers were installed. OSE also constructed one two-inch permanent monitoring well (**MW-02)** utilizing a 4-inch hollow-stem auger (HSA). During drilling, a center plug was used in the leading end of the HSA tool string to minimize the amount of soil cuttings in the center of the HSA. The monitoring well was constructed of two-inch diameter Schedule 40 polyvinyl chloride (PVC) riser pipe and 10-foot long, 0.010-inch slot, Schedule 40 PVC screens. The well was screened in sand, gravel, and silty clay material.

A filter pack consisting of clean sand was placed in the annulus around the screen of the permanent monitoring well. While slowly adding the filter pack, the hollow stem auger was incrementally withdrawn to allow the filter material to drop out of the bottom of the augers, while preventing the formation from collapsing. A seal consisting of 2 feet of bentonite was installed atop the filter pack. The bentonite seal was hydrated using clean water, after which the well was completed to an approximate depth of 2 feet bgs with bentonite chips. Concrete was then placed on top of the bentonite chips. A steel protective casing was pressed a minimum depth of 2 feet bgs into the concrete and was equipped with a locking cap.

In June 2012, Johnson Probing installed one additional two-inch permanent well (**JD-GP-122/MW-06**) as described above and one one-inch temporary monitoring well (**JD-GP-121/MW-07**). The temporary monitoring well was installed by inserting one-inch 0.010-inch slot, Schedule 40 PVC screen and riser into a borehole. The temporary monitoring well was removed and backfilled with site soils after the groundwater sample was collected. Because **JD-GP-40/MW-01** became blocked during its initial installation in April 2012, Johnson Probing re-drilled monitoring well **JD-GP-119/MW-01** approximately 10 ft. north of its original location and converted it in to a two-inch permanent well.

Well development included purging the water wells using a polyethylene dedicated disposable bailer, placing disposable polyethylene tubing into the screened interval and attaching the upper tubing end to a peristaltic pump, or by using a submersible purge pump with polyethylene tubing that was decontaminated in between each use. The water was purged a minimum of three to five casing volumes and allowed to recharge, if necessary, until little or no sediment entered the monitoring well or until the well went completely dry.

3.7 GROUNDWATER / MONITORING WELL SAMPLING

Before commencing measurement activities, each permanent and temporary monitoring well was checked for aboveground damage and vegetation around the well cleared as necessary for access. Any water that was present inside the protective casing or in the vaults around the well casing was removed prior to opening the casing cap.

Groundwater levels were measured in all wells intended for sampling in as short a period of time as practicable. All measurements were taken with a decontaminated electronic water level indicator. The depth to water was measured from a marked datum on the rim of the riser pipe to an accuracy of ±0.01 feet. The static water level measurements were recorded in the field book. The sampling equipment and procedures for monitoring well sampling are described as follows.

The static water level was measured with a decontaminated electronic water level meter. The volume of standing water in the well was calculated based on the static water level and well depth. Prior to sampling activities, the monitoring well was purged a minimum of three to five well casing volumes using a polyethylene bailer, peristaltic pump, or submersible purge pump to ensure the subsequent sample was from within the formations water. Groundwater samples were obtained with either a disposal bailer or peristaltic pump and decanted, or by micro-purging the monitoring well at a rate of 0.1 gallon per minute (gpm) with a peristaltic pump. Refer to **Appendix G** for description of procedures.

For groundwater samples collected by micro-purging (**MW-01, MW-03** through **MW-05**), field measurements of water quality indicator parameters, including pH (±0.1 unit), ORP (±20mV) and temperature (±10%) were collected during purging to confirm that groundwater indicator parameters had stabilized within the specified range of previous readings. Samples were transferred directly from the tubing to the appropriate laboratory provided sample bottles. Sample bottles were filled slowly, avoiding unnecessary agitation.

Due to equipment and/or field issues, wells **MW-02, MW-06, and MW-07** could not be micro-purged. Wells **MW-02** and **MW-06** were pumped with the peristaltic pump and **MW-07** was pumped with a bailer. Following appropriate groundwater sampling protocols, the samples intended for SVOCs, PCBs/pesticides, and metals analyses were collected in clean laboratory grade plastic jars (containing no preservatives), tightly capped, placed in an ice bath, and allowed to sit undisturbed for a maximum of two hours. The containerized samples were then carefully poured and transferred from the original jar into clean laboratory grade plastic jars containing appropriate preservatives. Care was taken to not introduce settled sediment when transferring collected samples.

Collected VOC sample bottles were collected to ensure that air bubbles or headspace is minimal by a securely tightened cap. Further, the sample bottle was inverted and tapped firmly to check for air bubbles. If an air bubble was observed, the bottle was opened and a small amount of groundwater sample was added to the bottle to ensure a meniscus is observed prior to re-capping. This method ensures that the VOC sample is <2.0 pH when delivered to the selected laboratory. Properly filled sample bottles were labeled and immediately placed in a secure, iced cooler and chilled to ≤4ºC in accordance with USEPA SW-846.

Bailers, ropes, plastic tubing, and all other field measurement and sampling equipment were decontaminated prior to inserting them into each well, as described in **Section 3.3**. Groundwater grab samples were collected from the wells by either using a dedicated, bottom-filling disposable polyethylene bailer or polyethylene tubing and a peristaltic pump. For both sampling methods, special care was taken to avoid physically altering or chemically contaminating the samples.

Groundwater samples were collected in appropriate laboratory supplied containers, preservative added depending on the analysis, then placed on ice to cool to 4°C, packed and hand delivered or picked up by STAT Analysis Corporation of Chicago, Illinois for analysis. All containers were furnished by the analytical laboratory and pre-cleaned according to US EPA protocols. Field quality assurance/quality control (QA/QC) samples (trip blanks, and field duplicates) were collected at the frequency specified in V3's Quality Assurance Project Plan (QAPP) or as otherwise specified. Required chain-of-custody procedures were maintained from the time of sample collection until delivery to the analytical laboratory.

3.8 LABORATORY METHODOLOGIES

Laboratory services were performed by the IEPA Laboratory in Springfield, IL and STAT Analysis Corporation of Chicago, Illinois (STAT). The laboratories are accredited by the Illinois Environmental Laboratory Accreditation Program (IL ELAP), a copy of the accreditation status and certification that all analyses were performed in accordance with the requirements of 35 Ill. Adm. Code 186 is provided in **Appendix F.1**. Soil and groundwater samples were analyzed for one or more of the following: VOCs, SVOCs, pesticides, PCBs, pH, total analyte list (TAL)

metals, RCRA metals, toxicity characteristic leaching procedure (TCLP) metals and organic carbon content (OCC- used to calculate fractional organic carbon (FOC)). All soil and groundwater samples were hand delivered or picked up by the laboratory. Analytical methods used are listed below:

Parameter	**Method Number**
Total Solids	2540B
VOCs	5035A/8260B
SVOCs/PAHs	8270C
Pesticides/PCBs	8081A/8082
pH	4500H+B/9045C
Total Metals	6010B
TCLP Metals	1311/6020
Total Mercury	7470A
OCC (for FOC)	D2974-87C

Standard chain-of-custody (COC) procedures were followed to ensure adequate documentation accompanied all samples submitted to the laboratory. Upon arrival at the laboratory, the sample cooler was accepted by the Laboratory Sample Custodian who signed and dated the COC record. Complete analytical data reports and copies of the COC forms are provided in **Appendix F.2**.

Summary results of analyses are presented in **Section 6.0**. Data comparison to appropriate remediation objectives are detailed in **Tables 1.1, 2.1 to 2.7**.

4.0 DOCUMENTATION OF FIELD ACTIVITIES

Field activities for V3's site investigation are discussed in the following report sections. V3 conducted subsurface investigations at the Site from April to July 2012. The purpose of each investigation is discussed under **Section 3.0**. The investigative activities consisted of 71 soil samples collected from 64 soil boring and monitoring well locations drilled on two separate occasions using Geoprobe® and hand auger methods, as well as eight test pits excavated using a backhoe. The investigation also included groundwater samples collected from six permanent and one temporary monitoring wells following ASTM methods. Details related to these sampling efforts are provided in the following sections, and a summary of samples and sampling analysis is provided on **Table 1.1**.

The locations of soil borings and monitoring wells are shown on **Figure 3.1**. Photographs of sampling locations and activities are provided in **Appendix D**. **Appendix G** details V3's standard operating procedures (SOPs).

4.1 DIRECT PUSH SOIL SAMPLING

Direct push soil sampling provides data on the presence, nature and extent of soil contamination, and information on subsurface geology.

In April 2012, V3 and OSE drilled 41 soil borings (**JD-GP-01** through **JD-GP-41**) and one monitoring well (**MW-02**) to approximately 8-20 ft. below ground surface (bgs). Four of the soil borings (**JD-GP-05/MW-05**, **JD-GP-16/MW-04**, **JD-GP-35/MW-03**, and **JD-GP-40/MW-01**) were converted into ¾" permanent monitoring wells.

In June 2012, V3 and Johnson Probing drilled 21 soil borings (**JD-GP-101** through **JD-GP-119**, **JD-GP-121**, and **JD-GP-122**) 10-20 ft. bgs and hand augered one soil boring (**JD-GP-120**) to approximately 5 ft. bgs. Two of the soil borings (**JD-GP-119/MW-01** and **JD-GP-122/MW-06**) were converted into two-inch permanent wells and one soil boring was converted into a one-inch temporary monitoring well (**JD-GP-121/MW-07**). Because **JD-GP-40/MW-01** became blocked while being installed, **JD-GP-119/MW-01** was drilled as a replacement. Groundwater was encountered at approximately 4 to 14 ft. bgs in most of the soil borings during drilling.

A total of 70 soil samples were collected for chemical analysis from the boring locations (**Figure 3.1**). As stated in **Section 3.5**, continuous soil samples were collected from the borings using 1.5 to 2-inch-diameter, 48 or 60-inch-long dual tube or macro core sampler equipped with a plastic sample retainer from which geologic logs were prepared (**Appendix C**). Soil samples were screened for VOCs using the field headspace technique, as described in **Section 3.5**.

Soil samples were collected from the borehole locations, as indicated on **Figure 3.1**, and discussed below. A summary of sample depths and analyses are listed in **Table 1.1**.

4.2 TEST PIT EXCAVATION SOIL SAMPLING

In addition to soil borings, eight test pits (**JD-EX-01** to **JD-EX-08**) were excavated by V3 Companies with a backhoe on June 18 and June 20, 2012, under the supervision of V3's site geologist (**Figure 3.1**). The purpose of the test pits was to help further delineate the limits of the

construction debris and poorly graded medium (cemented) blue sand with sulfur odors found in the northeast portion of the site.

The test pits were excavated to a depth of approximately 5-12 ft. below ground surface (bgs) and backfilled with their excavated soils. Geological conditions were very similar to those observed in the soil borings. Groundwater was encountered at approximately 8-11.5 ft. in five of the test pits (**JD-EX-01** and **JD-EX-04** through **JD-EX-07**). Only one soil sample was collected for chemical analysis from **JD-EX-04**. Refer to the test pit logs provided in **Appendix C** for details regarding the subsurface of the Site.

4.3 GROUNDWATER / MONITORING WELL INSTALLATION AND DEVELOPMENT

Six permanent monitoring wells (**MW-01** to **MW-06**) and one temporary groundwater monitoring well (**MW-07**) were sampled on-Site by V3, to assess the potential extent of impacted groundwater and to obtain representative water levels. The samples were collected by micropurge, a peristaltic pump, or bailer as discussed in **Section 3.7**. See **Figure 3.1** for well locations.

The installation was conducted with a Geo-probe 6600 DT using ¾" pre-packed PVC screens and hollow stem augers (HSAs). Refer to **Section 3.6** for more detail. The monitoring well logs are presented in **Appendix C**.

The wells were developed no sooner than 24 hours after installation to allow for grout curing. Development consisted of pumping at least three to five well volumes of water or until the well went completely dry. For all but three wells (**MW-02**, **MW-06** and **MW-07**), temperature, pH, specific conductance, dissolved oxygen and ORP were measured continuously as well volumes were removed. Development continued until these parameters stabilized within the following ranges: ±0.1 unit for pH, + 20 mV for ORP, and + 10% for turbidity and temperature.

4.4 GROUNDWATER / MONITORING WELL SAMPLING

The existing groundwater monitoring wells were sampled on Site by V3 to assess the potential extent of impacted groundwater and to obtain representative water levels The samples were collected by low-flow method, peristaltic pump, or dedicated bailer as discussed below and specified in **Appendix G** –Groundwater Sampling Protocol. See **Figure 3.1** for well locations.

Groundwater elevation and surface water elevation data (**Table 3.0**) indicate that groundwater is flowing to the northeast toward Midlothian Creek. See **Figure 2.2** for the Groundwater Contour Map.

Prior to groundwater purging or sampling activities, a static water level measurement was taken from the monitoring wells. All measurements were taken using an electric water level indicator. The depth to water was measured from a datum marked on the rim of the riser pipe to an accuracy of +/- 0.01 feet.

A peristaltic pump with dedicated tubing was used to purge each well, except **MW-07** which was purged with a bailer. Due to equipment and/or field issues, wells **MW-02, MW-06, and MW-07** could not be micro-purged. A micro-purge low-flow method was used on the remaining wells for

well purging prior to sampling. Equipment included an In-Situ low-flow sampling apparatus, a YSI 556 water quality meter and a flow control well pump. Environmentally approved PVC herco tubing was used in conjunction with the well pump. The water quality meter was calibrated prior to low-flow sampling.

The groundwater appeared relatively clear with no odors or sheens noted, except **MW-05** which had a faint petroleum odor and slight sheen. Samples to be analyzed for VOCs analyses were transferred immediately to vials containing preservative assuring no headspace remained in the container. Samples for other than VOC analysis were immediately transferred to appropriate laboratory containers. The samples were then placed in coolers provided by the laboratory and cooled to 4°C with the use of ice in the coolers.

4.5 REC 1: HISTORICAL JUNK YARD OPERATIONS

The following sampling program was performed within REC 1.

A total of 60 borings (**JD-GP-01** through **JD-GP-41** and **JD-GP-104** through **JD-GP-122/MW-06**) and monitoring wells (**MW-01, MW-02, MW-03, MW-04, MW-05 and MW-06**) were advanced by V3 at the Site from April to July 2012 to characterize potential subsurface impacts (**Figure 3.1**) associated with historical junk yard operations. These borings were advanced to a maximum depth of 20 feet bgs. Based on historical maps and site observations, the borings were advanced in locations that corresponded with former features, such as drums and AST areas, repair garage and chemical storage, abandoned garage, ponded water and auto junk yard areas.

- Petroleum odors, staining and/or elevated PID readings (greater than 5.0 ppm) were observed in nine borings (**JD-GP-01**, **JD-GP-03**, **JD-GP-05/MW-05**, **JD-GP-14**, **JD-GP-18**, **JD-GP-104**, **JD-GP-108**, **JD-GP-111**, and **JD-GP-122/MW-06)** and test pit **EX-05**.
- A faint mixed solvent /petroleum (automotive-related) odor and elevated PID readings were observed in two borings (**JD-GP-15** and **JD-GP-16 / MW-04)**.
- Blue poorly graded medium (cemented) sand with sulfur odors were observed in six borings (**JD-GP-23**, **JD-GP-24**, **JD-GP-38** through **JD-GP-40**, and **JD-GP-119/MW-01)** and three test pits (**JD-EX-04**, **JD-EX-06** and **JD-EX-07**).

Soil samples were analyzed for one or more of the following: VOCs, BTEX, SVOCs, PAHs, PCBs, Pesticides, TAL metals, RCRA metals, SPLP specific metals, TCLP specific metals, cyanide, reactive cyanide, reactive sulfide, glycols, TPH, FOC and pH constituents.

Groundwater samples were collected from one temporary monitoring well (**MW-07**) and six permanent monitoring wells (**MW-01** through **MW-06**). Samples were collected for analysis of one or more of the following: VOCs, SVOCs, PAHs, PCBs, pesticides, TAL metals, RCRA metals, cyanide, and glycols. A faint petroleum odor and a slight sheen was observed at permanent well **MW-05** in the northwest corner.

The sampling locations for this REC are provided in **Figure 3.1**. Analytical parameters for each sample are summarized on **Table 1.1**.

4.6 REC 2: SITE-WIDE FILL AND DEBRIS

The following sampling program was performed within REC 2.

A total of 63 borings (**JD-GP-01** through **JD-GP-41** and **JD-GP-101** through **JD-GP-122/MW-06**) and monitoring wells (**MW-01, MW-02, MW-03, MW-04, MW-05 and MW-06**) were advanced by V3 at the Site from April to July 2012 to characterize potential subsurface impacts (**Figure 3.1**) associated with site-wide fill and debris. These borings were advanced to a maximum depth of 20 feet bgs across Sites 5 and 6.

- Petroleum odors, staining and/or elevated PID readings (greater than 5.0 ppm) were observed in twelve borings (**JD-GP-01**, **JD-GP-03**, **JD-GP-05/MW-05**, **JD-GP-14**, **JD-GP-18**, **JD-GP-101** through **JD-GP-104**, **JD-GP-108**, **JD-GP-111**, and **JD-GP-122/MW-06**. Soil borings **JD-GP-101** and **JD-GP-102** had the highest PID readings with 3388 ppm and 3730 ppm.
- A faint mixed solvent /petroleum (automotive-related) odors and elevated PID readings were observed in two borings (**JD-GP-15** and **JD-GP-16/ MW-04)**.
- Blue poorly graded medium (cemented) sand with sulfur odors were observed in six borings (**JD-GP-23**, **JD-GP-24**, **JD-GP-38** through **JD-GP-40**, and **JD-GP-119/MW-01)** and three test pits (**EX-04**, **EX-06** and **EX-07**).

Soil samples were analyzed for one or more of the following: VOCs, BTEX, SVOCs, PAHs, PCBs, Pesticides, TAL metals, RCRA metals, SPLP specific metals, TCLP specific metals, cyanide, reactive cyanide, reactive sulfide, glycols, TPH, FOC and pH constituents.

Groundwater samples were collected from one temporary monitoring well (**MW-07**) and six permanent monitoring wells (**MW-01** through **MW-06**). Samples were collected for analysis of one or more of the following: VOCs, SVOCs, PAHs, PCBs, pesticides, TAL metals, RCRA metals, cyanide, and glycols. A faint petroleum odor and a slight sheen were observed at permanent well **MW-05** in the northwest corner.

The sampling locations for this REC are provided in **Figure 3.1**. Analytical parameters for each sample are summarized on **Table 1.1**.

5.0 ENDANGERMENT ASSESSMENT

The Site investigation targeted the investigation of the identified RECs:

- **REC 1: Historical Junk Yard Operations**
- **REC 2: Site-Wide Fill and Debris**

Following site investigation activities, a third REC was added.

- **REC 3: Apparent Petroleum Pipeline Release**: This REC includes identified soil and groundwater petroleum impacts at a depth at or below the buried petroleum pipeline that transects Site 5.

The following sections summarize conditions associated with the Site RECs and the general findings of the Site Investigation.

5.1 OBSERVED SUBSURFACE CONDITIONS

The following summarizes the subsurface conditions encountered during the field investigation.

REC 1: Historical Junk Yard Operations

- Odors / Staining / Visual Observations: Petroleum odors, staining and/or elevated PID readings (greater than 5.0 ppm) were observed in eight borings.
  - In the northwest portion of the site near the drums and ASTs, borings **JD-GP-01** and **JD-GP-03** contained faint odors at 2-4 ft in fill.
  - In the northwest portion of the site, near the petroleum pipeline subsurface soils contained strong to faint petroleum odors at 8-14 ft (see REC 3).
  - In the north-central portion of the site, boring **JD-GP-14** contained faint odors at 1-4 ft in fill, and surrounding borings **JD-GP-108** and **JD-GP-111** contained strong odors from 0-1.5 ft in fill.
  - In the west central portion of the site, boring **JD-GP-18** contained strong odors from 0-2 ft in fill, test pit **EX-05** contained odors from 0-1 ft, and nearby boring **JD-GP-122/MW-06** contained strong odors from 0 to 1 ft. Additional borings down-gradient did not contain petroleum odors.

  A faint automotive-related petroleum odor and elevated PID readings were observed in two borings, **JD-GP-15** and **JD-GP-16 / MW-04**, in the north-central portion of the site within the shallow fill from 1-3 ft. These observed impacts appeared to be due to former junk yard operations.

REC 2: Site-Wide Fill and Debris

- General Site Fill Material: At the surface of the Site, there is a layer of fill material that generally thickens from about 2 feet in the southwestern portion of the Site to a depth of about 12 feet at Midlothian Creek to the north. This fill contains re-worked gravel, sands, clay, asphalt, glass, wood, brick and construction debris (e.g., in the northeast portion of the Site).

- Blue (Cemented) Sand: Blue poorly-graded medium (cemented) sand with a sulfur odor was observed in six borings and three test pits within the southeastern corner of the site. The locations and depths are borings **JD-GP-23** (2-3.5 ft), **JD-GP-24** (6-8.5 ft), **JD-GP-38** through **JD-GP-40** (ranging between 3.75 to 7.5 ft), **JD-GP-119/MW-01** (5-7.5ft), and test pits **JD-EX-04** (3.5-4.5 ft), **JD-EX-06** (4.5-6.5 ft) and **JD-EX-07** (3.5-6.5 ft). This unidentified material is intermixed within the site fills located within eastern portion of the Site (see **Figure 3.1**), and does not appear to be related to former junk yard operations.

- Construction / Debris Fill: An area of debris is located within the northeastern portion of the Site, extending north to Midlothian Creek (see **Figure 3.1**). The debris fill is predominantly lumber, with some concrete, wire, auto parts and such, intermixed with some soil. The surface of this area generally contains several feet of soil cover. Evidence of environmental impact or deleterious sources of potential environmental impacts were not observed within soil borings or the test pits (**JD-EX-01** through **JD-EX-05)** performed in this area.

REC 3: Apparent Petroleum Pipeline Release

- Odors / Staining / Visual Observations: Petroleum odor was observed in the northwest portion of the site, to the immediate north and south of the petroleum pipeline.
  - Boring **JD-GP-05/MW-05** contained strong to faint odors at 8-14 ft within silt and a sand seam.
  - Boring **JD-GP-101** contains slight to strong odors from 6 to 12 feet within fill, with the strongest odor from 8-10 feet with a PID of 3388 ppm just above the groundwater.
  - Borings **JD-GP-102** and **JD-GP-103** contain slight to strong odors from 6-12 ft in fill, silt, clay and 8-10 ft in silt, respectively. Soil boring **JD-GP-102** had the highest PID reading with 3730 ppm.
  - Boring **JD-GP-104** faint to strong odors from 4 to 10 ft in fill.
  - **MW-05** also contained odors and a slight sheen during groundwater sampling down gradient of the petroleum pipeline.
  - The observed odors appear to be from a release originating from the active petroleum pipeline.

5.2 CONTAMINANTS OF CONCERN (COCs), DISTRIBUTION / NATURE OF CONTAMINATION

The primary COCs at the Site were identified and confirmed through laboratory analysis. The exposure pathways of concern (see **Table 1.1** for summary), and the apparent source of COCs are discussed briefly below. A detailed Tier 1 TACO evaluation is provided in **Section 6.3**.

VOCs

- Benzene and Xylene are the only VOCs that were detected above Tier 1 industrial-commercial ROs in soil.
- Benzene concentrations were identified above the inhalation exposure route for industrial-commercial and construction worker in four locations, and the Class II soil

to groundwater Tier 1 remediation objectives (ROs) in nine locations within the north half of the Site from three areas.

- Three areas of VOC soil impacts are shallow and likely the result of historic, localized surface releases during the junk yard operations. Concentrations were identified at depths ranging from 0 to 4 feet.
- In the northwest corner of the Site, strong petroleum odors, staining, and benzene and xylene concentrations above Tier 1 industrial-commercial ROs were identified at 8-10 ft adjacent to the petroleum pipeline.
- Other petroleum fuel constituents, such as benzene, toluene, ethylbenzene, xylenes (BTEX) and MTBE concentrations were detected below Tier 1 industrial-commercial ROs in surrounding and down gradient soils of the aforementioned locations.
- Benzene was detected above the Class II Tier 1 RO in one groundwater sample, MW-05 on the down-gradient side of the petroleum pipeline.

PAHs

- The only SVOCs detected above Tier 1 industrial-commercial ROs in soil included PAHs (benzo(a)pyrene and dibenzo(a,h)anthracene).
- Three areas of elevated PAHs were identified in the central and eastern portion of the Site from near surface soils from 0.5 to 3 feet bgs within the site fill. Two of the locations were on the up-gradient side of identified petroleum impacts. The presence of PAHs appears the result of shallow localized historic releases.
- Soil samples from depths below 3 ft and horizontally around the releases, did not contain elevated PAHs.
- PAHs (benzo(a)anthracene and benzo(b)fluoranthene) were detected in one groundwater sample, MW-02 in the center of the Site on the up-gradient side of a soil petroleum impacted location.
- The Tier 1 exposure pathways of concern include industrial-commercial ingestion, and the Class II groundwater ingestion route.

Metals

- The metals detected in excess of Tier 1 industrial-commercial soil ROs included: arsenic and mercury.
- Arsenic was identified at various depths within both the site fill and underlying native soil at three locations at the northwest and southeast corners of the site. The arsenic concentrations encountered appear within normal background ranges for naturally occurring arsenic and do not appear indicative of site contamination.
- Mercury was identified above the Tier 1 construction worker RO for elemental mercury at 17 locations between 0 to 8 feet bgs. A specific source that would suggest elemental mercury is present at the Site has not been identified, and as a result the observed concentration may not be indicative of a construction worker risk.

- Three metals (aluminum, iron and lead) were identified at concentrations in excess of Class II, Tier 1 ROs within two groundwater samples. An additional groundwater sample contained iron and lead above Class II, Tier 1 ROs. However, it is not apparent that the encountered concentrations represent a notable groundwater concern, as they may be the result of relatively high suspended solids present within collected groundwater samples.
- The Tier 1 exposure pathways of concern include soil industrial-commercial ingestion, construction worker inhalation, and groundwater ingestion.

PCBs

- PCBs were identified in one groundwater sample at concentrations in excess of the Class II Tier 1 RO from temporary well, MW-07. However, it is not likely that the encountered concentration represents actual dissolved-phase PCBs in groundwater. The sample collected at this location had a high suspended solids load; low-flow sampling was not possible from this temporary well. PCBs were not detected in soils, except two low concentrations detected well below the Tier 1 RO within two samples away from MW-07.

  [Note: While it is V3's judgment that actual PCBs impact to groundwater is unlikely, and that the observed concentrations are the result of sampling method limitations, the presence of PCBs within the sediment load for this sample suggests further characterization of the debris area may be warranted to further evaluate whether deleterious materials are present that may represent a potential source of PCBs.]

Pesticides were detected in some of the soil samples; however, all detections were below Tier 1 ROs. Pesticides were not detected in any of the three groundwater samples analyzed for pesticides (**MW-01**, **MW-02**, and **MW-03**).

6.0 TIER 1 EVALUATION

The following sections establish the baseline conditions at the Site that were determined through the Comprehensive Site Investigation (CSI). The later discussions establish site ROs, and the areas requiring active remediation to achieve ROs and/or provide for exposure pathway exclusion where ROs are exceeded.

6.1 BASELINE TACO EVALUATION (PRE-REMEDIATION)

The identification of potential receptors and exposure pathways is an important component of the investigation/remedial strategy for the Site because it allows for an evaluation and determination of site-specific risk and ROs. Where no potential receptor is exposed to contaminants of concern (COC) at a concentration exceeding TACO ROs, remedial actions are not required.

The initial step used to establish Site ROs is the development of a "baseline" TACO evaluation. The objectives of this evaluation were limited to determining the following:

- If known releases to the environment have resulted in residual concentrations of COCs greater than TACO Subpart C criteria; and
- If such residual concentrations represent unacceptable risk under Tier 1.

The first phase of a TACO evaluation is to determine if complete exposure routes exist pursuant to Illinois Administrative Code (IAC) 742.300 (Subpart C: Exposure Route Evaluation). Where a complete exposure pathway (source – transport – availability for exposure – receptor) does not exist, development of ROs for that exposure route is not required. An exposure route evaluation was accomplished on a constituent specific basis for each Recognized Environmental Condition (REC). Before a potential exposure route can be eliminated from further consideration, the following conditions must be satisfied:

1. The horizontal and vertical extent and constituent concentrations must be determined;
2. The sum total of organic constituent concentrations cannot exceed the soil attenuation capacity as measured by the natural organic carbon fraction (f_{oc}) of the soil;
3. Non-aqueous phase liquids (NAPL) or free product must be removed to the maximum extent practicable;
4. The concentration of any organic constituent cannot exceed the soil saturation limit;
5. The soil cannot be classified as a characteristic RCRA hazardous waste for reactivity, corrosivity, or toxicity (RCRA metals only).
6. The concentration of any PCBs in soil shall not exceed 50 parts per million (ppm).

Evaluation of Site data indicates conditions in the RECs achieve the TACO Subpart C criteria for demonstrating that source material is not present. The evaluation of Site data indicates the following:

- Observations did not indicate the presence of "free product" or COC saturated soil.

- Soil attenuation capacity, as measured by the site-specific foc value (0.64%, or 6,400 mg/kg) and the conservative TACO default value of 0.2% (2,000 mg/kg), has not been exceeded when compared to the sum of organic concentrations and Total Petroleum Hydrocarbon (TPH) (see **Tables 2.1 to 2.5**). The site-specific TPH values range from 298 to 1573 mg/kg.
- The soil saturation limits for organic COCs, in Part 742, Appendix A, Table A, have not been exceeded, when compared to the organic concentrations measured in the samples (see **Tables 2.1, 2.2, 2.3 and 2.4**).
- No characteristics of reactivity have been identified.
- Soil does not exhibit pH values less than or equal to 2.0 or greater than or equal to 12.5 (see **Table 2.5**).
- Investigation data indicate that hazardous concentrations of RCRA metals are not present and that PCB concentrations do not exceed 50 ppm (see **Tables 2.3** and **2.5**).

As a result of the above, pathway exclusion is allowable per IAC Section 742.300 (Subpart C: Exposure Route Evaluation).

A summary of soil and groundwater sample analysis results in which constituent concentrations are above applicable TACO Tier 1 ROs (COCs) are provided in **Table 1.1**. The following section establishes the baseline TACO conditions at the Site, followed next by a summary of the TACO Tier 1 evaluation.

6.2 BASELINE TACO CONDITIONS

The results of the CSI have established the baseline TACO conditions for the Site.

6.2.1 SITE COCS

The CSI includes a general delineation of the vertical and horizontal extent of COCs. The delineation of COCs was determined through subsurface investigations and analytical testing. The confirmed Site COCs include:

- Soils:
  - PAHs: benzo(a)pyrene and dibenzo(a,h)anthracene
  - VOCs: benzene and xylene
  - Metals: arsenic and mercury
- Groundwater:
  - PAHs: benzo(a)anthracene and benzo(b)fluoranthene
  - VOCs: benzene
  - Metals: aluminum, iron and lead
  - PCBs

Low-level pesticides were detected at the Site; however, the detections do not exceed Tier 1 ROs.

The analytical results obtained through the CSI were compared to the Tier 1 ROs of Title 35 of the Illinois Administrative Code (IAC) Part 742, Tiered Approach to Corrective Action Objectives (TACO), effective February 15, 2007. Further, analytical and physical site data were considered in accordance with 35 IAC Part 742, Subpart C; Exposure Route Evaluations.

A summary of soil and groundwater sample analysis results in which constituent concentrations are above applicable TACO Tier 1 ROs (e.g., the Site COCs) are provided in **Tables 2.1 through 2.7**. A summary of sample locations exceeding Tier 1 ROs is provided as **Table 1.1.**

6.2.2 POTENTIAL MIGRATION PATHWAYS, EXPOSURE ROUTES AND RECEPTORS

Existing and potential migration pathways that could transport contaminants off-site include underground utilities that exit the property, groundwater, fugitive dust, and surface water runoff.

Utility Review and Potential Migration Pathway Evaluation
A partially demolished structure and a mobile trailer are still on-site. Overhead electrical usage, apparently supplied by ComEd, was observed on Site 6. However, due to the limited nature of the site walkover and the mobile trailer that was not accessible, V3 was not able to determine whether other utility services are in operation on Site 6. It is unknown if there is wastewater or water lines connected to the structure. During the utility locates, the Metropolitan Water Reclamation District was not sure of storm line location along west property line. An old pipe stub was noted during debris removal in the northwest corner of the Site, but NICOR was unaware of pipe. Nicor indicated gas was previously turned off. Storm manholes were observed off-site along 137th Street and Sacramento Avenue.

Potential Exposure Pathways and Receptors
Potential exposure routes include soil ingestion and inhalation in areas without engineered barriers, construction worker exposures, soil component of groundwater ingestion exposure, and the groundwater ingestion exposure route. Based upon the current and anticipated future land use, potential receptors at the Site include construction workers, possible groundskeepers, and occupants of any buildings that may be constructed in the site area outside the regulatory floodway. Other potential receptors are associated with the migration and discharge of impacted runoff and groundwater from the Site to adjoining surface waters. Possible receptors at nearby surface waters include human users of the waterways and biotic life. Potential surface (receiving) waters for groundwater discharge include Midlothian Creek and the ditch along the Site's eastern edge.

Potential receptors for COCs within the Site groundwater include known industrial and/or private wells located near the Site (See "Water Well Survey" **Section 2.5.5**). Based on the water well survey results, there is no evidence that the Site is located within the setback of any potable water supply wells.

IEPA regulated groundwater recharge zones do not exist within a 2,500-foot radius of the Site based on a review of the online IEPA Soil and Water Assessment Database. Potable drinking water for the Site, and the City of Blue Island, is obtained from the municipal system. Groundwater is not used as a potable source at the Site or properties adjacent to the Site. Any future potable water service for the Site will be provided by a municipal supply.

An ordinance was passed by the City of Blue Island which prohibits the use of groundwater as a potable water supply, except for such uses and methods in existence before the effective date of the ordinance. As a result, there is no evidence of existing or potential groundwater receptors associated with the direct ingestion of groundwater via potable water well.

6.2.3 GROUNDWATER CLASSIFICATION

As discussed in **Section 2.5.4** – Site Hydrogeology, the groundwater beneath the Site classifies as a Class II: General Resource Groundwater, in accordance with Title 35: Environmental Protection, Subtitle F: Public Water Supplies, Chapter I: Pollution Control Board Part 620b: Groundwater Classification.

6.3 TACO TIER 1 EVALUATION

To define the nature and extent of contamination at the Site, and evaluate possible transport of contaminants, investigation analytical results were compared to Tier 1 ROs for industrial-commercial land use and the construction worker scenario. The future use of the property is industrial-commercial and/or future road extension, and therefore the following exposure routes were evaluated:

- Soil ingestion for the industrial-commercial and construction worker receptor population,
- Soil inhalation for the industrial-commercial and construction worker receptor population,
- Class II groundwater ingestion based on the migration potential of concentrations detected in soils, and
- Class II groundwater ingestion.

TACO RBCA and/or SSL simulations are anticipated in the future to determine Tier 2 site-specific soil inhalation and soil to groundwater ROs.

Where Tier 1 groundwater (and soil to groundwater) ROs have been exceeded, TACO RBCA equation R-26 simulations will be completed in the future Remedial Objectives Report to predict the distances from the COC sources (represented by groundwater monitoring wells or soil boring locations) required to achieve Tier 1 groundwater ROs. Because groundwater pathway exclusion is anticipated (via the City of Blue Island municipal ordinance prohibiting potable use of groundwater), the ditch and Midlothian Creek are possible receptors that are also considered in the evaluations of COCs that exceed Tier 1 groundwater pathway ROs. Tier 1 groundwater exceedances will also be compared to 35 IAC Part 302 surface water quality standards for respective COCs prior to calculating the R-26 modeling. If needed, R-26 simulations will be compared to surface water quality standards for respective COCs. TACO equation R-12 simulations will also be completed on soil samples to determine Tier 2 soil component of the groundwater ingestion ROs.

Tier 3 evaluation is anticipated to address any COCs that require groundwater pathway exclusion and do not meet surface water criteria at the ditch or Midlothian Creek.

A summary of soil and groundwater samples in which concentrations are above applicable TACO Tier 1 ROs is provided in **Table 1.1.** Details of analytical results for the Site Investigation are provided in **Tables 2.1-2.7**. The data utilized in developing these assessments includes data from the V3 Site investigation.

6.3.1 REC 1: HISTORICAL JUNK YARD OPERATIONS

This REC includes former junk yard operations at the Site and the potential presence of automotive-related chemicals and petroleum products. Open dumping was also observed. See **Table 1.1** for complete summary of results. The data within this table is grouped to present the Tier 1 exceedances related to each media sampled during the Site Investigation. Sample locations are provided on **Figure 3.1**.

Soil borings and test pits used to characterize REC 1 include:

- **JD-GP-01** through **JD-GP-41**,
- **JD-GP-104** through **JD-GP-122**
- **JD-EX-01** through **JD-EX-08**

Based upon the exceedance of applicable Tier 1 ROs, the REC 1 COCs include:

- VOCs / BTEX: Benzene, Xylenes
- SVOCs: Benzo(a)pyrene and Dibenzo(a,h)anthracene
- Metals: Arsenic and Mercury

The following summarizes the Tier 1 soil exceedances by exposure route:

Soil Ingestion Exposure Route: Evaluation of the site data indicates the Tier 1 ingestion ROs for the industrial-commercial scenario is exceeded for the following COCs:

- PAHs [Benzo(a)pyrene and Dibenzo(a,h)anthracene]:
  - **JD-GP-29(1-3)**
  - **JD-GP-111(0.5-1.5)**
  - **JD-GP-114(1-2)**

- Metals [Arsenic]: to be handled under REC 2
  - **JD-GP-26(1-3)**
  - **JD-GP-105(5-7)**
  - **MSDS(11-13)(JD-GP-117)**

Removal of the impacted soil, 95% upper confidence limit (UCL) calculations for Tier 1, or installation and maintenance of a barrier to exclude the ingestion pathway would be required in the areas where the soil ingestion exposure route RO is exceeded. Arsenic is being addressed by statistical analysis (95% UCL) in ***Section 6.3.4***.

Soil Inhalation Exposure Route: Evaluation of the site data indicates the Tier 1 inhalation RO for the industrial-commercial scenario is exceeded for the following COCs:

- VOCs/BTEX [Benzene]:
  - **JD-GP-05A(8-10)** – to be handled under REC 3
  - **JD-GP-18(1-3)**

The calculation of a site-specific Tier 2 RO, removal of the impacted soil, or installation and maintenance of a barrier to exclude the inhalation pathway would be required in the areas where the industrial-commercial soil inhalation exposure route RO is exceeded.

Evaluation of the site data indicates the Tier 1 inhalation RO for the construction worker scenario is exceeded for the following COCs:

- VOCs/BTEX [Benzene and/or Xylenes]:
  - **JD-GP-05A(8-10)** – to be addressed under REC 3
  - **JD-GP-18(1-3)**

- Metals [Mercury]: to be handled under REC 2
  - **JD-GP-10(1-3)**
  - **JD-GP-13(1-3)**
  - **JD-GP-19(1-3)**
  - **JD-GP-23(1-3)**
  - **JD-GP-124(6-8)**
  - **JD-GP-26(1-3)**
  - **JD-GP-27(6-8)**
  - **JD-GP-28(4-6)**
  - **JD-GP-29(1-3)**
  - **JD-GP-30(1-3)**
  - **JD-GP-31(1-3)**
  - **JD-GP-32(4-6)**
  - **JD-GP-37(1-3)**
  - **JD-GP-41(4-6)**
  - **JD-GP-104(5-7)**
  - **JD-GP-106(3-5)**
  - **JD-GP-117(3-5)**

Analytical results indicate no other soil inhalation exposure route exceedances for industrial-commercial or construction worker scenarios.

Worker notification would be required in the areas where the soil construction-worker inhalation exposure route RO is exceeded.

Soil Component of the Groundwater Ingestion Exposure Route: Evaluation of the site data indicates the Tier 1 soil component of the Class II groundwater ingestion route RO are exceeded for the following COCs:

- VOCs / BTEX [Benzene]:
  - **JD-GP-05A(8-10)** – (to be addressed under REC 3)
  - **JD-GP-14(1-3)**
  - **JD-GP-18(1-3)**
  - **JD-GP-104(5-7)** – (to be addressed under REC 3)
  - **JD-GP-108(0.5-1.5)**
  - **JD-GP-122DUP(0.5-1.5)**

Analytical results indicate no other Tier 1 soil component of the Class II groundwater ingestion route RO exceedances.

A groundwater use restriction will be applied at the Site and groundwater modeling (Tier 2) and, if needed, a Tier 3 evaluation will be used to exclude the pathway in the areas where the soil component of the Class II groundwater ingestion exposure route RO is exceeded.

Tier 1 Groundwater Evaluation
Groundwater wells used to characterize REC 1 include:

- **JD-GP-119/MW-01**
- **MW-02**
- **JD-GP-35/MW-03**
- **JD-GP-16/MW-04**
- **JD-GP-05/MW-05**
- **JD-GP-122/MW-06**
- **JD-GP-121/MW-07** (Temp Well)

Groundwater Direct Ingestion Exposure Route: Groundwater samples were collected, analyzed, and compared to Class II groundwater ROs. Based upon evaluation of data, the following constituents were detected at concentrations above Class II groundwater pathway ROs:

- VOCs / BTEX: [Benzene] **JD-GP-05/MW-05** – (to be handled under REC 3)

- SVOCs: [Benzo(a)anthracene and Benzo(b)fluoranthene] **MW-02**

- PCBs: [Aroclor 1254 and Aroclor 1260] **JD-GP-121/MW-07** (temp well). The groundwater sample at temporary well MW-07 contained sediments. Installation of a permanent well and resampling of MW-07 is suggested to determine if the PCB detection is accurate.

- Metals: [Aluminum, Iron, and Lead] – (to be handled under REC 2)
  - **JD-GP-119/MW-01**
  - **MW-02**
  - **JD-GP-121/MW-07 (temp well)**

Analytical results indicate no other Tier 1 Class II groundwater ingestion route RO exceedances. *A groundwater use restriction will be applied at the Site and groundwater modeling (Tier 2) and if needed, a Tier 3 evaluation will be used to exclude the ingestion pathway in the areas where the Class II groundwater ingestion exposure route RO is exceeded.*

6.3.2 REC 2: SITE-WIDE FILL AND DEBRIS

This REC includes site-wide fill, as a result of historical redevelopment as man-made land and historical operations. The fill material is from an unknown location. See **Table 1.1** for complete summary of results. The data within this table is grouped to present the Tier 1 exceedances related to each media sampled during the Site Investigation. Sample locations are provided on **Figure 3.1**.

Soil borings and test pits used to characterize REC 2 include:

- **JD-GP-01** through **JD-GP-41**,
- **JD-GP-101** through **JD-GP-122**
- **JD-EX-01** through **JD-EX-08**

Based upon the exceedance of applicable Tier 1 ROs, the REC 2 COCs include:

- VOCs / BTEX: Benzene, Xylenes
- SVOCs: Benzo(a)pyrene and Dibenzo(a,h)anthracene
- Metals: Arsenic and Mercury

The following summarizes the Tier 1 soil exceedances by exposure route:

Soil Ingestion Exposure Route: Evaluation of the site data indicates the Tier 1 ingestion ROs for the industrial-commercial scenario are exceeded for the following COCs:

- PAHs [Benzo(a)pyrene and Dibenzo(a,h)anthracene]: - to be handled under REC 1
  - **JD-GP-29(1-3)**
  - **JD-GP-111(0.5-1.5)**
  - **JD-GP-114(1-2)**

- Metals [Arsenic]
  - **JD-GP-26(1-3)**
  - **JD-GP-105(5-7)**
  - **MSDS(11-13)(JD-GP-117)**

Removal of the impacted soil, 95% upper confidence limit (UCL) calculations for Tier 1, or installation and maintenance of a barrier to exclude the ingestion pathway would be required in the areas where the soil ingestion exposure route RO is exceeded. Arsenic is being addressed by statistical analysis (95% Upper Confidence Limit) in ***Section 6.3.4***.

Soil Inhalation Exposure Route: Evaluation of the site data indicates the Tier 1 inhalation ROs for the industrial-commercial scenario is exceeded for the following COCs:

- VOCs/BTEX [Benzene]:
  - **JD-GP-05A(8-10)** – to be addressed under REC 3
  - **JD-GP-18(1-3)** – to be addressed under REC 1

Removal of the impacted soil or installation and maintenance of a barrier to exclude the inhalation pathway would be required in the areas where the industrial-commercial soil inhalation exposure route RO is exceeded.

Evaluation of the site data indicates the Tier 1 inhalation RO for the construction worker scenario is exceeded for the following COCs:

- VOCs/BTEX [Benzene and Xylenes]:
  - **JD-GP-05A(8-10)** – to be addressed under REC 3
  - **JD-GP-18(1-3)** – to be addressed under REC 1
  - **JD-GP-101(8-10)** – to be addressed under REC 3
  - **JD-GP-102(8-10)** – to be addressed under REC 3

- Metals [Mercury]:
  - **JD-GP-10(1-3)**
  - **JD-GP-13(1-3)**
  - **JD-GP-19(1-3)**
  - **JD-GP-23(1-3)**
  - **JD-GP-124(6-8)**
  - **JD-GP-26(1-3)**
  - **JD-GP-27(6-8)**
  - **JD-GP-28(4-6)**
  - **JD-GP-29(1-3)**
  - **JD-GP-30(1-3)**
  - **JD-GP-31(1-3)**
  - **JD-GP-32(4-6)**
  - **JD-GP-37(1-3)**
  - **JD-GP-41(4-6)**
  - **JD-GP-104(5-7)**
  - **JD-GP-106(3-5)**
  - **JD-GP-117(3-5)**

Worker notification would be required in the areas where the soil construction-worker inhalation exposure route RO is exceeded.

Analytical results indicate no other soil inhalation exposure route exceedances for industrial-commercial or construction worker scenarios.

Soil Component of the Groundwater Ingestion Exposure Route: Evaluation of the site data indicates the Tier 1 soil component of the Class II groundwater ingestion route RO are exceeded for the following COCs:

- VOCs / BTEX [Benzene]:
  - **JD-GP-05A(8-10)**
  - **JD-GP-14(1-3)**
  - **JD-GP-18(1-3)**
  - **JD-GP-101(8-10)**
  - **JD-GP-102(8-10)**
  - **JD-GP-103(8-10)**
  - **JD-GP-104(5-7)**
  - **JD-GP-108(0.5-1.5)**
  - **JD-GP-122DUP(0.5-1.5)**

SPLP or TCLP metals analysis on select samples from the OSE soil data set (**JD-GP-01** through **JD-GP-41**) was requested from IEPA. However, presumably due to budgetary constraints, IEPA was not able to satisfy this request. Additional SPLP and/or TCLP analysis was intended for soil samples that contained elevated pH (e.g., 9.0), to allow a rigorous evaluation of the soil component of the groundwater ingestion route. However, V3 utilized V3 collected soil samples from locations **JD-GP-101** through **JD-GP-122**, to provide a more rigorous metals evaluation of the soil to groundwater route. V3 selected samples for SPLP analysis based on their location relative to OSE borings with elevated pH and/or with the highest metal concentration that could not be evaluated using the pH-based soil component of

groundwater ingestion for Class II groundwater (aluminum, chromium, cobalt, iron, manganese, silver and vanadium).

The OSE borings were evaluated as follows:

- Selenium analysis contained multiple locations where the reporting limit was greater than the Tier 1 RO. Therefore, additional samples from **JD-GP-104** to **JD-GP-120** were evaluated for total selenium and **JD-GP-119** was analyzed for SPLP selenium. The additional analyses did not indicate detections of selenium concentrations.
- For metals with concentrations above the MSA background concentrations and/or which could not be evaluated by pH (aluminum, chromium, cobalt, iron, manganese, silver and vanadium), a supplemental sample from **JD-GP-104** through **JD-GP-122** was selected for analysis based on the closest proximity to the highest (or second highest) concentrations observed within the OSE dataset. The samples were analyzed for total and/or SPLP / TCLP concentrations each respective metal.
  - For example, the highest observed chromium concentration was 170 mg/kg in **JD-GP-108**, second highest is at **JD-GP-37** and **JD-GP-41** (117 and 113 mg/kg, respectively). SPLP chromium was analyzed and was not detected in the nearest supplemental borings **JD-GP-117** and **JD-GP-119**.
  - Of the metals without pH values, TCLP analysis were also performed on the RCRA based metals, arsenic, cadmium, chromium and silver. A low detection of chromium was well below the Class II Tier 1 groundwater RO and TCLP arsenic, cadmium and silver were not detected.
- Barium, boron, copper, iron, nickel, thallium, and zinc were additionally evaluated by SPLP analysis of samples from the supplemental borings at four locations (**JD-GP-106**, **JD-GP-119**, **JD-GP-120** and **JD-EX-04**), which were spaced across the Site. All SPLP results were below Class II ROs.
- A summary of SPLP and TCLP analysis and the metals evaluated are in the table below.

Supplemental Sample ID :	Supplemental Metals for Analysis	TCLP or SPLP analysis
JD-GP-104 (5-7)	Cr, Ag	SPLP
JD-GP-105 (5-7)	As, Cd, Cr, Ag	TCLP
JD-GP-106 (3-5)	Be, Cd, Cr, Fe, Mn, Ag, Tl, Zn	SPLP
JD-GP-107 (0.5-1.5)	Cr, Ag	SPLP
JD-GP-108 (0.5-1.5)	Cr, Ag	TCLP
JD-GP-110 (0.5-1.5)	Cr, Ag	SPLP
JD-GP-117(3-5)	Cd, Cr, Ag	SPLP
JD-GP-119(5-7)	Al, Ba, B, Cr, Co, Cu, Ni, Se, V	SPLP
JD-GP-120 (1-3)	Al, Cr, Co, Fe, Mn, Ag, V	SPLP
JD-EX-04(11-12)	Al, Cr, Co, Fe, Mn, Ag, V	SPLP
JD-GP-122(0.5-1.5)	Mn	SPLP

The SPLP and TCLP analysis did not indicate elevated concentrations of metals, or leachable metals in excess of respective Tier 1 soil to groundwater ROs.

A groundwater use restriction will be applied at the Site and groundwater modeling (Tier 2) and, if needed, a Tier 3 evaluation will be used to exclude the pathway in the areas where the soil component of the Class II groundwater ingestion exposure route RO is exceeded.

Tier 1 Groundwater Evaluation
Groundwater wells used to characterize REC 1 include:

- **JD-GP-119/MW-01**
- **MW-02**
- **JD-GP-35/MW-03**
- **JD-GP-16/MW-04**
- **JD-GP-05/MW-05**
- **JD-GP-122/MW-06**
- **JD-GP-121/MW-07** (Temp Well)

Groundwater Direct Ingestion Exposure Route: Groundwater samples were collected, analyzed, and compared to Class II groundwater ROs. Based upon evaluation of data, the following constituents were detected at concentrations above Class II groundwater pathway ROs:

- VOCs / BTEX [Benzene]: **JD-GP-05/MW-05 –** (to be addressed under REC 3)
- SVOCs: [Benzo(a)anthracene and Benzo(b)fluoranthene]: **MW-02 –** (to be addressed under REC 1)
- PCBs: [Aroclor 1254 and Aroclor 1260]: **JD-GP-121/MW-07** – (to be addressed under REC 1)
- Metals [Aluminum, Iron, and Lead]:
  - **JD-GP-119/MW-01**
  - **MW-02**
  - **JD-GP-121/MW-07**

Analytical results indicate no other Tier 1 Class II groundwater ingestion route RO exceedances.

A groundwater use restriction will be applied at the Site and groundwater modeling (Tier 2) and if needed, a Tier 3 evaluation will be used to exclude the ingestion pathway in the areas where the Class II groundwater ingestion exposure route RO is exceeded.

6.3.3 REC 3: APPARENT PETROLEUM PIPELINE RELEASE

This REC includes identified soil and groundwater petroleum impacts at a depth at or below the buried petroleum pipeline that transects Site 5. See **Table 1.1** for complete summary of results. The data within this table is grouped to present the Tier 1 exceedances related to each media sampled during the Site Investigation. Sample locations are provided on **Figure 3.1**.

Tier 1 Soil Evaluation

Soil borings used to characterize REC 3 include:

- **JD-GP-01**
- **JD-GP-03**
- **JD-GP-05**
- **JD-GP-101**
- **JD-GP-102**
- **JD-GP-103**
- **JD-GP-104**
- **JD-GP-105**
- **JD-GP-106**
- **JD-GP-107**

Based upon the exceedance of applicable Tier 1 ROs, the following COCs were identified:

- VOCs / BTEX: Benzene, Xylenes
- Metals: Arsenic and Mercury

Soil Ingestion Exposure Route: Evaluation of the site data indicates the Tier 1 ingestion ROs for the industrial-commercial scenario are exceeded for the following COCs:

- Metals [Arsenic]: **JD-GP-105(5-7)** – (to be handled under REC 2)

Soil Inhalation Exposure Route: Evaluation of the site data indicates the Tier 1 inhalation RO for the industrial-commercial scenario is exceeded for the following COC:

- VOCs/BTEX [Benzene]:
  - **JD-GP-05A(8-10)**
  - **JD-GP-101(8-10)**
  - **JD-GP-102(8-10)**

The calculation of a site-specific Tier 2 RO, removal of the impacted soil, or installation and maintenance of a barrier to exclude the inhalation pathway would be required in the areas where the industrial-commercial soil inhalation exposure route RO is exceeded.

Evaluation of the site data indicates the Tier 1 inhalation RO for the construction worker scenario is exceeded for the following COCs:

- VOCs/BTEX [Benzene]:
  - **JD-GP-05A(8-10)**
  - **JD-GP-101(8-10)**
  - **JD-GP-102(8-10)**

- Metals [Mercury]:
  - **JD-GP-104(5-7)**
  - **JD-GP-106(3-5)**

Analytical results indicate no other soil inhalation exposure route exceedances for industrial-commercial or construction worker scenarios.

Worker notification would be required in the areas where the soil inhalation exposure route RO is exceeded for the construction worker.

Soil Component of the Groundwater Ingestion Exposure Route: Evaluation of the site data indicates the Tier 1 soil component of the Class II groundwater ingestion route RO are exceeded for the following COCs:

- VOCs / BTEX [Benzene]:

  JD-GP-05A(8-10)
  JD-GP-101(8-10)
  JD-GP-102(8-10)
  JD-GP-103(8-10)
  JD-GP-104(5-7)

Analytical results indicate no other Tier 1 soil component of the Class II groundwater ingestion route RO exceedances.

A groundwater use restriction will be applied at the Site and groundwater modeling (Tier 2) and, if needed, a Tier 3 evaluation will be used to exclude the pathway in the areas where the soil component of the Class II groundwater ingestion exposure route RO is exceeded.

Tier 1 Groundwater Evaluation
Groundwater wells used to characterize REC 3 include:

- **JD-GP-16/MW-04**
- **JD-GP-05/MW-05**

Groundwater Direct Ingestion Exposure Route: Groundwater samples were collected, analyzed, and compared to Class II groundwater ROs. Based upon evaluation of data, the following constituents were detected at concentrations above Class II groundwater pathway ROs:

- VOCs / BTEX [Benzene]:

  JD-GP-05/MW-05

A groundwater use restriction will be applied at the Site and groundwater modeling (Tier 2) and if needed, a Tier 3 evaluation will be used to exclude the ingestion pathway in the areas where the Class II groundwater ingestion exposure route RO is exceeded.

6.3.4 ARSENIC SOIL INGESTION EXPOSURE ROUTE – STATISTICAL ANALYSIS

Evaluation of the site data indicates that arsenic exceeds the Tier 1 ingestion ROs for industrial-commercial [i.e., the statewide background soils concentration: 13 mg/kg for metropolitan statistical areas (Section 742, Appendix A, Table G)] at three locations. The exceedances of ingestion ROs were documented at the following sample locations:

- **JD-GP-26** (west central portion of Site 5):: 18 mg/kg at 1-3 ft
- **JD -GP-105** (northwest portion of Site 5): 15 mg/kg at 5-7 ft
- **JD -GP-117** / MSDS (MS-MSD sample in southeast portion of Site 6): 38 mg/kg at 11-13 ft (additional sample at 3-5 ft is below ROs)

Pursuant to IAC Part 742.225, a statistically valid approach for evaluating the average site-wide concentration of arsenic at the Site was employed. The objective of this evaluation was to determine whether the 95 % Upper Confidence Limit (UCL) for the site-wide arsenic data/results (sample population) is less than the 95% UCL statewide background soil concentration for arsenic of 13 mg/kg.

The following statistical procedures were employed:

- Shapiro-Wilk Test of Normality.
- Evaluation of the Upper Confidence Limit (UCL) on the mean at a 95% probability.

Prior to calculating the site-wide average concentration, a Shapiro-Wilk Test of Normality was used to determine if the data set is normally distributed. V3 used a USEPA statistical software package known as ProUCL to perform the Shapiro-Wilk Test on site-wide data. The details of the calculation are presented in the following paragraph and on the data and calculation sheets provided in **Appendix H**.

A data set of 54 sample analysis results was used for the calculations. The Shapiro-Wilk test and calculation of the mean were then performed. A "W" value for the Shapiro-Wilk test was calculated using ProUCL. The calculated "W" value was less than the critical "W" value and indicated that the data was not normally, log-normally or gamma distributed. Therefore, another method in determining a mean of the data and 95% upper confidence limit (UCL) was used. The results are summarized below:

- The mean of the data was calculated using ProUCL. The site-wide mean concentration for arsenic was calculated with nonparametric statistics to be equal to 4.595 mg/kg.

- The 95% UCL for the site-wide arsenic data was calculated from the site-wide data with ProUCL using nonparametric statistics (95% KM (t) UCL and the 95% KM (% Bootstrap) UCL). The resultant 95% KM (t) UCL was 5.881 mg/kg and the 95% KM (% Bootstrap) UCL was 6.059 mg/kg.

The site-wide 95% UCLs (5.881 and 6.059 mg/kg) are less than the 95% UCL statewide background soil concentration for arsenic (13 mg/kg). Therefore, the calculated arsenic concentration at the Site achieves the Tier 1 ingestion RO.

[Note: The 95% UCL was also calculated for the soil interval of 0-3 feet. The resulting calculations also achieved the Tier 1 ingestion RO.]

6.4 PRELIMINARY REMEDIATION OBJECTIVES

The following presents the initial proposed Site remediation objectives (ROs), as well as any institutional controls necessary for development of site-specific ROs.

Section 742.1000 (Subpart J; IAC Part 742) requires the establishment of institutional controls for ROs developed based on industrial-commercial property use and the exclusion of exposure routes/pathways. As per Section 742.1000(a), institutional controls will be placed on the Site that would:

- Restrict groundwater usage at the Site (via City of Blue Island Groundwater Ordinance – **Appendix B**);

- Restrict subsurface construction and maintenance to qualified personnel (i.e., in accordance with applicable OSHA regulations) via construction worker notification; and
- Maintain barriers to exclude exposure routes as applicable to specified areas where PAHs and BTEX are above Tier 1 or 2 ROs, as necessary.

The specific areas requiring institutional controls will be proposed subsequently in the Remediation Objectives Report and Remedial Action Plan. As per Sections 742.310(b) and 742.315 (b), the soil ingestion and inhalation routes, respectively, may be excluded if an appropriate engineered barrier, as set forth in Subpart K, is installed.

The No Further Remediation (NFR) letter will require current and future property owners to maintain the integrity of any specified barriers, as well as restrict all subsurface construction to qualified personnel (i.e., in accordance with applicable OSHA regulations). Section 742.320 specifies the conditions under which the groundwater ingestion exposure route may be excluded.

Active remedial measures (e.g., dig and haul) and/or engineered barriers, and site-specific soil and groundwater ROs are proposed to address and exclude exposure routes at the Site.

Groundwater Pathway Exclusion: Transecting the Site is Midlothian Creek, the potential receiving water for COCs at the Site and a potential exposure pathway for human and aquatic receptors. Following a Tier 2 remediation objectives evaluation, a Tier 3 evaluation of potential organics and inorganics in groundwater may be proposed. The Tier 3 proposal (as part of a future Remediation Objectives Report and Remedial Action Plan) would provide the basis for demonstrating "no adverse impact" to Midlothian Creek as a result of organic and inorganic COCs present within groundwater at the Site. Demonstrating "no adverse impact" to the Midlothian Creek is a prerequisite to excluding the groundwater exposure pathway at the Site.

Remediation Objectives: Considering the pathway exclusion planned for addressing site concerns, the following ROs are proposed:

- Tier 1 ROs: Tier 1 industrial-commercial and construction worker ROs for the soil inhalation and ingestion exposure pathways and Class II groundwater ingestion ROs. A construction worker notification is intended to exclude the construction worker inhalation exposure route.

- Tier 2 ROs:
  - Tier 2 soil inhalation ROs may be developed to determine whether benzene impacts at the Site require soil removal or barriers as a solution. It's anticipated, that calculated Tier 2 ROs will allow the RA the option of not removing the soils or maintaining engineered barriers in these locations.
  - Tier 2 soil component of the Class II groundwater ingestion and Tier 2 Class II direct ingestion groundwater ROs on-site. A groundwater use restriction at the Site will move the compliance point to the Site boundaries. Tier 2 simulations will be provided in a subsequent Remediation Objectives Report and Remedial Action Plan to demonstrate if Tier 2 site-specific ROs, surface water quality criteria and residual concentrations are protective (e.g., Tier 1, Class II direct ingestion groundwater ROs are achieved at the Site boundaries.).

- Tier 3 Evaluation: A Tier 3 incomplete exposure pathway demonstration related to the COCs in soils (PAHs, metals, BTEX) with residual concentrations at select locations exceeding the Tier 1 and Tier 2, Class II soil to groundwater exposure route may be proposed, as needed. This demonstration may include surface water samples or the installation of wells along the bank of the Creek.

Based on the approval of Tier 1, 2 and 3 evaluations, as needed, and the successful implementation of remedial measures and institutional controls, the Site can qualify for comprehensive NFR letter determination. Anticipated cleanup and/or exposure pathway resolution alternatives for COCs exceeding Tier 1 ROs are provided in the right-hand column of **Table 1.1**.

7.0 CONCLUSIONS

This report documents the comprehensive site investigation (**Sections 1.0** through **4.0**) and the assessment of site conditions (**Sections 5.0 and 6.0**).

7.1 SITE SUMMARY

From April to July 2012, V3 Companies performed several subsurface investigations of the remediation site (Site). The Site investigation performed by V3 during this period was developed with historical data obtained during previous environmental investigations related to the Site.

This data, in conjunction with the data and evaluations from V3's Site Investigation, form a Comprehensive Site Investigation (CSI) Report performed in conformance with the requirements of 35 IAC Section 740.425 and which provides a complete presentation of historical data and investigations related to the Site. With noted limitations, it is the LPE's judgment the data and associated evaluations of this CSI Report are adequate for characterization of the identified Site RECs.

The following RECs were defined for the Site:

- ***REC 1 – Historical Junk Yard Operations****:* This REC includes former junk yard operations at the Site and the potential presence of automotive-related chemicals and petroleum products. Open dumping was also observed.

- ***REC 2 – Site-Wide Fill and Debris****:* This REC includes site-wide fill, as a result of historical redevelopment as man-made land and historical operations. The fill material is from an unknown location.

Following site investigation activities, a third REC was added.

- ***REC 3 – Apparent Petroleum Pipeline Release****:* This REC includes identified soil and groundwater petroleum impacts at a depth at or below the buried petroleum pipeline that transects Site 5.

The following summarizes general site conditions:

- Physical Characteristics: The Site has been filled, and was originally a predominantly low-lying area gently rising in directions away from the current Midlothian Creek. Site fills consist of varying soils, including sands, gravels and clays intermixed with some brick asphalt and other debris. Two areas in the eastern portion of the Site fill are notable:
  - Blue (Cemented) Sand: A bluish poorly graded, cemented sandy material is located as indicated on **Figure 3.1**. The material generally is observed with a sulfurous odor. COCs were not observed in specific association with this material.
  - Construction / Debris Fill: The northeast portion of the Site contains an area of debris fill. The debris is predominantly lumber, with some concrete, wire, auto parts and such, intermixed with some soil. The surface of this area generally contains several feet of soil cover. Evidence of environmental

impact or deleterious sources of potential environmental impacts were not observed.

- Site COCs

  The analytical data obtained from respective RECs indicates the COCs within Site soils are:

  - PAHs: benzo(a)pyrene and dibenzo(a,h)anthracene
  - VOCs: benzene and xylene
  - Metals: arsenic and mercury

  Site Groundwater COCs are:

  - PAHs: benzo(a)anthracene and benzo(b)fluoranthene
  - VOCs: benzene
  - Metals: aluminum, iron and lead
  - PCBs

- Concentrations of COCs were detected above one or more of the following Tier 1 ROs: industrial-commercial ingestion and inhalation, construction worker inhalation, Class II soil component of the groundwater ingestion and Class II groundwater ingestion pathway ROs.

- Impacts from historical operations and/or site fill and an apparent release from the petroleum pipeline are located on site. These include isolated soil PAH and VOCs impacts in the central and north portion of the site, isolated PAHs and benzene in groundwater and site-wide metals impacts in soil and groundwater. V3 anticipates addressing the impacts by Tier 2 and/or 3 evaluations, dig and haul remediation and/or engineered barrier(s) and institutional controls, subject to future land use considerations.

Anticipated cleanup and/or exposure pathway resolution alternatives for COCs exceeding Tier 1 ROs are provided in the right-hand column of **Table 1.1**.

Based on the approval of Tier 1, 2 and 3 evaluations, as needed, and the implementation of the remedial actions (engineered barriers and/or dig and haul activities) and the following institutional controls, the Site will qualify for a comprehensive NFR determination:

- Provide pathway exclusion for the ingestion and inhalation exposure route through the maintenance of any engineered barrier (if barriers are specified);
- Provide notification to construction workers of overall site conditions as well as conditions underlying engineered barriers, and assure all work is completed pursuant to OSHA requirements; and
- Prevent the installation and/or use of potable wells and place a groundwater use restriction on the Site (via City of Blue Island Groundwater Ordinance – **Appendix B**).

7.2 DATA GAPS

Based on the investigation results and evaluation, V3 has identified a number of data gaps that need to be addressed to complete the TACO evaluation of the identified Site RECs. These data gaps are summarized as follows:

- Additional data may be required to complete Tier 2 / 3 analyses related to VOCs, PAHs and metals detected in soils and/or groundwater, dependent upon the reuse plan and selected site closure strategies. It's anticipated that targeted data collection will be recommended as closure strategies are better defined for various areas of the Site.
- An additional permanent monitoring well should be installed near the former temporary well MW-07 to determine if PCBs are an actual COC in groundwater (unlikely). Prior to installing the well, additional characterization of the debris fill may be warranted to further evaluate the potential for deleterious materials and/or other sources of COCs, including PCBs.

7.3 NEXT STEPS

The RA anticipates that Tier 2 and/or Tier 3 evaluations will be performed in the future and submitted under a Remediation Objectives Report and Remedial Action Plan once the RA has procured the funding necessary to continue. Additional public funding may be sought to implement cleanup actions for site re-use. In the interim, the RA is requesting approval / conditional approval of the CSIR. Approval/ conditional approval of the CSIR will assist the RA's eligibility to pursue funding for remedial planning and remedial actions at the Site.

Anticipated cleanup and/or exposure pathway resolution alternatives for COCs exceeding Tier 1 ROs are provided in the right-hand column of **Table 1.1**.

The pipeline company has been notified of the petroleum release to soils identified in the northwest corner of the Site. The City may approach the pipeline company as the Responsible Party for REC 3. As such, it is possible that this concern will be addressed separately or in conjunction with the City's SRP activities for the balance of the Site.

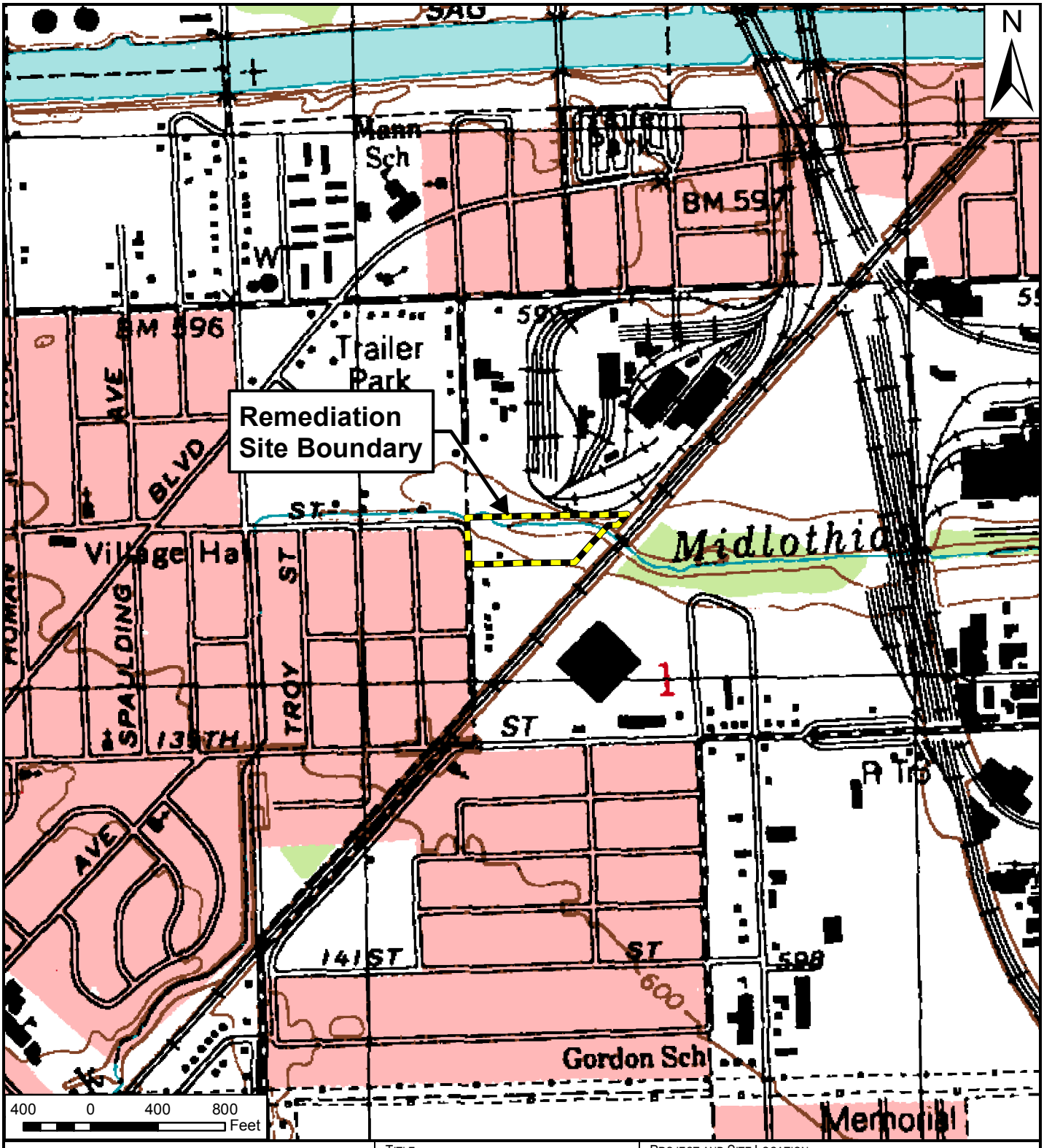
8.0 LICENSED PROFESSIONAL ENGINEER AFFIRMATION

I attest that the Site investigation, with the exception of those investigations performed by others (e.g., OSE), that are the subject of this report were performed under my direction and this document and all attachments were prepared under my direction or reviewed by me, and, to the best of my knowledge and belief, the work described in the report has been designed or completed in accordance with the Act, 35 Ill. Adm. Code 740, and generally accepted engineering practices, and the information presented is accurate and complete, except as otherwise noted.

Keith R. Oswald, P.E.
V3 COMPANIES

September 2012
Date

FIGURES



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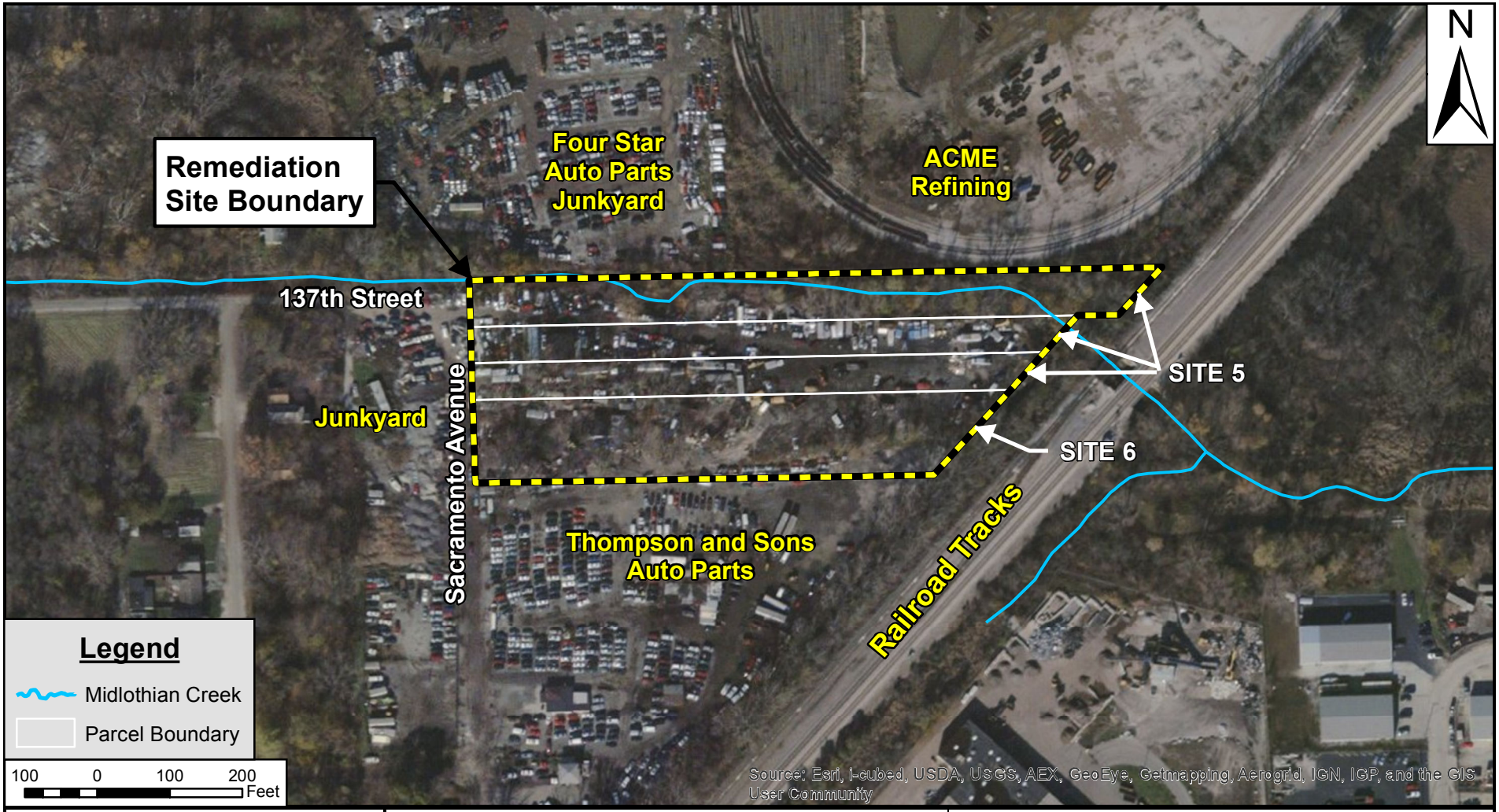
TITLE: **Site Location Map**	PROJECT AND SITE LOCATION: **City of Blue Island South COD and TOD Areas Site 5 and Site 6 13701 - 13721 Sacramento Avenue Blue Island, Illinois**		
BASE LAYER: USGS Topographic Map (1997)	PROJECT NO. 09073A2008.HAZ & 09073A2008.PET	FIGURE: 1.1	SHEET: 1 OF: 1
CLIENT: **City of Blue Island 13051 S. Greenwood Avenue Blue Island, Illinois 60406**	QUADRANGLE: Blue Island, IL	DATE: 08/03/12	SCALE: See Scale Bar



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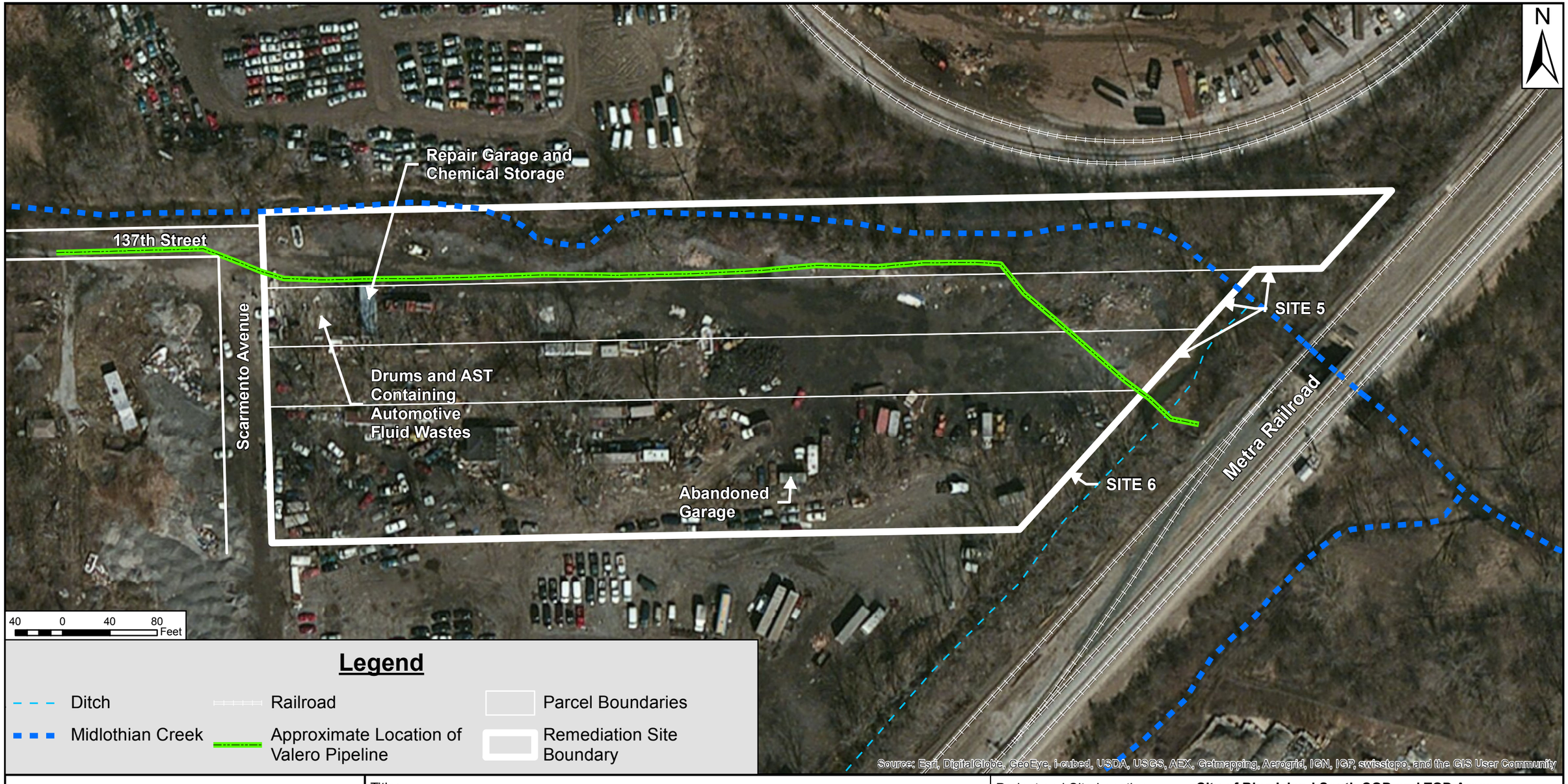
TITLE: **Site Vicinity Map**		PROJECT AND SITE LOCATION: **City of Blue Island South COD and TOD Areas Site 5 and Site 6 13701 - 13721 Sacramento Avenue Blue Island, Illinois**	
BASE LAYER: Aerials Express (2009)	PROJECT NO.: 09073A2008.HAZ and 09073A2008.PET	FIGURE: 1.2	SHEET: 1 OF: 1
CLIENT: **City of Blue Island 13051 S. Greenwood Avenue Blue Island, Illinois 60406**	QUADRANGLE: N/A	DATE: 08/03/12	SCALE: See Scale Bar



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Title: **Site Base Map**

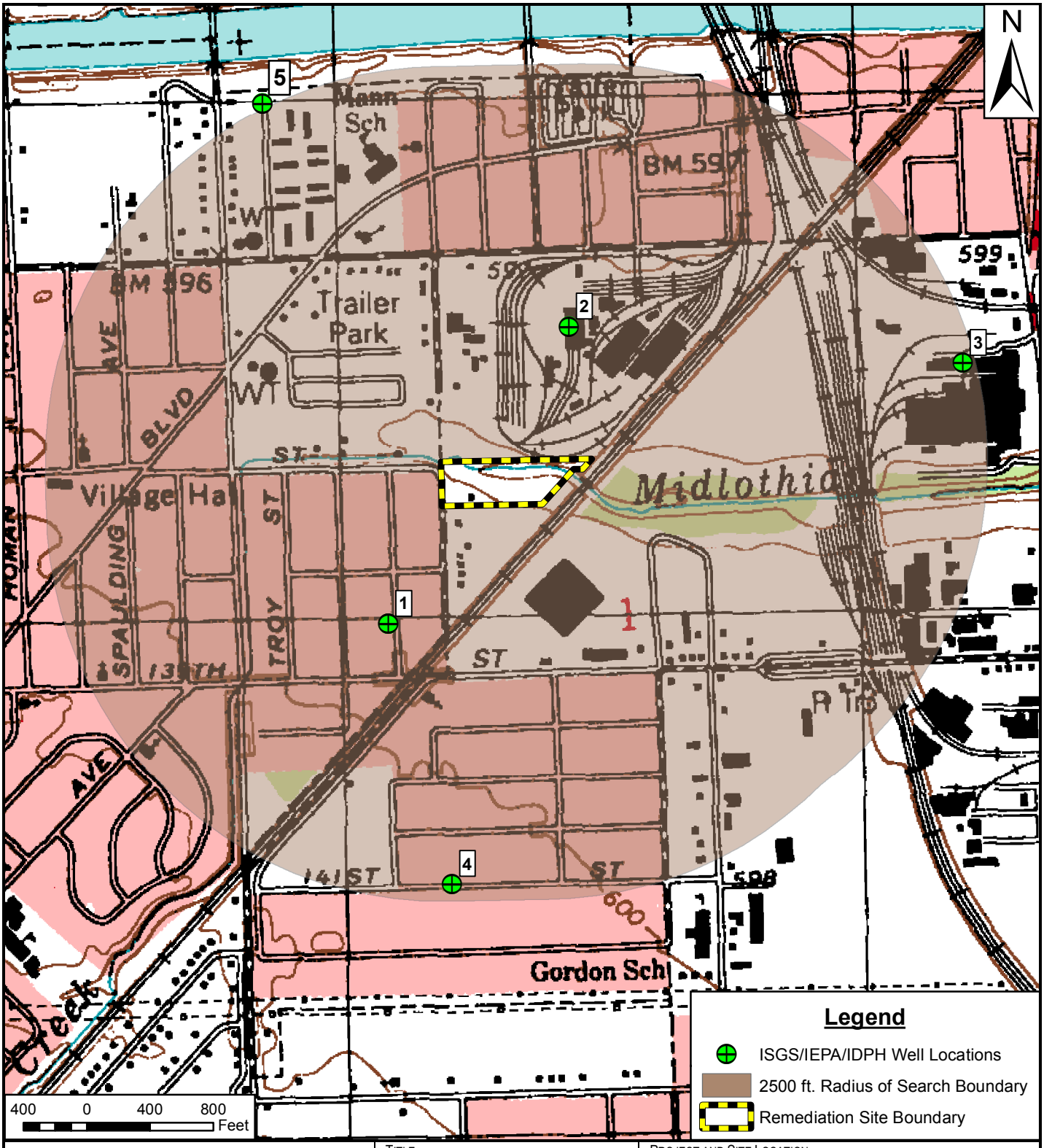
Base Layer: Digital Globe (2012)

Client: **City of Blue Island**
13051 S. Greenwood Avenue
Blue Island, Illinois 60406

Project and Site Location: **City of Blue Island South COD and TOD Areas**
Site 5 and Site 6
13701 - 13721 Sacramento Avenue
Blue Island, Illinois

Project No.:	Figure:	Sheet:
09073A2008.HAZ 09073A2008.PET	1.3	1 Of: 1

Quadrangle:	Date:	Scale:
N/A	08/03/12	See Scale Bar



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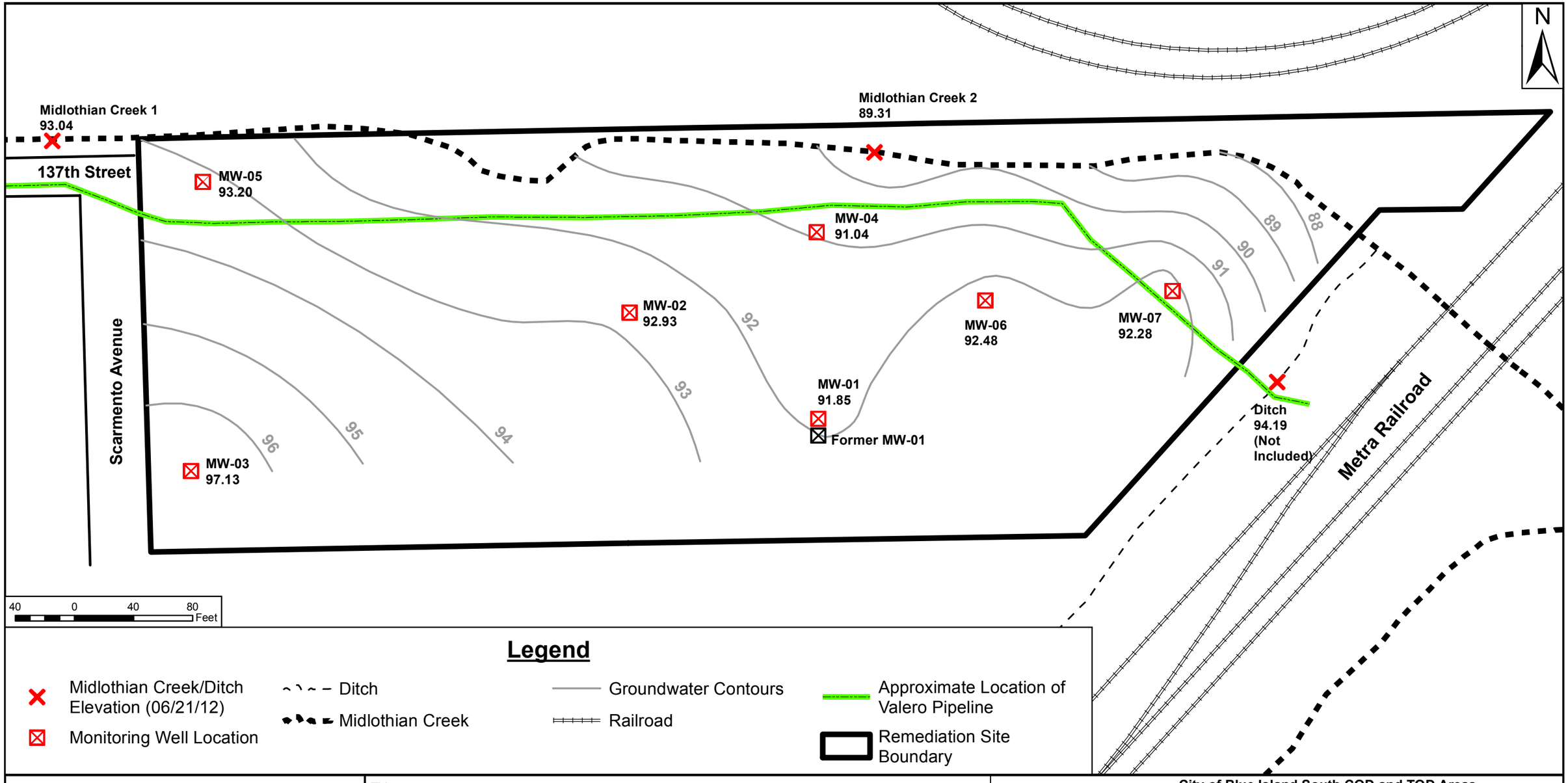
TITLE: **Water Well Survey Map**	PROJECT AND SITE LOCATION: **City of Blue Island South COD and TOD Areas Site 5 and Site 6 13701 - 13721 Sacramento Avenue Blue Island, Illinois**		
BASE LAYER: USGS Topographic Map (1997)	PROJECT NO. 09073A2008.HAZ 09073A2008.PET	FIGURE: 2.1	SHEET: 1 OF: 1
CLIENT: **City of Blue Island 13051 S. Greenwood Avenue Blue Island, Illinois 60406**	QUADRANGLE: Blue Island, IL	DATE: 08/03/12	SCALE: See Scale Bar



Legend

- Midlothian Creek/Ditch Elevation (06/21/12)
- Monitoring Well Location
- Ditch
- Midlothian Creek
- Groundwater Contours
- Railroad
- Approximate Location of Valero Pipeline
- Remediation Site Boundary

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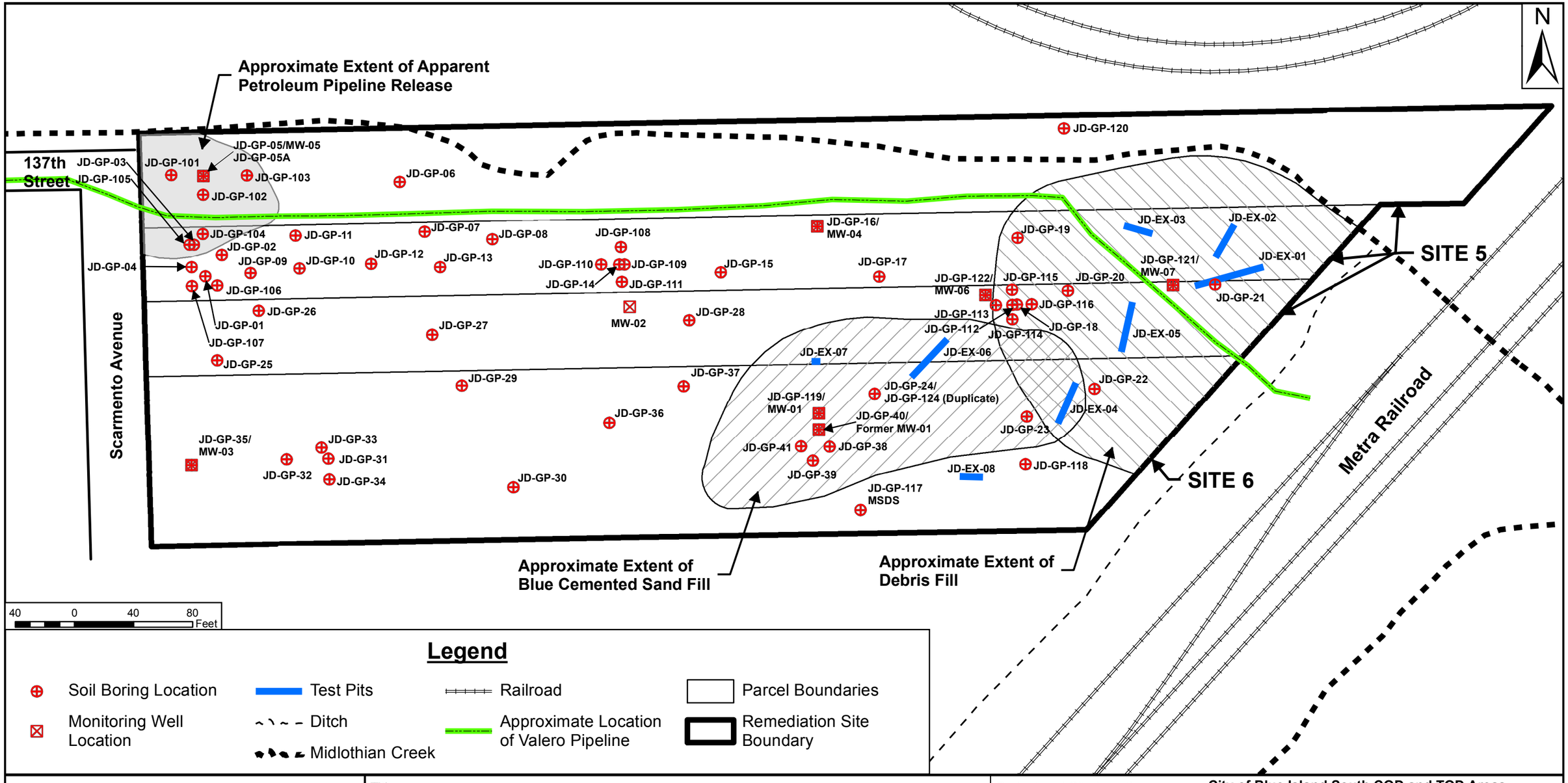
Title:	**Groundwater Contour Map**
Base Layer:	N/A
Client:	**City of Blue Island** **13051 S. Greenwood Avenue** **Blue Island, Illinois 60406**
Project and Site Location:	**City of Blue Island South COD and TOD Areas** **Sites 5 and 6** **13701 - 13721 Sacramento Avenue** **Blue Island, Illinois**
Project No.:	09073A2008.HAZ 09073A2008.PET
Figure:	2.1
Sheet: / Of:	1 / 1
Quadrangle:	N/A
Date:	08/03/12
Scale:	See Scale Bar



Legend

- Soil Boring Location
- Monitoring Well Location
- Test Pits
- Ditch
- Midlothian Creek
- Railroad
- Approximate Location of Valero Pipeline
- Parcel Boundaries
- Remediation Site Boundary

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Title: **Soil Boring, Monitoring Well, Test Pit, and Soil Sample Location Map**

Base Layer: N/A

Client: **City of Blue Island**
13051 S. Greenwood Avenue
Blue Island, Illinois 60406

Project and Site Location: **City of Blue Island South COD and TOD Areas**
Site 5 and Site 6
13701 - 13721 Sacramento Avenue
Blue Island, Illinois

Project No.:	Figure:	Sheet:
09073A2008.HAZ 09073A2008.PET	3.1	1 of 1

Quadrangle:	Date:	Scale:
N/A	08/03/12	See Scale Bar

TABLES

TABLE 1.1 - SUMMARY OF SOIL AND GROUNDWATER TIER 1 EXCEEDANCES
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	SAMPLE I.D.	Grab Soil Sample Depth (feet)	Soil Sample	GW Sample	ANALYSES PERFORMED: VOCs	BTEX	SVOCs	PNAs	Pesticides	PCBs	TAL Metals	RCRA Metals	SPLP -specific metals	TCLP-specific metals	Reactive Cyanide	Total Cyanide	Reactive Sulfide	Glycols	TPH	FOC	pH	EXCEEDANCES OF TACO TIER 1 REMEDIATION OBJECTIVES	TIER 1 REMEDIATION OBJECTIVES EXCEEDANCES: Industrial-Commercial Ingestion	Industrial-Commercial Inhalation	Construction Worker Ingestion	Construction Worker Inhalation	Soil Component of the Groundwater Ingestion Exposure Route Class II	Groundwater Class II	Notes (Sample Soil Type / Well Screen Interval)	TACO Exposure Pathway Resolution (Anticipated and/or Alternatives)
Apparent Valero Pipeline Petroleum Release	JD-GP-05(1-3)	1-3	X		X		X			X	X	X				X					X								Fill	
	JD-GP-05A(8-10)	8-10	X		X		X			X	X	X				X					X	1 VOC		Benzene		Benzene	Benzene		Native	Outdoor Inhalation: Develop Tier 2 RO / Egr. Barrier / and/or Soil Removal & Disposal Soil to GW: GW Use Restriction (must meet surface water criteria to allow exclusion) Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-101(8-10)	8-10	X			X		X											X			2 VOCs		Benzene		Benzene, Xylenes	Benzene		Fill	
	JD-GP-102(8-10)	8-10	X			X		X											X			1 VOC		Benzene		Benzene	Benzene		Native	
	JD-GP-103(8-10)	8-10	X			X		X											X								Benzene		Native	
Shallow Petroleum Impacts (NW Portion of Site)	JD-GP-06(4-6)	4-6	X		X		X			X	X	X				X					X								Fill	
	JD-GP-01(4-6)	4-6	X		X		X			X	X	X				X					X								Fill	
	JD-GP-106(1-2)	1-2	X			X		X																					Fill	
	JD-GP-106(3-5)	3-5	X			X		X				X	X					X			X	1 Metal				Mercury			Fill	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-106(10-12)	10-12	X			X		X												X									Native	
	JD-GP-107(0.5-1.5)	0.5-1.5	X			X		X				X	X								X								Fill	
	JD-GP-107(3-5)	3-5	X			X		X										X											Fill	
	JD-GP-107(8-10)	8-10	X			X		X																					Native	
	JD-GP-02(3-5)	3-5	X		X		X			X	X	X				X					X								Fill	
	JD-GP-03(1-3)	1-3	X		X		X			X	X	X				X					X								Fill	
	JD-GP-104(0.5-1.5)	0.5-1.5	X			X		X																					Fill	
	JD-GP-104(5-7)	5-7	X			X		X				X	X					X	X		X	1 VOC, 1 Metal				Mercury	Benzene		Fill	Soil to GW: GW Use Restriction (must meet surface water criteria to allow exclusion) Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-104(10-12)	10-12	X			X		X																					Fill	
	JD-GP-105(0.5-1.5)	0.5-1.5	X			X		X																					Fill	
	JD-GP-105(5-7)	5-7	X			X		X				X		X				X	X		X	1 Metal	Arsenic						Fill	Soil Ingestion: Tier 1 compliance via calculated 95% UCL
	JD-GP-04(1-3)	1-3	X		X		X			X	X	X				X					X								Fill	
Shallow Petroleum Impact (North Central Portion of Site)	JD-GP-14(1-3)	1-3	X		X		X			X	X	X				X					X	1 VOC					Benzene		Fill	Soil to GW: GW Use Restriction (must meet surface water criteria to allow exclusion)
	JD-GP-108(0.5-1.5)	0.5-1.5	X			X		X				X		X				X			X	1 VOC					Benzene		Fill	
	JD-GP-108(3-5)	3-5	X			X		X										X											Fill	
	JD-GP-109(5-7)	5-7	X																										Fill	
	JD-GP-110(0.5-1.5)	0.5-1.5	X			X		X				X	X					X	X		X								Fill	
	JD-GP-111(0.5-1.5)	0.5-1.5	X			X		X														2 SVOCs	Benzo(a)pyrene, Dibenzo(a,h)anthracene						Fill	Soil Ingestion: Tier 1 compliance via calculated 95% UCL or Hotspot removal or Egr. Barrier
Shallow Petroleum Impacts (NE Portion of Site)	JD-GP-18(1-3)	1-3	X		X		X			X	X	X				X					X	2 VOCs		Benzene		Benzene, Xylenes	Benzene		Fill	Outdoor Inhalation: Develop Tier 2 RO / Egr. Barrier / and/or Soil Removal & Disposal Soil to GW: GW Use Restriction (must meet surface water criteria to allow exclusion) Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-112(1-3)	1-3	X																										Fill	
	JD-GP-113(14-15)	14-15	X																	X									Native	
	JD-GP-114(1-2)	1-2	X			X		X												X		2 SVOCs	Benzo(a)pyrene, Dibenzo(a,h)anthracene						Fill	Soil Ingestion: Tier 1 compliance via calculated 95% UCL or Hotspot removal or Egr. Barrier
	JD-GP-115																												No Lab Sample	
	JD-GP-116																												No Lab Sample	
NE Site Fill Characterization (Construction Debris / Blue Cemented Sand)	JD-GP-17(1-3)	1-3	X		X		X			X	X	X				X					X								Fill	
	JD-GP-19(1-3)	1-3	X		X		X			X	X	X				X					X	1 Metal				Mercury			Fill	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-20(1-3)	1-3	X		X		X			X	X	X				X					X								Fill	
	JD-GP-21(4-6)	4-6	X		X		X			X	X	X				X					X								Fill	
	JD-GP-22(4-6)	4-6	X		X		X			X	X	X				X					X								Fill	
	JD-GP-23(1-3)	1-3	X		X		X			X	X	X				X					X	1 Metal				Mercury			Fill	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-24(6-8) & JD-GP-24(6-8)MS/MSD	6-8	X		X		X			X	X	X				X					X								Fill	
	JD-GP-124(6-8) (Duplicate)	6-8	X		X		X			X	X	X				X					X	1 Metal				Mercury			Fill	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-38(4-6)	4-6	X		X		X			X	X	X				X					X								Fill	
	JD-GP-39(1-3)	1-3	X		X		X			X	X	X				X					X								Fill	
	JD-GP-40(1-3)	1-3	X		X		X			X	X	X				X					X								Fill	
	JD-GP-119(5-7): Replaces Former Well Location (JD-GP-40/MW-01)	5-7	X										X																Fill	
	JD-GP-41(4-6)	4-6	X		X		X			X	X	X				X					X	1 Metal				Mercury			Fill	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-117(3-5)	3-5	X		X			X				X	X		X	X	X			X	X	1 Metal				Mercury			Fill	
	MSDS(11-13) (JD-GP-117)	11-13	X			X		X				X										1 Metal	Arsenic						Native	Soil Ingestion: Tier 1 compliance via calculated 95% UCL
	JD-GP-118(2-4)	2-4	X																										Fill	
	JD-GP-121																												No Lab Sample	
	JD-GP-122(0.5-1.5)	0.5-1.5	X		X			X					X																	Fill	
	JD-GP-122DUP(0.5-1.5)	0.5-1.5	X		X			X														1 VOC					Benzene		Fill	Soil to GW: GW Use Restriction (must meet surface water criteria to allow exclusion)
	JD-EX-01																												No Lab Sample	
	JD-EX-02																												No Lab Sample	
	JD-EX-03																												No Lab Sample	
	JD-EX-04(11-12)	11-12	X		X		X			X	X	X		X		X	X	X	X			X								Native	
	JD-EX-05																												No Lab Sample	
	JD-EX-06																												No Lab Sample	
	JD-EX-07																												No Lab Sample	
	JD-EX-08																												No Lab Sample	

TABLE 1.1 - SUMMARY OF SOIL AND GROUNDWATER TIER 1 EXCEEDANCES
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	SAMPLE I.D.	Grab Soil Sample Depth (feet)	Soil Sample	GW Sample	ANALYSES PERFORMED: VOCs	BTEX	SVOCs	PNAs	Pesticides	PCBs	TAL Metals	RCRA Metals	SPLP -specific metals	TCLP-specific metals	Reactive Cyanide	Total Cyanide	Reactive Sulfide	Glycols	TPH	FOC	pH	EXCEEDANCES OF TACO TIER 1 REMEDIATION OBJECTIVES	TIER 1 REMEDIATION OBJECTIVES EXCEEDANCES: Industrial-Commercial Ingestion	Industrial-Commercial Inhalation	Construction Worker Ingestion	Construction Worker Inhalation	Soil Component of the Groundwater Ingestion Exposure Route	Groundwater	Notes (Sample Soil Type / Well Screen Interval)	TACO Exposure Pathway Resolution (Anticipated and/or Alternatives)
																							Ingestion	Inhalation	Ingestion	Inhalation	Class II	Class II		
Various Site-wide Characterization	JD-GP-07(1-3)	1-3	X		X		X		X	X	X					X					X								Fill	
	JD-GP-08(4-6)	4-6	X		X		X		X	X	X					X					X								Fill	
	JD-GP-09(6-8)	6-8	X		X		X		X	X	X					X					X								Fill / Native	
	JD-GP-10(1-3)	1-3	X		X		X		X	X	X					X					X	1 Metal						Mercury	Fill	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-11(4-6)	4-6	X		X		X		X	X	X					X					X								Fill	
	JD-GP-12(6-8)	6-8	X		X		X		X	X	X					X					X								Fill / Native	
	JD-GP-13(1-3)	1-3	X		X		X		X	X	X					X					X	1 Metal						Mercury	Fill	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-15(6-8)	6-8	X		X		X		X	X	X					X					X								Fill	
	JD-GP-16(4-6)	4-6	X		X		X		X	X	X					X					X								Fill	
	JD-GP-25(4-6)	4-6	X		X		X		X	X	X					X					X								Native	
	JD-GP-26(1-3)	1-3	X		X		X		X	X	X					X					X	2 Metal	Arsenic					Mercury	Fill	Soil Ingestion: Tier 1 compliance via calculated 95% UCL Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-27(6-8)	6-8	X		X		X		X	X	X					X					X	1 Metal						Mercury	Fill / Native	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-28(4-6)	4-6	X		X		X		X	X	X					X					X	1 Metal						Mercury	Fill	
	JD-GP-29(1-3)	1-3	X		X		X		X	X	X					X					X	2 SVOCs, 1 Metal	Benzo(a)pyrene, Dibenzo(a,h)anthracene					Mercury	Fill	Soil Ingestion: Tier 1 compliance via calculated 95% UCL Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-30(1-3)	1-3	X		X		X		X	X	X					X					X	1 Metal						Mercury	Fill	
	JD-GP-31(1-3)	1-3	X		X		X		X	X	X					X					X	1 Metal						Mercury	Fill	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-32(4-6)	4-6	X		X		X		X	X	X					X					X	1 Metal						Mercury	Native	
	JD-GP-33(1-3)	1-3	X		X		X		X	X	X					X					X								Fill	
	JD-GP-34(4-6)	4-6	X		X		X		X	X	X					X					X								Native	
	JD-GP-35(6-8)	6-8	X		X		X		X	X	X					X					X								Native	
	JD-GP-36(4-6)	4-6	X		X		X		X	X	X					X					X								Fill	
	JD-GP-37(1-3)	1-3	X		X		X		X	X	X					X					X	1 Metal						Mercury	Fill	Construction Worker: Inst. Control - Health & Safety Provision
	JD-GP-120(1-3)	1-3	X		X		X		X	X	X		X			X					X								Native	
Groundwater Characterization	MW-01			X	X			X	X			X						X				3 Metals						Aluminum, Iron, Lead	Screened in Fill / Native	GW Ingestion: GW Use Restriction (must meet surface water criteria to allow exclusion)
	MW-02			X	X		X		X	X	X					X		X				2 SVOCs, 2 Metals						Benzo(a)anthracene, Benzo(b)fluoranthene, Iron, Lead	Screened in Fill / Native	
	MW-03			X	X		X			X		X				X		X											Screened in Native	
	MW-04			X	X			X				X						X											Screened in Fill / Native	
	MW-05			X	X																	1 VOC						Benzene	Screened in Native	GW Ingestion: GW Use Restriction (must meet surface water criteria to allow exclusion)
	MW-06			X	X			X				X						X											Screened in Fill / Native	
	MW-07 (temp well)			X	X		X		X	X	X					X		X				3 Metals, PCBs						Aluminum, Iron, Lead, PCBs	Screened in Fill / Native	GW Ingestion: GW Use Restriction (must meet surface water criteria to allow exclusion)
	EB-1 (equipment blank)			X		X																								
	Trip Blank #1			X	X																									
	Trip Blank #2			X	X																									

	OSE Fieldwork completed 04/02/12-04/05/12 and 04/10/12-04/12/12
	V3 Fieldwork completed 06/13/12-06/15/12 and 06/19/12
	Monitoring Wells

TABLE 2.1 - SOIL ANALYTICAL RESULTS (VOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial						OSE Investigation											
	Exposure Route-Specific Values for Soils				Component of the Groundwater Ingestion		4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012-04/10/12	4/2/2012	4/2/2012	4/2/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012
	Industrial-Commercial		Construction Worker				JD-GP-01	JD-GP-02	JD-GP-03	JD-GP-04	JD-GP-05	JD-GP-05A	JD-GP-06	JD-GP-07	JD-GP-08	JD-GP-09	JD-GP-10	JD-GP-11	JD-GP-12	JD-GP-13
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL	4-6 ft	3-5 ft	1-3 ft	1-3 ft	1-3 ft	8-10 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Volatile Organic Compounds (Method - 5035/8260)																				
1,1,1,2-Tetrachloroethane [NT]	61000[b]	--[c]	18000[b]	--[c]	17	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027 J3
1,1,1-Trichloroethane	---[c]	1,200[d]	--[c]	1,200[d]	9.6	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
1,1,2,2-Tetrachloroethane [NT]	27[e]	1.2[e]	620[e]	1.7[e]	0.0035	**	<0.0022 J5	<0.0021 J5	<0.0021 J5	<0.0018 J5	<0.0021 J5	<0.0021	<0.0021 J5	<0.0022 J5	<0.0019 J5	<0.0018 J5	<0.0021 J2	<0.0018	<0.0026	<0.0027
1,1,2-Trichloroethane	8,200[b]	1,800[d]	8,200[b]	1,800[d]	0.3	*	<0.0022 J5	<0.0021 J5	<0.0021 J5	<0.0018 J5	<0.0021 J5	<0.0021	<0.0021 J5	<0.0022 J5	<0.0019 J5	<0.0018 J5	<0.0021	<0.0018	<0.0026	<0.0027 J3
1,1-Dichloroethane	200,000[b]	1,700[d]	200,000[b]	130[b]	110	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
1,1-Dichloroethene (1,1-Dichloroethylene)	100,000[b]	470[d]	10000[b]	3.0[b]	0.3	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
1,1-Dichloropropene	**	**	**	**	**	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
1,2,3-Trichloropropane [NT]	0.19[e]	5.0[b]	4.1[e]	0.32[b]	0.000017	**	<0.0022 J5	<0.0021 J5	<0.0021 J5	<0.0018 J5	<0.0021 J5	<0.0021	<0.0021 J5	<0.0022 J5	<0.0019 J5	<0.0018 J5	<0.0021 J2	<0.0018	<0.0026	<0.0027 J3
1,2-Dibromoethane	**	**	**	**	**	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027 J3
1,2-Dichloroethane (Ethylene dichloride)	63[e]	0.70[e]	1,400[e]	0.99[e]	0.1	*	<0.0022 J5	<0.0021 J5	<0.0021 J5	<0.0018 J5	<0.0021 J5	<0.0021	<0.0021 J5	<0.0022 J5	<0.0019 J5	<0.0018 J5	<0.0021	<0.0018	<0.0026	<0.0027 J3
1,2-Dichloropropane	84[e]	23[b]	1,800[e]	0.50[b]	0.15	*	<0.0022 J5	<0.0021 J5	<0.0021 J5	<0.0018 J5	<0.0021 J5	<0.0021	<0.0021 J5	<0.0022 J5	<0.0019 J5	<0.0018 J5	<0.0021	<0.0018	<0.0026	<0.0027 J3
1,3-Dichloropropane [NT]	41000[b]	--[c]	41000[b]	--[c]	0.83	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027 J3
2,2-Dichloropropane	**	**	**	**	**	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
2-Butanone (MEK) [NT]	1000000[b]	25,000[d]	120,000[b]	730[b]	17	**	<0.011	<0.01	0.014	0.032	<0.011	<0.01	<0.011	0.017	0.033	<0.009	<0.011	0.032	0.11	0.014 J3
2-Hexanone	**	**	**	**	**	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2, V	<0.0018 V	<0.0026 V	<0.0027 V
4-Methyl-2-pentanone (MIBK) [NT]	160000[b]	3100[d]	160000[b]	340[b]	2.5	**	<0.0022 J5	<0.0021 J5	<0.0021 J5	0.0032 J6	<0.0021 J5	<0.0021	<0.0021 J5	<0.0022 J5	<0.0019 J5	<0.0018 J5	<0.0021	<0.0018	<0.0026	<0.0027
Acetone	----[g]	100000[d]	----[g]	100000[d]	25	*	0.14 J3, M	0.21 L, M	0.09 M	0.12 M	0.056	<0.01	<0.011	0.11	0.097 M	<0.009	0.029	0.031 M	0.22 M	0.088 J3, M
Benzene	100[e]	1.6[e]	2300[e]	2.2[e]	0.17	*	0.0038 J6	0.023 J6	<0.0021 J5	0.002 J6	<0.0021 J5	3.3	<0.0021 J5	<0.0022 J5	0.0025 J6	0.0023 J6	<0.0021	<0.0018	0.0038	<0.0027 J3
Bromobenzene [NT]	16000[b]	810[d]	4100[b]	22[b]	4.3	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027
Bromochloromethane	**	**	**	**	**	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
Bromodichloromethane (Dichlorobromomethane)	92[e]	3,000[d]	2,000[e]	3,000[d]	0.6	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
Bromoform	720[e]	100[e]	16,000[e]	140[e]	0.8	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027
Bromomethane (methylene bromide) [NT]	---[c]	44[b]	1800[b]	2.8[b]	---[c]	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027
Carbon disulfide	200,000[b]	720[d]	20,000[b]	9.0[b]	160	*	0.0038	<0.0021	0.0056	0.0038	0.0034	0.0028	<0.0021	0.022	0.0088	<0.0018	0.0085	0.0082	0.082	0.0072 J3
Carbon tetrachloride	44[e]	0.64[e]	410[b]	0.90[e]	0.33	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
Chlorobenzene (Monochlorobenzene)	41,000[b]	210[b]	4,100[b]	1.3[b]	6.5	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027 J3
Chloroethane [NT]	---[c]	1,500[d]	20000[b]	39[b]	---[c]	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
Chloroform	940[e]	0.54[e]	2,000[b]	0.76[e]	2.9	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
Chloromethane [NT]	---[c]	180b	--[c]	5b	---[c]	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027
cis-1,2-Dichloroethene (cis-1,2-Dichloroethylene)	20000[b]	1200[d]	20000[b]	1200[d]	1.1	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
cis-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
Chlorodibromomethane (Dibromochloromethane)	41,000[b]	1,300[d]	41,000[b]	1,300[d]	0.4	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027 J3
Dibromomethane	**	**	**	**	**	**	<0.0022 J5	<0.0021 J5	<0.0021 J5	<0.0018 J5	<0.0021 J5	<0.0021	<0.0021 J5	<0.0022 J5	<0.0019 J5	<0.0018 J5	<0.0021	<0.0018	<0.0026	<0.0027 J3
Ethylbenzene	200,000[b]	400[d]	20000[b]	58[b]	19	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	0.053	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027
Isopropylbenzene [NT]	200000[b]	800[b]	82000[b]	52[b]	400[d]	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	1.6	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027
MTBE (methyl tertiary-butyl ether)	20,000[b]	8,800[d]	2,000[b]	140[b]	0.32	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	0.0021	<0.0018	<0.0021	<0.0018	<0.0026	0.0039 J3
Methylene chloride (Dichloromethane)	760[e]	24[e]	12,000[b]	34[e]	0.2	*	<0.0055	<0.0052	<0.0052	<0.0044	<0.0053	<0.0052	<0.0053	<0.0055	<0.0046	<0.0045	<0.0053	<0.0044	<0.0064	<0.0066 J3
Styrene	410,000[b]	1,500[d]	41,000[b]	430[b]	18	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027
Tetrachloroethene (Perchloroethylene)	110[e]	20[e]	2,400[e]	28[e]	0.3	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027
Toluene	410000[b]	650[d]	410000[b]	42[b]	29	*	0.0038	0.0066	<0.0021	<0.0018	<0.0021	0.022	<0.0021	<0.0022	0.0027	0.0031	<0.0021 J2	0.0021	0.0056	<0.0027 J3
trans-1,2-Dichloroethene (trans-1,2-Dichloroethylene)	41,000[b]	3,100[d]	41,000[b]	3,100[d]	3.4	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
trans-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	<0.0022 J5	<0.0021 J5	<0.0021 J5	<0.0018 J5	<0.0021 J5	<0.0021	<0.0021 J5	<0.0022 J5	<0.0019 J5	<0.0018 J5	<0.0021	<0.0018	<0.0026	<0.0027
Trichloroethene (Trichloroethylene)	520[e]	8.9[e]	1200[b]	12[e]	0.3	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
Trichlorofluoromethane [NT]	610000[b]	1400[b]	140000[b]	13[b]	170	**	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
Vinyl Chloride	7.9[e]	1.1[e]	170[e]	1.1[b]	0.07	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	<0.0021	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021	<0.0018	<0.0026	<0.0027 J3
Xylenes (total)	410000[b]	320[d]	41000[b]	5.6[b]	150	*	<0.0022	<0.0021	<0.0021	<0.0018	<0.0021	0.059	<0.0021	<0.0022	<0.0019	<0.0018	<0.0021 J2	<0.0018	<0.0026	<0.0027

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.
NA means Not Available; no PQL or EQL available in USEPA analytical methods.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

0.11 Indicates exceedance of Tier 1 remediation objectives
0.11 Indicates lab detection limit is greater than remediation objective
(1) indicates value is for (1,3-Dichloropropylene, cis+trans)
[NT] [NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011.
Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html
--- --- indicates chemical not analyzed or not sampled
See attached for soil remediation objective notations

TABLE 2.1 - SOIL ANALYTICAL RESULTS (VOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial						OSE Investigation												
	Exposure Route-Specific Values for Soils				Component of the Groundwater Ingestion		4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012
	Industrial-Commercial		Construction Worker				JD-GP-14	JD-GP-15	JD-GP-16	JD-GP-17	JD-GP-18	JD-GP-19	JD-GP-20	JD-GP-21	JD-GP-22	JD-GP-23	JD-GP-24 & JD-GP-24MS/MSD	JD-GP-124 (Duplicate)	JD-GP-25
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL	1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	4-6 ft	1-3 ft	6-8 ft	6-8 ft	4-6 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Volatile Organic Compounds (Method - 5035/8260)																			
1,1,1,2-Tetrachloroethane [NT]	61000[b]	---[c]	18000[b]	---[c]	17	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
1,1,1-Trichloroethane	---[c]	1,200[d]	---[c]	1,200[d]	9.6	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
1,1,2,2-Tetrachloroethane [NT]	27[e]	1.2[e]	620[e]	1.7[e]	0.0035	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027 J5	<0.0023 J5	<0.002 J5	<0.0021 J5	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
1,1,2-Trichloroethane	8,200[b]	1,800[d]	8,200[b]	1,800[d]	0.3	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027 J5	<0.0023 J5	<0.002 J5	<0.0021 J5	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
1,1-Dichloroethane	200,000[b]	1,700[d]	200,000[b]	130[b]	110	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
1,1-Dichloroethene (1,1-Dichloroethylene)	100,000[b]	470[d]	10000[b]	3.0[b]	0.3	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
1,1-Dichloropropene	**	**	**	**	**	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
1,2,3-Trichloropropane [NT]	0.19[e]	5.0[b]	4.1[e]	0.32[b]	0.000017	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027 J5	<0.0023 J5	<0.002 J5	<0.0021 J5	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
1,2-Dibromoethane	**	**	**	**	**	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
1,2-Dichloroethane (Ethylene dichloride)	63[e]	0.70[e]	1,400[e]	0.99[e]	0.1	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027 J5	<0.0023 J5	<0.002 J5	<0.0021 J5	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
1,2-Dichloropropane	84[e]	23[b]	1,800[e]	0.50[b]	0.15	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027 J5	<0.0023 J5	<0.002 J5	<0.0021 J5	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
1,3-Dichloropropane [NT]	41000[b]	---[c]	41000[b]	---[c]	0.83	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
2,2-Dichloropropane	**	**	**	**	**	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
2-Butanone (MEK) [NT]	1000000[b]	25,000[d]	120,000[b]	730[b]	17	**	<0.0087	0.035	0.046	<0.0097	<0.014	0.026	0.036	0.021	0.023	0.11	0.02	0.016	<0.0097
2-Hexanone	**	**	**	**	**	**	<0.0017 V	<0.0019 V	<0.0021 V	<0.0019 V	<0.0027	0.0024	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
4-Methyl-2-pentanone (MIBK) [NT]	160000[b]	3100[d]	160000[b]	340[b]	2.5	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027 J5	0.0043 J6	0.0059 J6	<0.0021 J5	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
Acetone	----[g]	100000[d]	----[g]	100000[d]	25	*	0.16 M	0.13 M	0.12 M	0.15 M	<0.014	0.13 M	0.12	<0.01	0.14	<0.0083	0.085 M	0.088 M	0.088 M
Benzene	100[e]	1.6[e]	2300[e]	2.2[e]	0.17	*	1.2	<0.0019	0.0029	0.015	6.6	0.0031 J6	0.0032 J6	<0.0021 J5	<0.0023	0.0024	0.005 J3	<0.0021	0.0022
Bromobenzene [NT]	16000[b]	810[d]	4100[b]	22[b]	4.3	**	<0.0017	<0.0019	<0.0021	<0.0019	0.0049	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Bromochloromethane	**	**	**	**	**	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Bromodichloromethane (Dichlorobromomethane)	92[e]	3,000[d]	2,000[e]	3,000[d]	0.6	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Bromoform	720[e]	100[e]	16,000[e]	140[e]	0.8	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Bromomethane (methylene bromide) [NT]	---[c]	44[b]	1800[b]	2.8[b]	---[c]	**	<0.0017	<0.0019	<0.0021	<0.0019	0.0062	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
Carbon disulfide	200,000[b]	720[d]	20,000[b]	9.0[b]	160	*	0.0029	0.0023	0.0035	0.0026	<0.0027	0.0093	<0.002	0.024	0.0048	0.003	0.011	0.0078	0.0037
Carbon tetrachloride	44[e]	0.64[e]	410[b]	0.90[e]	0.33	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
Chlorobenzene (Monochlorobenzene)	41,000[b]	210[b]	4,100[b]	1.3[b]	6.5	*	<0.0017	<0.0019	<0.0021	<0.0019	0.0058	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Chloroethane [NT]	---[c]	1,500[d]	20000[b]	39[b]	---[c]	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
Chloroform	940[e]	0.54[e]	2,000[b]	0.76[e]	2.9	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Chloromethane [NT]	---[c]	180b	---[c]	5b	---[c]	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
cis-1,2-Dichloroethene (cis-1,2-Dichloroethylene)	20000[b]	1200[d]	20000[b]	1200[d]	1.1	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
cis-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Chlorodibromomethane (Dibromochloromethane)	41,000[b]	1,300[d]	41,000[b]	1,300[d]	0.4	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Dibromomethane	**	**	**	**	**	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027 J5	<0.0023 J5	<0.002 J5	<0.0021 J5	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Ethylbenzene	200,000[b]	400[d]	20000[b]	58[b]	19	*	1.1	<0.0019	<0.0021	0.0087	2.6	<0.0023	0.0022	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Isopropylbenzene [NT]	200000[b]	800[b]	82000[b]	52[b]	400[d]	**	0.038	<0.0019	<0.0021	<0.0019	0.012	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
MTBE (methyl tertiary-butyl ether)	20,000[b]	8,800[d]	2,000[b]	140[b]	0.32	*	0.0064	0.0033	0.019	0.002	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
Methylene chloride (Dichloromethane)	760[e]	24[e]	12,000[b]	34[e]	0.2	*	<0.0043	<0.0047	<0.0051	<0.0048	<0.0068	<0.0058	<0.005	<0.0051	<0.0058	<0.0042	<0.0047 J3	<0.0053	<0.0049
Styrene	410,000[b]	1,500[d]	41,000[b]	430[b]	18	*	0.0041	<0.0019	<0.0021	<0.0019	0.017	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Tetrachloroethene (Perchloroethylene)	110[e]	20[e]	2,400[e]	28[e]	0.3	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Toluene	410000[b]	650[d]	410000[b]	42[b]	29	*	0.023	0.003	0.0038	0.0035	22	0.0035	0.0038	<0.0021	<0.0023	0.0031	<0.0019 J3	<0.0021	0.0033
trans-1,2-Dichloroethene (trans-1,2-Dichloroethylene)	41,000[b]	3,100[d]	41,000[b]	3,100[d]	3.4	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
trans-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027 J5	<0.0023 J5	<0.002 J5	<0.0021 J5	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Trichloroethene (Trichloroethylene)	520[e]	8.9[e]	1200[b]	12[e]	0.3	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Trichlorofluoromethane [NT]	610000[b]	1400[b]	140000[b]	13[b]	170	**	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019
Vinyl Chloride	7.9[e]	1.1[e]	170[e]	1.1[b]	0.07	*	<0.0017	<0.0019	<0.0021	<0.0019	<0.0027	<0.0023	<0.002	<0.0021	<0.0023	<0.0017	<0.0019	<0.0021	<0.0019
Xylenes (total)	410000[b]	320[d]	41000[b]	5.6[b]	150	*	5.1	<0.0019	<0.0021	0.035	12	<0.0023	0.011	<0.0021	<0.0023	<0.0017	<0.0019 J3	<0.0021	<0.0019

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.
NA means Not Available; no PQL or EQL available in USEPA analytical methods.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

0.11 Indicates exceedance of Tier 1 remediation objectives

0.11 Indicates lab detection limit is greater than remediation objective
(1) indicates value is for (1,3-Dichloropropylene, cis+trans)

[NT] [NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011.
Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

--- --- indicates chemical not analyzed or not sampled
See attached for soil remediation objective notations

TABLE 2.1 - SOIL ANALYTICAL RESULTS (VOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial						OSE Investigation											
	Exposure Route-Specific Values for Soils				Component of the Groundwater Ingestion		4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012
	Industrial-Commercial		Construction Worker				JD-GP-26	JD-GP-27	JD-GP-28	JD-GP-29	JD-GP-30	JD-GP-31	JD-GP-32	JD-GP-33	JD-GP-34	JD-GP-35	JD-GP-36	JD-GP-37
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL	1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	4-6 ft	1-3 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Volatile Organic Compounds (Method - 5035/8260)																		
1,1,1,2-Tetrachloroethane [NT]	61000[b]	--[c]	18000[b]	--[c]	17	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,1,1-Trichloroethane	---[c]	1,200[d]	---[c]	1,200[d]	9.6	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,1,2,2-Tetrachloroethane [NT]	27[e]	1.2[e]	620[e]	1.7[e]	0.0035	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,1,2-Trichloroethane	8,200[b]	1,800[d]	8,200[b]	1,800[d]	0.3	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,1-Dichloroethane	200,000[b]	1,700[d]	200,000[b]	130[b]	110	*	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,1-Dichloroethene (1,1-Dichloroethylene)	100,000[b]	470[d]	10000[b]	3.0[b]	0.3	*	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,1-Dichloropropene	**	**	**	**	**	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,2,3-Trichloropropane [NT]	0.19[e]	5.0[b]	4.1[e]	0.32[b]	0.000017	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,2-Dibromoethane	**	**	**	**	**	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,2-Dichloroethane (Ethylene dichloride)	63[e]	0.70[e]	1,400[e]	0.99[e]	0.1	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,2-Dichloropropane	84[e]	23[b]	1,800[e]	0.50[b]	0.15	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
1,3-Dichloropropane [NT]	41000[b]	--[c]	41000[b]	--[c]	0.83	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
2,2-Dichloropropane	**	**	**	**	**	**	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
2-Butanone (MEK) [NT]	1000000[b]	25,000[d]	120,000[b]	730[b]	17	**	<0.022	<0.012 J1, J2	0.046	0.039	0.039	0.12	<0.01	0.041	<0.0097	<0.0096	0.021	0.033
2-Hexanone	**	**	**	**	**	**	<0.0045	<0.0023 J2	<0.0019	0.0038	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
4-Methyl-2-pentanone (MIBK) [NT]	160000[b]	3100[d]	160000[b]	340[b]	2.5	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	0.0055	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Acetone	----[g]	100000[d]	----[g]	100000[d]	25	*	0.41	<0.012 J1, J2	0.17 M	0.18 M	0.16 M	0.03	0.013 M	0.1	0.055 M	<0.0096	0.066	0.081 M
Benzene	100[e]	1.6[e]	2300[e]	2.2[e]	0.17	*	<0.0045	<0.0023 J2	0.002	0.0055	0.0062	0.0035	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	0.0038
Bromobenzene [NT]	16000[b]	810[d]	4100[b]	22[b]	4.3	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Bromochloromethane	**	**	**	**	**	**	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Bromodichloromethane (Dichlorobromomethane)	92[e]	3,000[d]	2,000[e]	3,000[d]	0.6	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Bromoform	720[e]	100[e]	16,000[e]	140[e]	0.8	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Bromomethane (methylene bromide) [NT]	---[c]	44[b]	1800[b]	2.8[b]	---[c]	**	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Carbon disulfide	200,000[b]	720[d]	20,000[b]	9.0[b]	160	*	<0.0045	<0.0023 J1, J2	0.0025	0.0058	0.0042	0.013	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Carbon tetrachloride	44[e]	0.64[e]	410[b]	0.90[e]	0.33	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Chlorobenzene (Monochlorobenzene)	41,000[b]	210[b]	4,100[b]	1.3[b]	6.5	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Chloroethane [NT]	---[c]	1,500[d]	20000[b]	39[b]	---[c]	**	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Chloroform	940[e]	0.54[e]	2,000[b]	0.76[e]	2.9	*	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Chloromethane [NT]	---[c]	180b	--[c]	5b	---[c]	**	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
cis-1,2-Dichloroethene (cis-1,2-Dichloroethylene)	20000[b]	1200[d]	20000[b]	1200[d]	1.1	*	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
cis-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Chlorodibromomethane (Dibromochloromethane)	41,000[b]	1,300[d]	41,000[b]	1,300[d]	0.4	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Dibromomethane	**	**	**	**	**	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Ethylbenzene	200,000[b]	400[d]	20000[b]	58[b]	19	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	0.064
Isopropylbenzene [NT]	200000[b]	800[b]	82000[b]	52[b]	400[d]	**	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
MTBE (methyl tertiary-butyl ether)	20,000[b]	8,800[d]	2,000[b]	140[b]	0.32	*	<0.0045	<0.0023 J1, J2	0.011	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Methylene chloride (Dichloromethane)	760[e]	24[e]	12,000[b]	34[e]	0.2	*	<0.011	<0.0059 J1, J2	<0.0048	<0.0064	<0.0064	<0.0062	<0.0051	<0.0056	<0.0049	<0.0048	<0.0052	<0.0048
Styrene	410,000[b]	1,500[d]	41,000[b]	430[b]	18	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Tetrachloroethene (Perchloroethylene)	110[e]	20[e]	2,400[e]	28[e]	0.3	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Toluene	410000[b]	650[d]	410000[b]	42[b]	29	*	<0.0045	<0.0023 J2	0.0038	0.007	0.0088 J2	0.0028	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	0.0035
trans-1,2-Dichloroethene (trans-1,2-Dichloroethylene)	41,000[b]	3,100[d]	41,000[b]	3,100[d]	3.4	*	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
trans-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Trichloroethene (Trichloroethylene)	520[e]	8.9[e]	1200[b]	12[e]	0.3	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Trichlorofluoromethane [NT]	610000[b]	1400[b]	140000[b]	13[b]	170	**	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Vinyl Chloride	7.9[e]	1.1[e]	170[e]	1.1[b]	0.07	*	<0.0045	<0.0023 J1, J2	<0.0019	<0.0026	<0.0025	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	<0.0019
Xylenes (total)	410000[b]	320[d]	41000[b]	5.6[b]	150	*	<0.0045	<0.0023 J2	<0.0019	<0.0026	<0.0025 J2	<0.0025	<0.002	<0.0023	<0.0019	<0.0019	<0.0021	0.24

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.
NA means Not Available; no PQL or EQL available in USEPA analytical methods.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

0.11 Indicates exceedance of Tier 1 remediation objectives
0.11 Indicates lab detection limit is greater than remediation objective
(1) indicates value is for (1,3-Dichloropropylene, cis+trans)

[NT] [NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011.
Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

--- --- indicates chemical not analyzed or not sampled
See attached for soil remediation objective notations

TABLE 2.1 - SOIL ANALYTICAL RESULTS (VOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial						OSE Investigation				V3 Investigation									
	Exposure Route-Specific Values for Soils				Component of the Groundwater Ingestion		4/4/2012	4/5/2012	4/10/2012	4/10/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012
	Industrial-Commercial		Construction Worker				JD-GP-38	JD-GP-39	JD-GP-40	JD-GP-41	JD-GP-101	JD-GP-102	JD-GP-103	JD-GP-104	JD-GP-104	JD-GP-104	JD-GP-105	JD-GP-105	JD-GP-106	JD-GP-106
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL	4-6 ft	1-3 ft	1-3 ft	4-6 ft	8-10 ft	8-10 ft	8-10 ft	0.5-1.5 ft	5-7 ft	10-12 ft	0.5-1.5 ft	5-7 ft	1-2 ft	3-5ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Volatile Organic Compounds (Method - 5035/8260)																				
1,1,1,2-Tetrachloroethane [NT]	61000[b]	--[c]	18000[b]	--[c]	17	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,1,1-Trichloroethane	---[c]	1,200[d]	--[c]	1,200[d]	9.6	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,1,2,2-Tetrachloroethane [NT]	27[e]	1.2[e]	620[e]	1.7[e]	0.0035	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,1,2-Trichloroethane	8,200[b]	1,800[d]	8,200[b]	1,800[d]	0.3	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,1-Dichloroethane	200,000[b]	1,700[d]	200,000[b]	130[b]	110	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,1-Dichloroethene (1,1-Dichloroethylene)	100,000[b]	470[d]	10000[b]	3.0[b]	0.3	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,1-Dichloropropene	**	**	**	**	**	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,2,3-Trichloropropane [NT]	0.19[e]	5.0[b]	4.1[e]	0.32[b]	0.000017	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,2-Dibromoethane	**	**	**	**	**	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,2-Dichloroethane (Ethylene dichloride)	63[e]	0.70[e]	1,400[e]	0.99[e]	0.1	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,2-Dichloropropane	84[e]	23[b]	1,800[e]	0.50[b]	0.15	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
1,3-Dichloropropane [NT]	41000[b]	--[c]	41000[b]	--[c]	0.83	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
2,2-Dichloropropane	**	**	**	**	**	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
2-Butanone (MEK) [NT]	1000000[b]	25,000[d]	120,000[b]	730[b]	17	**	<0.0094	<0.01	0.04	<0.0096	----	----	----	----	----	----	----	----	----	----
2-Hexanone	**	**	**	**	**	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
4-Methyl-2-pentanone (MIBK) [NT]	160000[b]	3100[d]	160000[b]	340[b]	2.5	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Acetone	----[g]	100000[d]	----[g]	100000[d]	25	*	0.023	0.02	0.13	0.018	----	----	----	----	----	----	----	----	----	----
Benzene	100[e]	1.6[e]	2300[e]	2.2[e]	0.17	*	0.0029	<0.002	0.0037	<0.0019	6.2	7.6	0.28	< 0.0054	0.94	< 0.0059	< 0.0062	0.062	< 0.0083	< 0.0051
Bromobenzene [NT]	16000[b]	810[d]	4100[b]	22[b]	4.3	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Bromochloromethane	**	**	**	**	**	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Bromodichloromethane (Dichlorobromomethane)	92[e]	3,000[d]	2,000[e]	3,000[d]	0.6	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Bromoform	720[e]	100[e]	16,000[e]	140[e]	0.8	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Bromomethane (methylene bromide) [NT]	---[c]	44[b]	1800[b]	2.8[b]	---[c]	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Carbon disulfide	200,000[b]	720[d]	20,000[b]	9.0[b]	160	*	<0.0019	<0.002	0.0025	<0.0019	----	----	----	----	----	----	----	----	----	----
Carbon tetrachloride	44[e]	0.64[e]	410[b]	0.90[e]	0.33	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Chlorobenzene (Monochlorobenzene)	41,000[b]	210[b]	4,100[b]	1.3[b]	6.5	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Chloroethane [NT]	---[c]	1,500[d]	20000[b]	39[b]	---[c]	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Chloroform	940[e]	0.54[e]	2,000[b]	0.76[e]	2.9	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Chloromethane [NT]	---[c]	180b	--[c]	5b	---[c]	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
cis-1,2-Dichloroethene (cis-1,2-Dichloroethylene)	20000[b]	1200[d]	20000[b]	1200[d]	1.1	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
cis-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Chlorodibromomethane (Dibromochloromethane)	41,000[b]	1,300[d]	41,000[b]	1,300[d]	0.4	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Dibromomethane	**	**	**	**	**	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Ethylbenzene	200,000[b]	400[d]	20000[b]	58[b]	19	*	<0.0019	<0.002	0.074	<0.0019	2.6	0.63	1.1	< 0.0054	0.0077	< 0.0059	< 0.0062	< 0.0051	< 0.0083	< 0.0051
Isopropylbenzene [NT]	200000[b]	800[b]	82000[b]	52[b]	400[d]	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
MTBE (methyl tertiary-butyl ether)	20,000[b]	8,800[d]	2,000[b]	140[b]	0.32	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Methylene chloride (Dichloromethane)	760[e]	24[e]	12,000[b]	34[e]	0.2	*	<0.0047	<0.0051	<0.0045	<0.0048	----	----	----	----	----	----	----	----	----	----
Styrene	410,000[b]	1,500[d]	41,000[b]	430[b]	18	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Tetrachloroethene (Perchloroethylene)	110[e]	20[e]	2,400[e]	28[e]	0.3	*	<0.0019	0.0035	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Toluene	410000[b]	650[d]	410000[b]	42[b]	29	*	<0.0019	<0.002	<0.0018	<0.0019	0.87	< 0.25	0.75	< 0.0054	0.011	< 0.0059	< 0.0062	< 0.0051	< 0.0083	< 0.0051
trans-1,2-Dichloroethene (trans-1,2-Dichloroethylene)	41,000[b]	3,100[d]	41,000[b]	3,100[d]	3.4	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
trans-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Trichloroethene (Trichloroethylene)	520[e]	8.9[e]	1200[b]	12[e]	0.3	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Trichlorofluoromethane [NT]	610000[b]	1400[b]	140000[b]	13[b]	170	**	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Vinyl Chloride	7.9[e]	1.1[e]	170[e]	1.1[b]	0.07	*	<0.0019	<0.002	<0.0018	<0.0019	----	----	----	----	----	----	----	----	----	----
Xylenes (total)	410000[b]	320[d]	41000[b]	5.6[b]	150	*	<0.0019	<0.002	0.011	<0.0019	6.3	0.96	5.2	< 0.016	< 0.017	< 0.018	< 0.019	< 0.015	< 0.025	< 0.015

Part 742 Notes
* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.
NA means Not Available; no PQL or EQL available in USEPA analytical methods.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

0.11 Indicates exceedance of Tier 1 remediation objectives
0.11 Indicates lab detection limit is greater than remediation objective
(1) indicates value is for (1,3-Dichloropropylene, cis+trans)
[NT] [NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011.
Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html
--- --- indicates chemical not analyzed or not sampled
See attached for soil remediation objective notations

TABLE 2.1 - SOIL ANALYTICAL RESULTS (VOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial						V3 Investigation													
	Exposure Route-Specific Values for Soils				Component of the Groundwater Ingestion		6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/14/2012	6/14/2012	6/14/2012	6/15/2012	6/19/2012	6/19/2012	6/18/2012	6/14/2012
	Industrial-Commercial		Construction Worker				JD-GP-106	JD-GP-107	JD-GP-107	JD-GP-107	JD-GP-108	JD-GP-108	JD-GP-110	JD-GP-111	JD-GP-114	JD-GP-117	JD-GP-120	JD-GP-122	JD-GP-122DUP	JD-EX-04	MSDS (JD-GP-117)
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL	10-12ft	0.5-1.5 ft	3-5ft	8-10ft	0.5-1.5 ft	3-5ft	0.5-1.5 ft	0.5-1.5 ft	1-2 ft	3-5 ft	1-3 ft	0.5-1.5 ft	0.5-1.5 ft	11-12 ft	11-13 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Volatile Organic Compounds (Method - 5035/8260)																					
1,1,1,2-Tetrachloroethane [NT]	61000[b]	--[c]	18000[b]	--[c]	17	**	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
1,1,1-Trichloroethane	---[c]	1,200[d]	---[c]	1,200[d]	9.6	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
1,1,2,2-Tetrachloroethane [NT]	27[e]	1.2[e]	620[e]	1.7[e]	0.0035	**	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
1,1,2-Trichloroethane	8,200[b]	1,800[d]	8,200[b]	1,800[d]	0.3	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
1,1-Dichloroethane	200,000[b]	1,700[d]	200,000[b]	130[b]	110	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
1,1-Dichloroethene (1,1-Dichloroethylene)	100,000[b]	470[d]	10000[b]	3.0[b]	0.3	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1,1-Dichloropropene	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1,2,3-Trichloropropane [NT]	0.19[e]	5.0[b]	4.1[e]	0.32[b]	0.000017	**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1,2-Dibromoethane	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
1,2-Dichloroethane (Ethylene dichloride)	63[e]	0.70[e]	1,400[e]	0.99[e]	0.1	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
1,2-Dichloropropane	84[e]	23[b]	1,800[e]	0.50[b]	0.15	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
1,3-Dichloropropane [NT]	41000[b]	--[c]	41000[b]	--[c]	0.83	**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2,2-Dichloropropane	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	< 0.093	< 0.09	----	----	< 0.066	----
2-Butanone (MEK) [NT]	1000000[b]	25,000[d]	120,000[b]	730[b]	17	**	----	----	----	----	----	----	----	----	----	< 0.025	< 0.024	----	----	< 0.018	----
2-Hexanone	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	< 0.025	< 0.024	----	----	< 0.018	----
4-Methyl-2-pentanone (MIBK) [NT]	160000[b]	3100[d]	160000[b]	340[b]	2.5	**	----	----	----	----	----	----	----	----	----	< 0.093	< 0.09	----	----	< 0.066	----
Acetone	----[g]	100000[d]	----[g]	100000[d]	25	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Benzene	100[e]	1.6[e]	2300[e]	2.2[e]	0.17	*	< 0.0058	< 0.0066	< 0.0058	< 0.0055	0.56	< 0.0083	0.036	< 0.28	< 0.0067	----	----	< 0.17	0.22	----	< 0.0058
Bromobenzene [NT]	16000[b]	810[d]	4100[b]	22[b]	4.3	**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Bromochloromethane	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Bromodichloromethane (Dichlorobromomethane)	92[e]	3,000[d]	2,000[e]	3,000[d]	0.6	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Bromoform	720[e]	100[e]	16,000[e]	140[e]	0.8	*	----	----	----	----	----	----	----	----	----	< 0.012	< 0.012	----	----	< 0.0088	----
Bromomethane (methylene bromide) [NT]	---[c]	44[b]	1800[b]	2.8[b]	---[c]	**	----	----	----	----	----	----	----	----	----	< 0.062	< 0.06	----	----	< 0.044	----
Carbon disulfide	200,000[b]	720[d]	20,000[b]	9.0[b]	160	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Carbon tetrachloride	44[e]	0.64[e]	410[b]	0.90[e]	0.33	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Chlorobenzene (Monochlorobenzene)	41,000[b]	210[b]	4,100[b]	1.3[b]	6.5	*	----	----	----	----	----	----	----	----	----	< 0.012	< 0.012	----	----	< 0.0088	----
Chloroethane [NT]	---[c]	1,500[d]	20000[b]	39[b]	---[c]	**	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Chloroform	940[e]	0.54[e]	2,000[b]	0.76[e]	2.9	*	----	----	----	----	----	----	----	----	----	< 0.012	< 0.012	----	----	< 0.0088	----
Chloromethane [NT]	---[c]	180b	--[c]	5b	---[c]	**	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
cis-1,2-Dichloroethene (cis-1,2-Dichloroethylene)	20000[b]	1200[d]	20000[b]	1200[d]	1.1	*	----	----	----	----	----	----	----	----	----	< 0.0025	< 0.0024	----	----	< 0.0018	----
cis-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Chlorodibromomethane (Dibromochloromethane)	41,000[b]	1,300[d]	41,000[b]	1,300[d]	0.4	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Dibromomethane	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Ethylbenzene	200,000[b]	400[d]	20000[b]	58[b]	19	*	< 0.0058	< 0.0066	< 0.0058	< 0.0055	2.4	< 0.0083	0.1	1.3	< 0.0067	----	----	0.61	0.73	----	< 0.0058
Isopropylbenzene [NT]	200000[b]	800[b]	82000[b]	52[b]	400[d]	**	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
MTBE (methyl tertiary-butyl ether)	20,000[b]	8,800[d]	2,000[b]	140[b]	0.32	*	----	----	----	----	----	----	----	----	----	< 0.012	< 0.012	----	----	< 0.0088	----
Methylene chloride (Dichloromethane)	760[e]	24[e]	12,000[b]	34[e]	0.2	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Styrene	410,000[b]	1,500[d]	41,000[b]	430[b]	18	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Tetrachloroethene (Perchloroethylene)	110[e]	20[e]	2,400[e]	28[e]	0.3	*	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Toluene	410000[b]	650[d]	410000[b]	42[b]	29	*	< 0.0058	< 0.0066	< 0.0058	< 0.0055	< 0.24	< 0.0083	< 0.0078	< 0.28	< 0.0067	< 0.0062	< 0.006	0.98	1.4	< 0.0044	< 0.0058
trans-1,2-Dichloroethene (trans-1,2-Dichloroethylene)	41,000[b]	3,100[d]	41,000[b]	3,100[d]	3.4	*	----	----	----	----	----	----	----	----	----	< 0.0025	< 0.0024	----	----	< 0.0018	----
trans-1,3-Dichloropropene (1)	57[e]	2.1[e]	1200[e]	0.39[b]	0.02	0.005	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Trichloroethene (Trichloroethylene)	520[e]	8.9[e]	1200[b]	12[e]	0.3	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Trichlorofluoromethane [NT]	610000[b]	1400[b]	140000[b]	13[b]	170	**	----	----	----	----	----	----	----	----	----	< 0.0062	< 0.006	----	----	< 0.0044	----
Vinyl Chloride	7.9[e]	1.1[e]	170[e]	1.1[b]	0.07	*	----	----	----	----	----	----	----	----	----	< 0.019	< 0.018	----	----	< 0.013	----
Xylenes (total)	410000[b]	320[d]	41000[b]	5.6[b]	150	*	< 0.018	< 0.02	< 0.017	< 0.017	1.8	< 0.025	0.55	4.5	< 0.02	----	----	3.7	4.8	----	< 0.017

Part 742 Notes
* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.
NA means Not Available; no PQL or EQL available in USEPA analytical methods.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

0.11 Indicates exceedance of Tier 1 remediation objectives
0.11 Indicates lab detection limit is greater than remediation objective
(1) indicates value is for (1,3-Dichloropropylene, cis+trans)
[NT] [NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011.
Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html
--- --- indicates chemical not analyzed or not sampled
See attached for soil remediation objective notations

TABLE 2.2 - SOIL ANALYTICAL RESULTS (SVOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial							OSE Investigation												
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	Background Carcinogenic PAH 95th Percentile Concentrations		4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012-04/10/12	4/2/2012	4/2/2012	4/2/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012
	Industrial-Commercial		Construction Worker					JD-GP-01	JD-GP-02	JD-GP-03	JD-GP-04	JD-GP-05	JD-GP-05A	JD-GP-06	JD-GP-07	JD-GP-08	JD-GP-09	JD-GP-10	JD-GP-11	JD-GP-12	JD-GP-13
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Within MSA		4-6 ft	3-5 ft	1-3 ft	1-3 ft	1-3 ft	8-10 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	ADL (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Semivolatiles (Method - 8270)																					
Base Neutral/Acid Compounds (Includes Polynuclear Aromatics)																					
1,2,4,5-Tetrachlorobenzene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
1,2,4-Trichlorobenzene	20,000[b]	3,200[d]	2,000[b]	920[b]	53	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
1,2-Dichlorobenzene (*o* -Dichlorobenzene)	180,000[b]	560[d]	18,000[b]	310[b]	43	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
1,2-Dinitrobenzene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
1,3-Dichlorobenzene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
1,3-Dinitrobenzene	200[a]	-----[c]	200[a]	-----[c]	0.0037	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
1,4-Dichlorobenzene (*p* -Dichlorobenzene)	-----[c]	17,000[b]	-----[c]	340[b]	11	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
1,4-Dinitrobenzene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
1-Chloronaphthalene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
1-Naphthylamine	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.2	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068 J5	<0.061 J5
2,2-Oxybis(1-chloropropane)	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
2,3,4,6-Tetrachlorophenol	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2,4,5-Trichlorophenol	200000[b]	-----[c]	200000[b]	-----[c]	1400[l]	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2,4,6-Trichlorophenol	520[e]	390[e]	11000[e]	540[e]	0.77[f]	**	0.66	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2,4-Dichlorophenol	6100[b]	-----[c]	610[b]	-----[c]	1[i]	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2,4-Dimethylphenol	41000[b]	-----[c]	41000[b]	-----[c]	9	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2,4-Dinitrophenol	4100[b]	-----[c]	410[b]	-----[c]	0.2	**	3.3	<0.22	<0.2	<0.2	<0.18	<0.2	<0.2	<0.21	<0.22	<0.21	<0.2	<0.42	<0.2	<0.23	<0.21
2,4-Dinitrotoluene	8.4[e]	-----[c]	180[e]	-----[c]	0.0008	**	0.25	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2,6-Dichlorophenol	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2,6-Dinitrotoluene	8.4[e]	-----[c]	180[e]	-----[c]	0.0007	**	0.26	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2-Chloronaphthalene	160000[b]	-----[c]	41000[b]	-----[c]	240	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2-Chlorophenol	10000[b]	53000[d]	10000[b]	53000[d]	4[i]	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
2-Methylnaphthalene [NT]	8,200[b]	-----[c]	820[b]	-----[c]	9.5	**	**	<0.065	<0.06	0.18	<0.053	<0.06	4.6	<0.061	<0.064	<0.062	<0.059	0.18	<0.06	<0.068	0.18
2-Methylphenol (o-cresol)	100000[b]	-----[c]	100000[b]	-----[c]	15	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
2-Naphthylamine	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2-Nitroaniline [NT]	31000[b]	28[b]	31000[b]	1.5[b]	0.7	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2-Nitrophenol	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
2-Picoline	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
3,3'-Dichlorobenzidine	13[e]	-----[c]	280[e]	-----[c]	0.033	**	1.3	<0.065	<0.06	<0.058	<0.053 J2	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061 J2
3-Nitroaniline [NT]	-----[c]	-----[c]	200[e]	-----[c]	-----[c]	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
4,6-Dinitro-2-methylphenol [NT]	160b	-----[c]	160b	-----[c]	pH-based	**	**	<0.43	<0.39	<0.38	<0.35	<0.39	<0.4	<0.4	<0.42	<0.41	<0.39	<0.81	<0.4	<0.45	<0.4
4-Bromophenyl-phenylether	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
4-Chloro-3-methylphenol	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
4-Chloroaniline	8,200[b]	-----[c]	820[b]	-----[c]	0.7	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
4-Chlorophenyl-phenylether	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
4-Methylphenol (p-cresol) [NT]	200,000[b]	170000[b]	4100[b]	3300[b]	3.9	**	**	<0.065	<0.06	<0.058	0.054	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
4-Nitroanilne [NT]	8200[b]	2400[b]	2000[b]	52[b]	0.14	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
4-Nitrobiphenyl	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
4-Nitrophenol [NT]	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
5-Nitroacenaphthene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
7,12-Dimethylbenzo(a)anthracene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058 J2	<0.053 J2	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061 J2
Acenaphthene	120000[b]	-----[c]	120000[b]	-----[c]	2900	0.13	*	<0.065	<0.06	<0.058	<0.053	<0.06	0.13	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	0.3
Acenaphthylene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	420	0.07	**	<0.065	<0.06	0.076	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	0.15	<0.06	<0.068	<0.061
Acetophenone	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
Aniline								----	----	----	----	----	----	----	----	----	----	----	----	----	----
Anthracene	610000[b]	-----[c]	610000[b]	-----[c]	59000	0.4	*	<0.065	0.078	0.19	<0.053	<0.06	0.064	<0.061	<0.064	0.065	<0.059	0.25	<0.06	<0.068	0.74
Azobenzene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Benzo(*a*)anthracene	8[e]	-----[c]	170[e]	-----[c]	8	1.8	*	<0.065	0.34	0.57	0.094 J2	0.12	<0.06	<0.061	0.091	0.17	<0.059	0.71	<0.06	<0.068	1.9 J2
Benzo(*a*) pyrene	0.8[e, x]	-----[c]	17[e]	-----[c]	82	2.1	*	<0.065	0.32	0.53 J2	0.11 J2	0.12	<0.06	<0.061	0.091	0.17	<0.059	0.69	<0.06	<0.068	1.8 J2
Benzo(*b*)fluoranthene	8[e]	-----[c]	170[e]	-----[c]	25	2.1	*	<0.065	0.42	0.71 J2	0.15 J2	0.16	<0.06	<0.061	0.11	0.18	<0.059	0.98	<0.06	0.079	1.8 J2
Benzo(*g,h,i*)perylene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	130,000	1.7	**	<0.065	0.093	0.19 J2	0.11 J2	<0.06	<0.06	<0.061	<0.064	0.064	<0.059	0.23	<0.06	<0.068	0.79 J2
Benzo(*k*) fluoranthene	78[e]	-----[c]	1700[e]	-----[c]	250	1.7	*	<0.065	0.35	0.83 J2	0.097 J2	0.15	<0.06	<0.061	0.11	0.23	<0.059	0.84	<0.06	<0.068	2.4 J2
Benzidine [NT]	0.02e	0.02e	0.54e	0.02e	0.000002	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Benzoic acid	1,000,000b	-----[c]	820,000b	-----[c]	400i	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Benzyl alcohol [NT]	200,000b	-----[c]	61,000b	-----[c]	3	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----	----
bis (2-Chloroethoxy)methane	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
bis (2-Chloroethyl)ether	5[e]	0.47[e]	75[e]	0.66[e]	0.0004	**	0.66	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
bis (2-Ethylhexyl)phthalate	410[e]	31000[d]	4100[b]	31000[d]	31000[d]	**	*	<0.22	<0.2	<0.2	6.8 J2	<0.2	<0.2	<0.21	<0.22	<0.21	<0.2	<0.42	<0.2	<0.23	0.64 J2
Butyl benzyl phthalate	410,000[b]	930[d]	410,000[b]	930[d]	930[d]	**	*	<0.065	<0.06	<0.058	<0.053 J2	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	0.17 J2
Carbazole	290	-----[c]	6200	-----[c]	2.8	**	NA	<0.065	0.072	0.076	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	0.33
Chrysene	780[e]	-----[c]	17000[e]	-----[c]	800	2.7	*	<0.065	0.35	0.64	0.12 J2	0.15	<0.06	<0.061	0.11	0.2	<0.059	0.82	<0.06	0.069	1.9 J2
Dibenzo(*a,h*)anthracene	0.8[e]	-----[c]	17[e]	-----[c]	7.6	0.42	*	<0.065	<0.06	0.074 J2	<0.053 J2	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	0.31 J2
Dibenzofuran [NT]	2000[b]	-----[c]	820[b]	-----[c]	15[b]	**	**	<0.065	<0.06	0.11	<0.053	<0.06	0.13	<0.061	<0.064	<0.062	<0.059	0.19	<0.06	<0.068	0.21
Diethyl phthalate	1000000[b]	2000[d]	1000000[b]	2000[d]	470	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Dimethylphthalate	-----[c]	-----[c]	20000[b]	-----[c]	-----[c]	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Di-n-butylphthalate	200000[b]	2300[d]	200000[b]	2300[d]	2300[d]	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Di-n-octylphthalate	41,000[e]	10,000[d]	4,100[b]	10,000[d]	10000[d]	**	*	<0.065	<0.06	<0.058 J2	0.19 J2	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061 J2
Diphenylamine [NT]	51000[b]	-----[c]	5100[b]	-----[c]	100	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061

	Industrial-Commercial							OSE Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	Background Carcinogenic PAH 95th Percentile Concentrations		4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012-04/10/12	4/2/2012	4/2/2012	4/2/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012
	Industrial-Commercial		Construction Worker					JD-GP-01	JD-GP-02	JD-GP-03	JD-GP-04	JD-GP-05	JD-GP-05A	JD-GP-06	JD-GP-07	JD-GP-08	JD-GP-09	JD-GP-10	JD-GP-11	JD-GP-12	JD-GP-13
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Within MSA		4-6 ft	3-5 ft	1-3 ft	1-3 ft	1-3 ft	8-10 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	ADL (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Ethyl methanesulfonate	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
Fluoranthene	82000[b]	-----[c]	82000[b]	-----[c]	21000	4.1	*	0.083	0.58	0.87	0.11	0.26	0.097	<0.061	0.14	0.33	<0.059	1.4	<0.06	0.097	3
Fluorene	82000[b]	-----[c]	82000[b]	-----[c]	2800	0.18	*	<0.065	<0.06	0.062	<0.053	<0.06	0.29	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	0.46
Hexachlorobenzene	4[e]	1.8[e]	78[e]	2.6[e]	11	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Hexachlorobutadiene [NT]	2,000b	-----[c]	200b	-----[c]	11	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Hexachlorocyclopentadiene	14,000[b]	16[b]	14,000[b]	1.1[b]	2200[d]	**	*	<0.22	<0.2	<0.2	<0.18	<0.2	<0.2	<0.21	<0.22	<0.21	<0.2	<0.42	<0.2	<0.23	<0.21
Hexachloroethane	2,000[b]	-----[c]	2,000[b]	-----[c]	2.6	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
Hexachloropropene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Indeno(1,2,3-*c,d*)pyrene	8[e]	-----[c]	170[e]	-----[c]	69	1.6	*	<0.065	0.12	0.23 J2	0.076 J2	<0.06	<0.06	<0.061	<0.064	0.077	<0.059	0.29	<0.06	<0.068	0.89 J2
Isodrin	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Isophorone	410,000[b]	4,600[d]	410,000[b]	4,600[d]	8	**	*	<0.065	<0.06	<0.058	0.28	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Isosafrole	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Mestranol	**	**	**	**	**	**	**	<0.065	<0.06	<0.058 J2	<0.053 J2	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061 J2
Methyl methanesulfonate	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
Naphthalene	41000[b]	270[b]	4100[b]	1.8[b]	18	0.2	*	<0.065	<0.06	0.11	<0.053	<0.06	0.5	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	0.13
Nitrobenzene	1,000[b]	140[b]	1,000[b]	9.4[b]	0.1	**	0.26	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
N-Nitroso-di-n-butylamine	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
N-Nitroso-di-n-propylamine	0.8[e]	-----[c]	18[e]	-----[c]	0.00005	**	0.0018	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
N-Nitrosopioeridine	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
p-Dimethylaminoazobenzene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053 J2	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061 J2
Pentachlorobenzene	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Pentachloronitrobenzene [NT]	6100[b]	-----[c]	610[b]	-----[c]	150	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Pentachlorophenol	24[e,j]	-----[c]	520[e,j]	-----[c]	0.14[f]	**	*	<0.65	<0.6	<0.58	<0.53	<0.6	<0.6	<0.61	<0.64	<0.62	<0.59	<1.2	<0.6	<0.68	<0.61
Phenacetin	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Phenanthrene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	1,000	2.5	**	<0.065	0.3	0.7	0.094	0.14	0.7	<0.061	0.074	0.25	<0.059	0.78	<0.06	<0.068	2.7
Phenol	610000[b]	-----[c]	61000[b]	-----[c]	100	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
Pronamide	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061
Pyrene	61000[b]	-----[c]	61000[b]	-----[c]	21000	3	*	0.074	0.51	1.1	0.44 J2	0.23	0.12	<0.061	0.14	0.3	<0.059	1.2	<0.06	0.083	6.9 J2
Pyridine [NT]	2000b		2000b		pH-dependent	**	*	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059 J1	<0.12	<0.06	<0.068	<0.061
Safrole	**	**	**	**	**	**	**	<0.065	<0.06	<0.058	<0.053	<0.06	<0.06	<0.061	<0.064	<0.062	<0.059	<0.12	<0.06	<0.068	<0.061

Part 742 Notes
* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/2012, 9/1/2012

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 commercial/industrial objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html
---	--- indicates chemical not analyzed or not sampled
	See attached for notations

TABLE 2.2 - SOIL ANALYTICAL RESULTS (SVOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial							OSE Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	Background Carcinogenic PAH 95th Percentile Concentrations		4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012
	Industrial-Commercial		Construction Worker					JD-GP-14	JD-GP-15	JD-GP-16	JD-GP-17	JD-GP-18	JD-GP-19	JD-GP-20	JD-GP-21	JD-GP-22	JD-GP-23	JD-GP-24 & JD-GP-24MS/MSD	JD-GP-124 (Duplicate)	JD-GP-25
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Within MSA		1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	4-6 ft	1-3 ft	6-8 ft	6-8 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	ADL (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Semivolatiles (Method - 8270)																				
Base Neutral/Acid Compounds (Includes Polynuclear Aromatics)																				
1,2,4,5-Tetrachlorobenzene	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
1,2,4-Trichlorobenzene	20,000[b]	3,200[d]	2,000[b]	920[b]	53	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
1,2-Dichlorobenzene (*o*-Dichlorobenzene)	180,000[b]	560[d]	18,000[b]	310[b]	43	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
1,2-Dinitrobenzene	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
1,3-Dichlorobenzene	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
1,3-Dinitrobenzene	200[a]	-----[c]	200[a]	-----[c]	0.0037	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
1,4-Dichlorobenzene (*p*-Dichlorobenzene)	-----[c]	17,000[b]	-----[c]	340[b]	11	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
1,4-Dinitrobenzene	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
1-Chloronaphthalene	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
1-Naphthylamine	**	**	**	**	**	**	**	<0.054 J5	<0.062 J5	<0.062 J5	<0.11 J5	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2,2-Oxybis(1-chloropropane)	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
2,3,4,6-Tetrachlorophenol	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2,4,5-Trichlorophenol	200000[b]	-----[c]	200000[b]	-----[c]	1400[l]	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2,4,6-Trichlorophenol	520[e]	390[e]	11000[e]	540[e]	0.77[l]	**	0.66	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2,4-Dichlorophenol	6100[b]	-----[c]	610[b]	-----[c]	1[l]	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2,4-Dimethylphenol	41000[b]	-----[c]	41000[b]	-----[c]	9	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2,4-Dinitrophenol	4100[b]	-----[c]	410[b]	-----[c]	0.2	**	3.3	<0.18	<0.21	<0.21	<0.37	<0.18	<0.19	<0.18	<0.2	<0.21	<0.19	<0.2	<0.2	<0.42
2,4-Dinitrotoluene	8.4[e]	-----[c]	180[e]	-----[c]	0.0008	**	0.25	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2,6-Dichlorophenol	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2,6-Dinitrotoluene	8.4[e]	-----[c]	180[e]	-----[c]	0.0007	**	0.26	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2-Chloronaphthalene	160000[b]	-----[c]	41000[b]	-----[c]	240	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2-Chlorophenol	10000[b]	53000[d]	10000[b]	53000[d]	4[l]	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
2-Methylnaphthalene [NT]	8,200[b]	-----[c]	820[b]	-----[c]	9.5	**	**	0.66	<0.062	<0.062	0.7	0.49	<0.056	0.087	<0.059	0.2	<0.055	0.24	<0.06	<0.12
2-Methylphenol (o-cresol)	100000[b]	-----[c]	100000[b]	-----[c]	15	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
2-Naphthylamine	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2-Nitroaniline [NT]	31000[b]	28[b]	31000[b]	1.5[b]	0.7	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2-Nitrophenol	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
2-Picoline	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
3,3'-Dichlorobenzidine	13[e]	-----[c]	280[e]	-----[c]	0.033	**	1.3	<0.054 J2	<0.062	<0.062	<0.11 J2	<0.053 J2	<0.056 J2	<0.054 J2	<0.059	<0.061 J2	<0.055	<0.059 J2	<0.06	<0.12
3-Nitroaniline [NT]	-----[c]	-----[c]	200[e]	-----[c]	-----[c]	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
4,6-Dinitro-2-methylphenol [NT]	160b	-----[c]	160b	-----[c]	pH-based	**	**	<0.36	<0.41	<0.41	<0.71	<0.35	<0.37	<0.35	<0.39	<0.4	<0.37	<0.39	<0.39	<0.81
4-Bromophenyl-phenylether	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
4-Chloro-3-methylphenol	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
4-Chloroaniline	8,200[b]	-----[c]	820[b]	-----[c]	0.7	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
4-Chlorophenyl-phenylether	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
4-Methylphenol (p-cresol) [NT]	200,000[b]	170000[b]	4100[b]	3300[b]	3.9	**	**	<0.054	<0.062	<0.062	<0.11	<0.053 J3	<0.056	0.065	<0.059 J1	0.28	<0.055	<0.059	<0.06	<0.12
4-Nitroanilne [NT]	8200[b]	2400[b]	2000[b]	52[b]	0.14	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
4-Nitrobiphenyl	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
4-Nitrophenol [NT]	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
5-Nitroacenaphthene	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
7,12-Dimethylbenzo(a)anthracene	**	**	**	**	**	**	**	<0.054 J2	<0.062	<0.062 J2	<0.11 J2	<0.053 J2	<0.056 J2	<0.054 J2	<0.059 J2	<0.061 J2	<0.055	<0.059 J2	<0.06	<0.12
Acenaphthene	120000[b]	-----[c]	120000[b]	-----[c]	2900	0.13	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	0.15	<0.055	0.12	<0.06	<0.12
Acenaphthylene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	420	0.07	**	0.26	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Acetophenone	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
Aniline								----	----	----	----	----	----	----	----	----	----	----	----	----
Anthracene	610000[b]	-----[c]	610000[b]	-----[c]	59000	0.4	*	0.29	0.092	0.11	0.11	0.064	<0.056	<0.054	<0.059	0.42	<0.055	0.23	0.073	<0.12
Azobenzene	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Benzo(*a*)anthracene	8[e]	-----[c]	170[e]	-----[c]	8	1.8	*	1.3 J2	0.38	0.33	0.47 J2	0.28 J2	0.22 J2	0.16 J2	0.14	1.6 J2	0.17	0.52 J2	0.33	<0.12
Benzo(*a*) pyrene	0.8[e,x]	-----[c]	17[e]	-----[c]	82	2.1	*	1.2 J2	0.37	0.31 J2	0.49 J2	0.31 J2	0.32 J2	0.23 J2	0.13 J2	1.6 J2	0.25	0.54 J2	0.33	<0.12
Benzo(*b*)fluoranthene	8[e]	-----[c]	170[e]	-----[c]	25	2.1	*	1.8 J2	0.43	0.39 J2	0.51 J2	0.42 J2	0.29 J2	0.3 J2	0.14 J2	1.8 J2	0.25	0.49 J2	0.39	<0.12
Benzo(*g,h,i*)perylene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	130,000	1.7	**	0.8 J2	0.11	0.093 J2	0.37 J2	0.25 J2	0.33 J2	0.21 J2	0.062 J2	0.92 J2	0.16	0.57 J2	0.12	<0.12
Benzo(*k*) fluoranthene	78[e]	-----[c]	1700[e]	-----[c]	250	1.7	*	1.7 J2	0.47	0.4 J2	0.45 J2	0.37 J2	0.23 J2	0.25 J2	0.15 J2	1.5 J2	0.23	0.41 J2	0.37	<0.12
Benzidine [NT]	0.02e	0.02e	0.54e	0.02e	0.000002	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Benzoic acid	1,000,000b	-----[c]	820,000b	-----[c]	400i	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Benzyl alcohol [NT]	200,000b	-----[c]	61,000b	-----[c]	3	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
bis (2-Chloroethoxy)methane	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
bis (2-Chloroethyl)ether	5[e]	0.47[e]	75[e]	0.66[e]	0.0004	**	0.66	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
bis (2-Ethylhexyl)phthalate	410[e]	31000[d]	4100[b]	31000[d]	31000[d]	**	*	<0.18 J2	<0.21	<0.21	6 J2	4.2 J2, J3	<0.19 J2	0.65 J2	0.9	0.4 J2	<0.19	<0.2 J2	<0.2	<0.42
Butyl benzyl phthalate	410,000[b]	930[d]	410,000[b]	930[d]	930[d]	**	*	<0.054 J2	<0.062	<0.062	0.13 J2	0.22 J2	<0.056 J2	<0.054 J2	<0.059	0.064 J2	<0.055	<0.059 J2	<0.06	<0.12
Carbazole	290	-----[c]	6200	-----[c]	2.8	**	NA	0.14	0.069	0.065	<0.11	<0.053	<0.056	<0.054	<0.059	0.13	<0.055	0.074	<0.06	<0.12
Chrysene	780[e]	-----[c]	17000[e]	-----[c]	800	2.7	*	1.7 J2	0.44	0.38	0.61 J2	0.35 J2	0.31 J2	0.28 J2	0.16	1.8 J2	0.21	0.7 J2	0.36	<0.12
Dibenzo(*a,h*)anthracene	0.8[e]	-----[c]	17[e]	-----[c]	7.6	0.42	*	0.25 J2	<0.062	<0.062 J2	<0.11 J2	<0.053 J2	0.068 J2	<0.054 J2	<0.059 J2	0.32 J2	<0.055	0.096 J2	<0.06	<0.12
Dibenzofuran [NT]	2000[b]	-----[c]	820[b]	-----[c]	15[b]	**	**	0.4	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	0.12	<0.055	0.068	<0.06	<0.12
Diethyl phthalate	1000000[b]	2000[d]	1000000[b]	2000[d]	470	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Dimethylphthalate	-----[c]	-----[c]	20000[b]	-----[c]	-----[c]	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Di-n-butylphthalate	200000[b]	2300[d]	200000[b]	2300[d]	2300[d]	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Di-n-octylphthalate	41,000[e]	10,000[d]	4,100[b]	10,000[d]	10000[d]	**	*	<0.054 J2	<0.062	<0.062 J2	0.4 J2	0.2 J2	<0.056 J2	<0.054 J2	<0.059 J2	<0.061 J2	<0.055	<0.059 J2	<0.06	<0.12
Diphenylamine [NT]	51000[b]	-----[c]	5100[b]	-----[c]	100	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12

	Industrial-Commercial							OSE Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	Background Carcinogenic PAH 95th Percentile Concentrations		4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012
	Industrial-Commercial		Construction Worker					JD-GP-14	JD-GP-15	JD-GP-16	JD-GP-17	JD-GP-18	JD-GP-19	JD-GP-20	JD-GP-21	JD-GP-22	JD-GP-23	JD-GP-24 & JD-GP-24MS/MSD	JD-GP-124 (Duplicate)	JD-GP-25
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Within MSA		1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	4-6 ft	1-3 ft	6-8 ft	6-8 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	ADL (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Ethyl methanesulfonate	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
Fluoranthene	82000[b]	-----c	82000[b]	-----c	21000	4.1	*	1.9	0.78	0.73	0.53	0.39	0.23	0.21	0.26	1.5	0.29	0.54	0.64	<0.12
Fluorene	82000[b]	-----c	82000[b]	-----c	2800	0.18	*	0.056	<0.062	0.069	0.11	<0.053	<0.056	<0.054	<0.059	0.17	<0.055	0.24	<0.06	<0.12
Hexachlorobenzene	4[e]	1.8[e]	78[e]	2.6[e]	11	**	*	<0.054	<0.062	<0.062	<0.11	<0.053 J3	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Hexachlorobutadiene [NT]	2,000b	-----c	200b	-----c	11	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Hexachlorocyclopentadiene	14,000[b]	16[b]	14,000[b]	1.1[b]	2200[d]	**	*	<0.18	<0.21	<0.21	<0.37	<0.18	<0.19	<0.18	<0.2	<0.21	<0.19	<0.2	<0.2	<0.42
Hexachloroethane	2,000[b]	-----c	2,000[b]	-----c	2.6	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
Hexachloropropene	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Indeno(1,2,3-*c,d*)pyrene	8[e]	-----c	170[e]	-----c	69	1.6	*	0.81 J2	0.13	0.11 J2	0.33 J2	0.23 J2	0.16 J2	0.16 J2	0.063 J2	0.98 J2	0.16	0.28 J2	0.14	<0.12
Isodrin	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Isophorone	410,000[b]	4,600[d]	410,000[b]	4,600[d]	8	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Isosafrole	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Mestranol	**	**	**	**	**	**	**	<0.054 J2	<0.062	<0.062 J2	<0.11 J2	<0.053 J2	<0.056 J2	<0.054 J2	<0.059 J2	<0.061 J2	<0.055	<0.059 J2	<0.06	<0.12
Methyl methanesulfonate	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
Naphthalene	41000[b]	270[b]	4100[b]	1.8[b]	18	0.2	*	0.38	<0.062	<0.062	0.44	0.27	<0.056	<0.054	<0.059	0.14	<0.055	0.18	0.062	<0.12
Nitrobenzene	1,000[b]	140[b]	1,000[b]	9.4[b]	0.1	**	0.26	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
N-Nitroso-di-n-butylamine	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
N-Nitroso-di-n-propylamine	0.8[e]	-----c	18[e]	-----c	0.00005	**	0.0018	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
N-Nitrosopioeridine	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
p-Dimethylaminoazobenzene	**	**	**	**	**	**	**	<0.054 J2	<0.062	<0.062	<0.11 J2	<0.053 J2	<0.056 J2	<0.054 J2	<0.059	<0.061 J2	<0.055	<0.059 J2	<0.06	<0.12
Pentachlorobenzene	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053 J3	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Pentachloronitrobenzene [NT]	6100[b]	-----c	610[b]	-----c	150	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Pentachlorophenol	24[e,j]	-----c	520[e,j]	-----c	0.14[l]	**	*	<0.54	<0.62	<0.62	<1.1	<0.53	<0.56	<0.54	<0.59	<0.61	<0.55	<0.59	<0.6	<1.2
Phenacetin	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Phenanthrene [NT]	61,000[b]	-----c	61,000[b]	-----c	1,000	2.5	**	2.1	0.48	0.64	0.55	0.32	0.18	0.19	0.22	1.4	0.15	1.3	0.33	<0.12
Phenol	610000[b]	-----c	61000[b]	-----c	100	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
Pronamide	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12
Pyrene	61000[b]	-----c	61000[b]	-----c	21000	3	*	4.8 J2	0.73	0.68	1.9 J2	1.1 J2	0.92 J2	0.88 J2	0.53	3 J2	0.28	2.2 J2	0.57	<0.12
Pyridine [NT]	2000b		2000b		pH-dependent	**	*	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059 J1	<0.061	<0.055	<0.059	<0.06	<0.12
Safrole	**	**	**	**	**	**	**	<0.054	<0.062	<0.062	<0.11	<0.053	<0.056	<0.054	<0.059	<0.061	<0.055	<0.059	<0.06	<0.12

Part 742 Notes
* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/2012, 9/1/2012

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 commercial/industrial objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html
---	--- indicates chemical not analyzed or not sampled
	See attached for notations

TABLE 2.2 - SOIL ANALYTICAL RESULTS (SVOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial							OSE Investigation												
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	Background Carcinogenic PAH 95th Percentile Concentrations		4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/10/2012	4/10/2012
	Industrial-Commercial		Construction Worker					JD-GP-26	JD-GP-27	JD-GP-28	JD-GP-29	JD-GP-30	JD-GP-31	JD-GP-32	JD-GP-33	JD-GP-34	JD-GP-35	JD-GP-36	JD-GP-37	JD-GP-38	JD-GP-39	JD-GP-40	JD-GP-41
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Within MSA		1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	4-6 ft	1-3 ft	4-6 ft	1-3 ft	1-3 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	ADL (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Semivolatiles (Method - 8270)																							
Base Neutral/Acid Compounds (Includes Polynuclear Aromatics)																							
1,2,4,5-Tetrachlorobenzene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
1,2,4-Trichlorobenzene	20,000[b]	3,200[d]	2,000[b]	920[b]	53	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
1,2-Dichlorobenzene (*o*-Dichlorobenzene)	180,000[b]	560[d]	18,000[b]	310[b]	43	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
1,2-Dinitrobenzene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
1,3-Dichlorobenzene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
1,3-Dinitrobenzene	200[a]	-----[c]	200[a]	-----[c]	0.0037	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
1,4-Dichlorobenzene (*p*-Dichlorobenzene)	-----[c]	17,000[b]	-----[c]	340[b]	11	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
1,4-Dinitrobenzene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
1-Chloronaphthalene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
1-Naphthylamine	**	**	**	**	**	**	**	<0.061 J5	<0.21 J5	<0.06 J5	<0.054 J5	<0.053 J5	<0.059 J5	<0.059 J5	<0.062 J5	<0.06 J5	<0.059 J5	<0.06	<0.057	<0.058	<0.061	<0.2	<0.2
2,2-Oxybis(1-chloropropane)	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2,3,4,6-Tetrachlorophenol	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2,4,5-Trichlorophenol	200000[b]	-----[c]	200000[b]	-----[c]	1400[l]	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2,4,6-Trichlorophenol	520[e]	390[e]	11000[e]	540[e]	0.77[l]	**	0.66	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2,4-Dichlorophenol	6100[b]	-----[c]	610[b]	-----[c]	1[l]	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2,4-Dimethylphenol	41000[b]	-----[c]	41000[b]	-----[c]	9	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2,4-Dinitrophenol	4100[b]	-----[c]	410[b]	-----[c]	0.2	**	3.3	<0.21	<0.71	<0.2	<0.18	<0.18	<0.2	<0.2	<0.21	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.2	<0.2
2,4-Dinitrotoluene	8.4[e]	-----[c]	180[e]	-----[c]	0.0008	**	0.25	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2,6-Dichlorophenol	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2,6-Dinitrotoluene	8.4[e]	-----[c]	180[e]	-----[c]	0.0007	**	0.26	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2-Chloronaphthalene	160000[b]	-----[c]	41000[b]	-----[c]	240	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2-Chlorophenol	10000[b]	53000[d]	10000[b]	53000[d]	4[l]	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2-Methylnaphthalene [NT]	8,200[b]	-----[c]	820[b]	-----[c]	9.5	**	**	0.14	<0.21	<0.06	0.16	<0.053	0.068	<0.059	<0.062	<0.06	<0.059	<0.06	0.059	<0.058	<0.061	<0.057	0.16
2-Methylphenol (o-cresol)	100000[b]	-----[c]	100000[b]	-----[c]	15	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2-Naphthylamine	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2-Nitroaniline [NT]	31000[e]	28[e]	31000[b]	1.5[e]	0.7	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2-Nitrophenol	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
2-Picoline	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
3,3'-Dichlorobenzidine	13[e]	-----[c]	280[e]	-----[c]	0.033	**	1.3	<0.061	<0.21	<0.06	<0.054 J2	<0.053	<0.059 J2	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057 J2	<0.058 J2
3-Nitroaniline [NT]	-----[c]	-----[c]	200[b]	-----[c]	-----[c]	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
4,6-Dinitro-2-methylphenol [NT]	160b	-----[c]	160b	-----[c]	pH-based	**	**	<0.4	<1.4	<0.4	<0.36	<0.35	<0.39	<0.39	<0.41	<0.39	<0.39	<0.4	<0.38	<0.38	<0.4	<0.38	<0.39
4-Bromophenyl-phenylether	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
4-Chloro-3-methylphenol	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
4-Chloroaniline	8,200[b]	-----[c]	820[b]	-----[c]	0.7	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
4-Chlorophenyl-phenylether	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
4-Methylphenol (p-cresol) [NT]	200,000[b]	170000[b]	4100[b]	3300[b]	3.9	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	0.08
4-Nitroanilne [NT]	8200[b]	2400[b]	2000[b]	52[b]	0.14	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
4-Nitrobiphenyl	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
4-Nitrophenol [NT]	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
5-Nitroacenaphthene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
7,12-Dimethylbenzo(a)anthracene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054 J2	<0.053 J2	<0.059 J2	<0.059	<0.062 J2	<0.06	<0.059	<0.06 J2	<0.057 J2	<0.058	<0.061 J2	<0.057 J2	<0.058 J2
Acenaphthene	120000[b]	-----[c]	120000[b]	-----[c]	2900	0.13	*	<0.061	<0.21	<0.06	0.88	<0.053	0.16	<0.059	<0.062	<0.06	<0.059	<0.06	0.11	<0.058	<0.061	0.14	0.17
Acenaphthylene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	420	0.07	**	0.14	<0.21	<0.06	0.072	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	0.063	<0.061	<0.057	0.34
Acetophenone	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Aniline								----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Anthracene	610000[b]	-----[c]	610000[b]	-----[c]	59000	0.4	*	0.11	<0.21	<0.06	1.6	0.074	0.42	<0.059	<0.062	<0.06	<0.059	<0.06	0.27	<0.058	<0.061	0.21	0.76
Azobenzene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Benzo(*a*)anthracene	8[e]	-----[c]	170[e]	-----[c]	8	1.8	*	0.51	0.32	0.14	5.4 J2	0.27	1.9 J2	<0.059	0.16	<0.06	<0.059	0.2	1.1	0.16	0.078	0.9 J2	1.7 J2
Benzo(*a*) pyrene	0.8[e, x]	-----[c]	17[e]	-----[c]	82	2.1	*	0.52	0.26	0.15	5 J2	0.26 J2	1.9 J2	<0.059	0.16 J2	<0.06	<0.059	0.25 J2	1.1 J2	0.27	0.098 J2	1.1 J2	1.5 J2
Benzo(*b*)fluoranthene	8[e]	-----[c]	170[e]	-----[c]	25	2.1	*	0.73	0.33	0.16	5.6 J2	0.29 J2	2.8 J2	<0.059	0.21 J2	<0.06	<0.059	0.31 J2	1.4 J2	0.31	0.097 J2	1.2 J2	1.6 J2
Benzo(*g,h,i*)perylene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	130,000	1.7	**	0.17	<0.21	<0.06	2.8 J2	0.12 J2	1 J2	<0.059	0.083 J2	<0.06	<0.059	0.097 J2	0.52 J2	0.11	0.087 J2	0.71 J2	0.89 J2
Benzo(*k*) fluoranthene	78[e]	-----[c]	1700[e]	-----[c]	250	1.7	*	0.78	0.38	0.17	5.3 J2	0.27 J2	2.8 J2	<0.059	0.21 J2	<0.06	<0.059	0.27 J2	1.5 J2	0.29	0.09 J2	1.2 J2	1.5 J2
Benzidine [NT]	0.02e	0.02e	0.54e	0.02e	0.000002	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Benzoic acid	1,000,000b	-----[c]	820,000b	-----[c]	400i	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Benzyl alcohol [NT]	200,000b	-----[c]	61,000b	-----[c]	3	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
bis (2-Chloroethoxy)methane	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
bis (2-Chloroethyl)ether	5[e]	0.47[e]	75[e]	0.66[e]	0.0004	**	0.66	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
bis (2-Ethylhexyl)phthalate	410[e]	31000[d]	4100[b]	31000[d]	31000[d]	**	*	<0.21	<0.71	<0.2	0.19 J2	<0.18	0.36 J2	<0.2	<0.21	<0.2	<0.2	0.24	1.3	<0.2	<0.21	<0.2 J2	0.21 J2
Butyl benzyl phthalate	410,000[b]	930[d]	410,000[b]	930[d]	930[d]	**	*	<0.061	<0.21	<0.06	<0.054 J2	<0.053	<0.059 J2	<0.059	<0.062	<0.06	<0.059	<0.06	0.07	<0.058	<0.061	<0.057 J2	<0.058 J2
Carbazole	290	-----[c]	6200	-----[c]	2.8	**	NA	<0.061	<0.21	<0.06	1.5	<0.053	0.65	<0.059	<0.062	<0.06	<0.059	<0.06	0.2	<0.058	<0.061	0.11	0.37
Chrysene	780[e]	-----[c]	17000[e]	-----[c]	800	2.7	*	0.63	0.36	0.17	5.8 J2	0.31	2.5 J2	<0.059	0.19	<0.06	<0.059	0.23	1.3	0.18	0.09	1.1 J2	1.8 J2
Dibenzo(a,*h*)anthracene	0.8[e]	-----[c]	17[e]	-----[c]	7.6	0.42	*	<0.061	<0.21	<0.06	0.99 J2	<0.053 J2	0.34 J2	<0.059	<0.062 J2	<0.06	<0.059	<0.06 J2	0.16 J2	<0.058	<0.061 J2	0.17 J2	0.26 J2
Dibenzofuran [NT]	2000[b]	-----[c]	820[b]	-----[c]	15[b]	**	**	0.077	<0.21	<0.06	0.79	<0.053	0.2	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	0.064	0.26
Diethyl phthalate	1000000[b]	2000[d]	1000000[b]	2000[d]	470	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Dimethylphthalate	-----[c]	-----[c]	20000[b]	-----[c]	-----[c]	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Di-n-butylphthalate	200000[b]	2300[d]	200000[b]	2300[d]	2300[d]	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	0.098	<0.058	<0.061	<0.057	<0.058
Di-n-octylphthalate	41,000[e]	10,000[d]	4,100[b]	10,000[d]	10000[d]	**	*	<0.061	<0.21	<0.06	<0.054 J2	<0.053 J2	<0.059 J2	<0.059	<0.062 J2	<0.06	<0.059	<0.06 J2	0.091 J2	<0.058	<0.061 J2	0.13 J2	<0.058 J2
Diphenylamine [NT]	51000[b]	-----[c]	5100[b]	-----[c]	100	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058

	Industrial-Commercial							OSE Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	Background Carcinogenic PAH 95th Percentile Concentrations		4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/10/2012	4/10/2012
	Industrial-Commercial		Construction Worker					JD-GP-26	JD-GP-27	JD-GP-28	JD-GP-29	JD-GP-30	JD-GP-31	JD-GP-32	JD-GP-33	JD-GP-34	JD-GP-35	JD-GP-36	JD-GP-37	JD-GP-38	JD-GP-39	JD-GP-40	JD-GP-41
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Within MSA		1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	4-6 ft	1-3 ft	4-6 ft	1-3 ft	1-3 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	ADL (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Ethyl methanesulfonate	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Fluoranthene	82000[b]	-----[c]	82000[b]	-----[c]	21000	4.1	*	0.78	0.5	0.28	8.9	0.41	4.7	<0.059	0.32	<0.06	<0.059	0.34	2	0.23	0.16	1.4	2.7
Fluorene	82000[b]	-----[c]	82000[b]	-----[c]	2800	0.18	*	<0.061	<0.21	<0.06	1.3	<0.053	0.32	<0.059	<0.062	<0.06	<0.059	<0.06	0.12	<0.058	<0.061	0.12	0.45
Hexachlorobenzene	4[e]	1.8[e]	78[e]	2.6[e]	11	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Hexachlorobutadiene [NT]	2,000b	-----[c]	200b	-----[c]	11	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Hexachlorocyclopentadiene	14,000[b]	16[b]	14,000[b]	1.1[b]	2200[d]	**	*	<0.21	<0.71	<0.2	<0.18	<0.18	<0.2	<0.2	<0.21	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.2	<0.2
Hexachloroethane	2,000[b]	-----[c]	2,000[b]	-----[c]	2.6	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Hexachloropropene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Indeno(1,2,3-*c,d*)pyrene	8[e]	-----[c]	170[e]	-----[c]	69	1.6	*	0.2	<0.21	<0.06	3 J2	0.11 J2	1.1 J2	<0.059	0.082 J2	<0.06	<0.059	0.11 J2	0.56 J2	0.11	<0.061 J2	0.68 J2	0.9 J2
Isodrin	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Isophorone	410,000[b]	4,600[d]	410,000[b]	4,600[d]	8	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Isosafrole	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Mestranol	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054 J2	<0.053 J2	<0.059 J2	<0.059	<0.062 J2	<0.06	<0.059	<0.06 J2	<0.057 J2	<0.058	<0.061 J2	<0.057 J2	<0.058 J2
Methyl methanesulfonate	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Naphthalene	41000[b]	270[b]	4100[b]	1.8[b]	18	0.2	*	0.1	<0.21	<0.06	0.38	<0.053	0.073	<0.059	<0.062	<0.06	<0.059	<0.06	0.071	0.068	<0.061	0.11	0.28
Nitrobenzene	1,000[b]	140[b]	1,000[b]	9.4[b]	0.1	**	0.26	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
N-Nitroso-di-n-butylamine	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
N-Nitroso-di-n-propylamine	0.8[e]	-----[c]	18[e]	-----[c]	0.00005	**	0.0018	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
N-Nitrosopioeridine	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
p-Dimethylaminoazobenzene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054 J2	<0.053	<0.059 J2	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057 J2	<0.058 J2
Pentachlorobenzene	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Pentachloronitrobenzene [NT]	6100[b]	-----[c]	610[b]	-----[c]	150	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Pentachlorophenol	24[e,i]	-----[c]	520[e,i]	-----[c]	0.14[i]	**	*	<0.61	<2.1	<0.6	<0.54	<0.53	<0.59	<0.59	<0.62	<0.6	<0.59	<0.6	<0.57	<0.58	<0.61	<0.57	<0.58
Phenacetin	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Phenanthrene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	1,000	2.5	**	0.56	0.27	0.19	11	0.31	2.9	<0.059	0.21	<0.06	<0.059	0.18	1.4	0.14	0.11	0.91	2.5
Phenol	610000[b]	-----[c]	61000[b]	-----[c]	100	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	0.061
Pronamide	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Pyrene	61000[b]	-----[c]	61000[b]	-----[c]	21000	3	*	0.83	0.47	0.25	24 J2	0.77	8.3 J2	<0.059	0.47	<0.06	<0.059	0.45	3.1	0.27	0.2	2.9 J2	3 J2
Pyridine [NT]	2000b		2000b		pH-dependent	**	*	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058
Safrole	**	**	**	**	**	**	**	<0.061	<0.21	<0.06	<0.054	<0.053	<0.059	<0.059	<0.062	<0.06	<0.059	<0.06	<0.057	<0.058	<0.061	<0.057	<0.058

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/2012, 9/1/2012

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 commercial/industrial objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html
---	--- indicates chemical not analyzed or not sampled
	See attached for notations

TABLE 2.2 - SOIL ANALYTICAL RESULTS (SVOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial							V3 Investigation												
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	Background Carcinogenic PAH 95th Percentile Concentrations		6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012
	Industrial-Commercial		Construction Worker					JD-GP-101	JD-GP-102	JD-GP-103	JD-GP-104	JD-GP-104	JD-GP-104	JD-GP-105	JD-GP-105	JD-GP-106	JD-GP-106	JD-GP-106	JD-GP-107	JD-GP-107
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Within MSA		8-10 ft	8-10 ft	8-10 ft	0.5-1.5 ft	5-7 ft	10-12 ft	0.5-1.5 ft	5-7 ft	1-2 ft	3-5ft	10-12ft	0.5-1.5 ft	3-5ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	ADL (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Semivolatiles (Method - 8270)																				
Base Neutral/Acid Compounds (Includes Polynuclear Aromatics)																				
1,2,4,5-Tetrachlorobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
1,2,4-Trichlorobenzene	20,000[b]	3,200[d]	2,000[b]	920[b]	53	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
1,2-Dichlorobenzene (*o*-Dichlorobenzene)	180,000[b]	560[d]	18,000[b]	310[b]	43	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
1,2-Dinitrobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
1,3-Dichlorobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
1,3-Dinitrobenzene	200[a]	-----c	200[a]	-----c	0.0037	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
1,4-Dichlorobenzene (*p*-Dichlorobenzene)	-----c	17,000[b]	-----c	340[b]	11	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
1,4-Dinitrobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
1-Chloronaphthalene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
1-Naphthylamine	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2,2-Oxybis(1-chloropropane)	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2,3,4,6-Tetrachlorophenol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2,4,5-Trichlorophenol	200000[b]	-----c	200000[b]	-----c	1400[l]	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
2,4,6-Trichlorophenol	520[e]	390[e]	11000[e]	540[e]	0.77[l]	**	0.66	----	----	----	----	----	----	----	----	----	----	----	----	----
2,4-Dichlorophenol	6100[b]	-----c	610[b]	-----c	1[l]	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
2,4-Dimethylphenol	41000[b]	-----c	41000[b]	-----c	9	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
2,4-Dinitrophenol	4100[b]	-----c	410[b]	-----c	0.2	**	3.3	----	----	----	----	----	----	----	----	----	----	----	----	----
2,4-Dinitrotoluene	8.4[e]	-----c	180[e]	-----c	0.0008	**	0.25	----	----	----	----	----	----	----	----	----	----	----	----	----
2,6-Dichlorophenol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2,6-Dinitrotoluene	8.4[e]	-----c	180[e]	-----c	0.0007	**	0.26	----	----	----	----	----	----	----	----	----	----	----	----	----
2-Chloronaphthalene	160000[b]	-----c	41000[b]	-----c	240	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2-Chlorophenol	10000[b]	53000[d]	10000[b]	53000[d]	4[l]	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
2-Methylnaphthalene [NT]	8,200[b]	-----c	820[b]	-----c	9.5	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2-Methylphenol (o-cresol)	100000[b]	-----c	100000[b]	-----c	15	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2-Naphthylamine	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2-Nitroaniline [NT]	31000[b]	28[b]	31000[b]	1.5[b]	0.7	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2-Nitrophenol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
2-Picoline	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
3,3'-Dichlorobenzidine	13[e]	-----c	280[e]	-----c	0.033	**	1.3	----	----	----	----	----	----	----	----	----	----	----	----	----
3-Nitroaniline [NT]	-----c	-----c	200[b]	-----c	-----c	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
4,6-Dinitro-2-methylphenol [NT]	160b	-----c	160b	-----c	pH-based	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
4-Bromophenyl-phenylether	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
4-Chloro-3-methylphenol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
4-Chloroaniline	8,200[b]	-----c	820[b]	-----c	0.7	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
4-Chlorophenyl-phenylether	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
4-Methylphenol (p-cresol) [NT]	200,000[b]	170000[b]	4100[b]	3300[b]	3.9	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
4-Nitroanilne [NT]	8200[b]	2400[b]	2000[b]	52[b]	0.14	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
4-Nitrobiphenyl	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
4-Nitrophenol [NT]	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
5-Nitroacenaphthene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
7,12-Dimethylbenzo(a)anthracene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Acenaphthene	120000[b]	-----c	120000[b]	-----c	2900	0.13	*	0.061	0.18	0.24	< 0.036	< 0.039	< 0.039	< 0.34	< 0.039	< 0.036	< 0.039	< 0.039	< 0.35	< 0.041
Acenaphthylene [NT]	61,000[b]	-----c	61,000[b]	-----c	420	0.07	**	< 0.039	< 0.039	0.12	0.071	< 0.039	< 0.039	< 0.34	< 0.039	0.12	0.07	< 0.039	< 0.35	< 0.041
Acetophenone	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Aniline								----	----	----	----	----	----	----	----	----	----	----	----	----
Anthracene	610000[b]	-----c	610000[b]	-----c	59000	0.4	*	< 0.039	< 0.039	0.15	0.088	< 0.039	< 0.039	< 0.34	< 0.039	0.23	0.081	< 0.039	< 0.35	< 0.041
Azobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Benzo(*a*)anthracene	8[e]	-----c	170[e]	-----c	8	1.8	*	< 0.039	< 0.039	< 0.04	0.24	< 0.039	< 0.039	0.6	< 0.039	0.48	0.23	< 0.039	0.61	0.048
Benzo(*a*) pyrene	0.8[e, x]	-----c	17[e]	-----c	82	2.1	*	< 0.039	< 0.039	< 0.04	0.31	< 0.039	< 0.039	0.73	< 0.039	0.66	0.29	< 0.039	0.78	0.06
Benzo(*b*)fluoranthene	8[e]	-----c	170[e]	-----c	25	2.1	*	< 0.039	< 0.039	< 0.04	0.29	< 0.039	< 0.039	0.68	0.044	0.61	0.29	< 0.039	0.83	0.047
Benzo(*g,h,i*)perylene [NT]	61,000[b]	-----c	61,000[b]	-----c	130,000	1.7	**	< 0.039	< 0.039	< 0.04	0.2	< 0.039	< 0.039	0.44	< 0.039	0.4	0.17	< 0.039	0.65	0.05
Benzo(*k*) fluoranthene	78[e]	-----c	1700[e]	-----c	250	1.7	*	< 0.039	< 0.039	< 0.04	0.38	< 0.039	< 0.039	0.68	< 0.039	0.7	0.26	< 0.039	0.76	0.07
Benzidine [NT]	0.02e	0.02e	0.54e	0.02e	0.000002	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Benzoic acid	1,000,000b	-----c	820,000b	-----c	400i	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Benzyl alcohol [NT]	200,000b	-----c	61,000b	-----c	3	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
bis (2-Chloroethoxy)methane	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
bis (2-Chloroethyl)ether	5[e]	0.47[e]	75[e]	0.66[e]	0.0004	**	0.66	----	----	----	----	----	----	----	----	----	----	----	----	----
bis (2-Ethylhexyl)phthalate	410[e]	31000[d]	4100[b]	31000[d]	31000[d]	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Butyl benzyl phthalate	410,000[b]	930[d]	410,000[b]	930[d]	930[d]	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Carbazole	290	-----c	6200	-----c	2.8	**	NA	----	----	----	----	----	----	----	----	----	----	----	----	----
Chrysene	780[e]	-----c	17000[e]	-----c	800	2.7	*	< 0.039	< 0.039	< 0.04	0.29	< 0.039	< 0.039	0.71	< 0.039	0.57	0.27	< 0.039	0.66	0.073
Dibenzo(*a,h*)anthracene	0.8[e]	-----c	17[e]	-----c	7.6	0.42	*	< 0.039	< 0.039	< 0.04	0.1	< 0.039	< 0.039	< 0.34	< 0.039	0.2	0.096	< 0.039	0.36	< 0.041
Dibenzofuran [NT]	2000[b]	-----c	820[b]	-----c	15[b]	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Diethyl phthalate	1000000[b]	2000[d]	1000000[b]	2000[d]	470	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Dimethylphthalate	-----c	-----c	20000[b]	-----c	-----c	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Di-n-butylphthalate	200000[b]	2300[d]	200000[b]	2300[d]	2300[d]	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Di-n-octylphthalate	41,000[e]	10,000[d]	4,100[b]	10,000[d]	10000[d]	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Diphenylamine [NT]	51000[b]	-----c	5100[b]	-----c	100	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----

	Industrial-Commercial							V3 Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	Background Carcinogenic PAH 95th Percentile Concentrations		6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012
	Industrial-Commercial		Construction Worker					JD-GP-101	JD-GP-102	JD-GP-103	JD-GP-104	JD-GP-104	JD-GP-104	JD-GP-105	JD-GP-105	JD-GP-106	JD-GP-106	JD-GP-106	JD-GP-107	JD-GP-107
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Within MSA		8-10 ft	8-10 ft	8-10 ft	0.5-1.5 ft	5-7 ft	10-12 ft	0.5-1.5 ft	5-7 ft	1-2 ft	3-5ft	10-12ft	0.5-1.5 ft	3-5ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	ADL (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Ethyl methanesulfonate	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Fluoranthene	82000[b]	-----c	82000[b]	-----c	21000	4.1	*	< 0.039	0.074	0.053	0.38	0.052	< 0.039	1.4	0.052	0.84	0.38	< 0.039	1.3	0.11
Fluorene	82000[b]	-----c	82000[b]	-----c	2800	0.18	*	0.12	0.34	0.4	< 0.036	0.13	< 0.039	< 0.34	< 0.039	< 0.036	< 0.039	< 0.039	< 0.35	< 0.041
Hexachlorobenzene	4[e]	1.8[e]	78[e]	2.6[e]	11	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Hexachlorobutadiene [NT]	2,000b	-----c	200b	-----c	11	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Hexachlorocyclopentadiene	14,000[b]	16[b]	14,000[b]	1.1[b]	2200[d]	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Hexachloroethane	2,000[b]	-----c	2,000[b]	-----c	2.6	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Hexachloropropene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Indeno(1,2,3-*c,d*)pyrene	8[e]	-----c	170[e]	-----c	69	1.6	*	< 0.039	< 0.039	< 0.04	0.18	< 0.039	< 0.039	< 0.34	< 0.039	0.38	0.17	< 0.039	0.52	0.041
Isodrin	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Isophorone	410,000[b]	4,600[d]	410,000[b]	4,600[d]	8	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Isosafrole	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Mestranol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Methyl methanesulfonate	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Naphthalene	41000[b]	270[b]	4100[b]	1.8[b]	18	0.2	*	0.76	1	0.38	< 0.036	< 0.039	< 0.039	< 0.34	0.4	0.039	< 0.039	< 0.039	< 0.35	< 0.041
Nitrobenzene	1,000[b]	140[b]	1,000[b]	9.4[b]	0.1	**	0.26	----	----	----	----	----	----	----	----	----	----	----	----	----
N-Nitroso-di-n-butylamine	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
N-Nitroso-di-n-propylamine	0.8[e]	-----c	18[e]	-----c	0.00005	**	0.0018	----	----	----	----	----	----	----	----	----	----	----	----	----
N-Nitrosopioeridine	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
p-Dimethylaminoazobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Pentachlorobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Pentachloronitrobenzene [NT]	6100[b]	-----c	610[b]	-----c	150	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Pentachlorophenol	24[e,j]	-----c	520[e,j]	-----c	0.14[l]	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Phenacetin	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Phenanthrene [NT]	61,000[b]	-----c	61,000[b]	-----c	1,000	2.5	**	0.2	0.65	0.34	0.12	0.28	< 0.039	0.58	0.069	0.37	0.099	< 0.039	0.59	0.058
Phenol	610000[b]	-----c	61000[b]	-----c	100	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Pronamide	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----
Pyrene	61000[b]	-----c	61000[b]	-----c	21000	3	*	< 0.039	0.15	0.14	0.35	0.075	< 0.039	1.2	0.053	0.79	0.35	< 0.039	1.1	0.11
Pyridine [NT]	2000b		2000b		pH-dependent	**	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Safrole	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----	----

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.

** indicates that the value is not listed in TACO, Section 742, Table A or B.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012

Checked by / Date RKB 5/24/2012, 9/1/2012

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 commercial/industrial objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html
---	--- indicates chemical not analyzed or not sampled
	See attached for notations

Chemical Name	Industrial-Commercial: Exposure Route-Specific Values for Soils: Industrial-Commercial: Ingestion (mg/kg)	Industrial-Commercial: Exposure Route-Specific Values for Soils: Industrial-Commercial: Inhalation (mg/kg)	Industrial-Commercial: Exposure Route-Specific Values for Soils: Construction Worker: Ingestion (mg/kg)	Industrial-Commercial: Exposure Route-Specific Values for Soils: Construction Worker: Inhalation (mg/kg)	Industrial-Commercial: Soil Component of the Groundwater Ingestion Route Values: Class II (mg/kg)	Industrial-Commercial: Background Carcinogenic PAH 95th Percentile Concentrations: Within MSA (mg/kg)	ADL (mg/kg)	V3 Investigation: 6/13/2012 JD-GP-107 8-10ft mg/kg	6/13/2012 JD-GP-108 0.5-1.5 ft mg/kg	6/13/2012 JD-GP-108 3-5ft mg/kg	6/13/2012 JD-GP-110 0.5-1.5 ft mg/kg	6/14/2012 JD-GP-111 0.5-1.5 ft mg/kg	6/14/2012 JD-GP-114 1-2 ft mg/kg	6/14/2012 JD-GP-117 3-5 ft mg/kg	6/15/2012 JD-GP-120 1-3 ft mg/kg	6/19/2012 JD-GP-122 0.5-1.5 ft mg/kg	6/19/2012 JD-GP-122DUP 0.5-1.5 ft mg/kg	6/18/2012 JD-EX-04 11-12 ft mg/kg	6/14/2012 MSDS JD-GP-117 11-13 ft mg/kg
Semivolatiles (Method - 8270)																			
Base Neutral/Acid Compounds (Includes Polynuclear Aromatics)																			
1,2,4,5-Tetrachlorobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
1,2,4-Trichlorobenzene	20,000[b]	3,200[d]	2,000[b]	920[b]	53	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
1,2-Dichlorobenzene (*o*-Dichlorobenzene)	180,000[b]	560[d]	18,000[b]	310[b]	43	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
1,2-Dinitrobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
1,3-Dichlorobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
1,3-Dinitrobenzene	200[a]	-----[c]	200[a]	-----[c]	0.0037	**	**	----	----	----	----	----	----	----	----	----	----	----	----
1,4-Dichlorobenzene (*p*-Dichlorobenzene)	-----[c]	17,000[b]	-----[c]	340[b]	11	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
1,4-Dinitrobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
1-Chloronaphthalene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
1-Naphthylamine	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
2,2-Oxybis(1-chloropropane)	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2,3,4,6-Tetrachlorophenol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
2,4,5-Trichlorophenol	200000[b]	-----[c]	200000[b]	-----[c]	1400[j]	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2,4,6-Trichlorophenol	520[e]	390[e]	11000[e]	540[e]	0.77[j]	**	0.66	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2,4-Dichlorophenol	6100[b]	-----[c]	610[b]	-----[c]	1[j]	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2,4-Dimethylphenol	41000[b]	-----[c]	41000[b]	-----[c]	9	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2,4-Dinitrophenol	4100[b]	-----[c]	410[b]	-----[c]	0.2	**	3.3	----	----	----	----	----	----	----	< 1.2	----	----	< 0.98	----
2,4-Dinitrotoluene	8.4[e]	-----[c]	180[e]	-----[c]	0.0008	**	0.25	----	----	----	----	----	----	----	< 0.046	----	----	< 0.039	----
2,6-Dichlorophenol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.046	----	----	< 0.039	----
2,6-Dinitrotoluene	8.4[e]	-----[c]	180[e]	-----[c]	0.0007	**	0.26	----	----	----	----	----	----	----	----	----	----	----	----
2-Chloronaphthalene	160000[b]	-----[c]	41000[b]	-----[c]	240	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2-Chlorophenol	10000[b]	53000[d]	10000[b]	53000[d]	4[j]	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2-Methylnaphthalene [NT]	8,200[b]	-----[c]	820[b]	-----[c]	9.5	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2-Methylphenol (o-cresol)	100000[b]	-----[c]	100000[b]	-----[c]	15	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2-Naphthylamine	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
2-Nitroaniline [NT]	31000[b]	28[b]	31000[b]	1.5[b]	0.7	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2-Nitrophenol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
2-Picoline	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
3,3'-Dichlorobenzidine	13[e]	-----[c]	280[e]	-----[c]	0.033	**	1.3	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
3-Nitroaniline [NT]	-----[c]	-----[c]	200[b]	-----[c]	-----[c]	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
4,6-Dinitro-2-methylphenol [NT]	160b	-----[c]	160b	-----[c]	pH-based	**	**	----	----	----	----	----	----	----	< 0.46	----	----	< 0.39	----
4-Bromophenyl-phenylether	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
4-Chloro-3-methylphenol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.46	----	----	< 0.39	----
4-Chloroaniline	8,200[b]	-----[c]	820[b]	-----[c]	0.7	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
4-Chlorophenyl-phenylether	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
4-Methylphenol (p-cresol) [NT]	200,000[b]	170000[b]	4100[b]	3300[b]	3.9	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
4-Nitroanilne [NT]	8200[b]	2400[b]	2000[b]	52[b]	0.14	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
4-Nitrobiphenyl	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
4-Nitrophenol [NT]	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.46	----	----	< 0.39	----
5-Nitroacenaphthene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
7,12-Dimethylbenzo(a)anthracene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Acenaphthene	120000[b]	-----[c]	120000[b]	-----[c]	2900	0.13	*	< 0.038	0.048	< 0.038	< 0.4	0.62	0.21	< 0.041	< 0.046	< 0.36	< 0.36	< 0.039	< 0.043
Acenaphthylene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	420	0.07	**	< 0.038	< 0.037	< 0.038	< 0.4	< 0.34	0.093	< 0.041	< 0.046	< 0.36	< 0.36	< 0.039	< 0.043
Acetophenone	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Aniline								----	----	----	----	----	----	----	< 0.47	----	----	< 0.39	----
Anthracene	610000[b]	-----[c]	610000[b]	-----[c]	59000	0.4	*	< 0.038	0.2	< 0.038	< 0.4	2.4	1.3	0.055	< 0.046	< 0.36	< 0.36	< 0.039	< 0.043
Azobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Benzo(*a*)anthracene	8[e]	-----[c]	170[e]	-----[c]	8	1.8	*	< 0.038	0.46	< 0.038	1.2	5.6	4.9	0.16	< 0.046	0.78	0.83	< 0.039	< 0.043
Benzo(*a*) pyrene	0.8[e, x]	-----[c]	17[e]	-----[c]	82	2.1	*	< 0.038	0.49	< 0.038	1.6	6.2	6.6	0.2	< 0.046	1.3	1.1	< 0.039	< 0.043
Benzo(*b*)fluoranthene	8[e]	-----[c]	170[e]	-----[c]	25	2.1	*	< 0.038	0.44	< 0.038	1.2	6.2	5.9	0.15	< 0.046	1.3	1.4	< 0.039	< 0.043
Benzo(*g,h,i*)perylene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	130,000	1.7	**	< 0.038	0.29	< 0.038	0.87	3.7	3.4	0.13	< 0.046	1.7	1.3	< 0.039	< 0.043
Benzo(*k*) fluoranthene	78[e]	-----[c]	1700[e]	-----[c]	250	1.7	*	< 0.038	0.49	< 0.038	1.8	6	4.6	0.19	< 0.046	1.1	0.87	< 0.039	< 0.043
Benzidine [NT]	0.02e	0.02e	0.54e	0.02e	0.000002	**	**	----	----	----	----	----	----	----	< 0.46	----	----	< 0.39	----
Benzoic acid	1,000,000b	-----[c]	820,000b	-----[c]	400i	**	*	----	----	----	----	----	----	----	< 1.2	----	----	< 0.98	----
Benzyl alcohol [NT]	200,000b	-----[c]	61,000b	-----[c]	3	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
bis (2-Chloroethoxy)methane	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
bis (2-Chloroethyl)ether	5[e]	0.47[e]	75[e]	0.66[e]	0.0004	**	0.66	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
bis (2-Ethylhexyl)phthalate	410[e]	31000[d]	4100[b]	31000[d]	31000[d]	**	*	----	----	----	----	----	----	----	< 1.2	----	----	< 0.98	----
Butyl benzyl phthalate	410,000[b]	930[d]	410,000[b]	930[d]	930[d]	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Carbazole	290	-----[c]	6200	-----[c]	2.8	**	NA	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Chrysene	780[e]	-----[c]	17000[e]	-----[c]	800	2.7	*	< 0.038	0.54	< 0.038	1.8	6.6	5.3	0.18	< 0.046	1.2	1.3	< 0.039	< 0.043
Dibenzo(*a,h*)anthracene	0.8[e]	-----[c]	17[e]	-----[c]	7.6	0.42	*	< 0.038	0.15	< 0.038	0.59	1.7	2.1	0.065	< 0.046	< 0.36	< 0.36	< 0.039	< 0.043
Dibenzofuran [NT]	2000[b]	-----[c]	820[b]	-----[c]	15[b]	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Diethyl phthalate	1000000[b]	2000[d]	1000000[b]	2000[d]	470	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Dimethylphthalate	-----[c]	-----[c]	20000[b]	-----[c]	-----[c]	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Di-n-butylphthalate	200000[b]	2300[d]	200000[b]	2300[d]	2300[d]	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Di-n-octylphthalate	41,000[e]	10,000[d]	4,100[b]	10,000[d]	10000[d]	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Diphenylamine [NT]	51000[b]	-----[c]	5100[b]	-----[c]	100	**	**	----	----	----	----	----	----	----	----	----	----	----	----

	Industrial-Commercial							V3 Investigation										
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	Background Carcinogenic PAH 95th Percentile Concentrations		6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/14/2012	6/14/2012	6/14/2012	6/15/2012	6/19/2012	6/19/2012	6/18/2012	6/14/2012
	Industrial-Commercial		Construction Worker					JD-GP-107	JD-GP-108	JD-GP-108	JD-GP-110	JD-GP-111	JD-GP-114	JD-GP-117	JD-GP-120	JD-GP-122	JD-GP-122DUP	JD-EX-04	MSDS JD-GP-117
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	Within MSA		8-10ft	0.5-1.5 ft	3-5ft	0.5-1.5 ft	0.5-1.5 ft	1-2 ft	3-5 ft	1-3 ft	0.5-1.5 ft	0.5-1.5 ft	11-12 ft	11-13 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	ADL (mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Ethyl methanesulfonate	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Fluoranthene	82000[b]	-----[c]	82000[b]	-----[c]	21000	4.1	*	< 0.038	1.1	0.06	3.4	16	7.4	0.33	< 0.046	1.4	1.5	< 0.039	< 0.043
Fluorene	82000[b]	-----[c]	82000[b]	-----[c]	2800	0.18	*	< 0.038	0.067	< 0.038	< 0.4	1	0.25	< 0.041	< 0.046	< 0.36	< 0.36	< 0.039	< 0.043
Hexachlorobenzene	4[e]	1.8[e]	78[e]	2.6[e]	11	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Hexachlorobutadiene [NT]	2,000b	-----[c]	200b	-----[c]	11	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Hexachlorocyclopentadiene	14,000[b]	16[b]	14,000[b]	1.1[b]	2200[d]	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Hexachloroethane	2,000[b]	-----[c]	2,000[b]	-----[c]	2.6	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Hexachloropropene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Indeno(1,2,3-*c,d*)pyrene	8[e]	-----[c]	170[e]	-----[c]	69	1.6	*	< 0.038	0.27	< 0.038	0.87	3.6	3.5	0.11	< 0.046	1	0.93	< 0.039	< 0.043
Isodrin	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Isophorone	410,000[b]	4,600[d]	410,000[b]	4,600[d]	8	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Isosafrole	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Mestranol	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Methyl methanesulfonate	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Naphthalene	41000[b]	270[b]	4100[b]	1.8[b]	18	0.2	*	< 0.038	0.34	< 0.038	< 0.4	1.8	< 0.039	< 0.041	< 0.046	< 0.36	0.36	< 0.039	< 0.043
Nitrobenzene	1,000[b]	140[b]	1,000[b]	9.4[b]	0.1	**	0.26	----	----	----	----	----	----	----	< 0.046	----	----	< 0.039	----
N-Nitroso-di-n-butylamine	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
N-Nitroso-di-n-propylamine	0.8[e]	-----[c]	18[e]	-----[c]	0.00005	**	0.0018	----	----	----	----	----	----	----	< 0.046	----	----	< 0.039	----
N-Nitrosopioeridine	**	**	**	**	**	**	**	----	----	----	----	----	----	----	< 0.046	----	----	< 0.039	----
p-Dimethylaminoazobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Pentachlorobenzene	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Pentachloronitrobenzene [NT]	6100[b]	-----[c]	610[b]	-----[c]	150	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Pentachlorophenol	24[e,j]	-----[c]	520[e,j]	-----[c]	0.14[i]	**	*	----	----	----	----	----	----	----	< 0.046	----	----	< 0.039	----
Phenacetin	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Phenanthrene [NT]	61,000[b]	-----[c]	61,000[b]	-----[c]	1,000	2.5	**	< 0.038	0.58	< 0.038	1.4	9.3	2.3	0.17	< 0.046	0.67	0.59	< 0.039	< 0.043
Phenol	610000[b]	-----[c]	61000[b]	-----[c]	100	**	*	----	----	----	----	----	----	----	< 0.24	----	----	< 0.2	----
Pronamide	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----
Pyrene	61000[b]	-----[c]	61000[b]	-----[c]	21000	3	*	< 0.038	0.9	0.048	2.7	13	6.7	0.28	< 0.046	1.8	2	< 0.039	< 0.043
Pyridine [NT]	2000b		2000b		pH-dependent	**	*	----	----	----	----	----	----	----	< 0.94	----	----	< 0.79	----
Safrole	**	**	**	**	**	**	**	----	----	----	----	----	----	----	----	----	----	----	----

Part 742 Notes
* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.

V3 Table Notes:

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/2012, 9/1/2012

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 commercial/industrial objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html
---	--- indicates chemical not analyzed or not sampled
	See attached for notations

TABLE 2.3 - SOIL ANALYTICAL RESULTS (PCBs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial					OSE Investigation												
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012-04/10/12	4/2/2012	4/2/2012	4/2/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012
	Industrial-Commercial		Construction Worker			JD-GP-01	JD-GP-02	JD-GP-03	JD-GP-04	JD-GP-05	JD-GP-05A	JD-GP-06	JD-GP-07	JD-GP-08	JD-GP-09	JD-GP-10	JD-GP-11	JD-GP-12	JD-GP-13	JD-GP-14	JD-GP-15
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	4-6 ft	3-5 ft	1-3 ft	1-3 ft	1-3 ft	8-10 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft	1-3 ft	6-8 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCBs (8081/8082)																					
Aroclor 1016 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.013	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.013	<0.012	<0.012	<0.012	<0.012	<0.014	<0.081	<0.073	<0.012
Aroclor 1221 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.013	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.013	<0.012	<0.012	<0.012	<0.012	<0.014	<0.081	<0.073	<0.012
Aroclor 1232 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.013	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.013	<0.012	<0.012	<0.012	<0.012	<0.014	<0.081	<0.073	<0.012
Aroclor 1242 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.013	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.013	<0.012	<0.012	<0.012	<0.012	<0.014	<0.081	<0.073	<0.012
Aroclor 1248 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.013	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.013	<0.012	<0.012	<0.012	<0.012	<0.014	<0.081	<0.073	<0.012
Aroclor 1254 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.013	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.013	<0.012	<0.012	<0.012	<0.012	<0.014	<0.081	<0.073	<0.012
Aroclor 1260 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.013	<0.012	<0.012	<0.011	0.021	<0.012	<0.012	<0.013	<0.012	<0.012	<0.012	<0.012	<0.014	<0.081	<0.073	<0.012

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.

** indicates that the value is not listed in TACO, Section 742, Table A or B.

V3 Table Notes:

0.11 Indicates exceedance of Tier 1 remediation objectives
See attached for notations

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

TABLE 2.3 - SOIL ANALYTICAL RESULTS (PCBs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial					OSE Investigation												
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012
	Industrial-Commercial		Construction Worker			JD-GP-16	JD-GP-17	JD-GP-18	JD-GP-19	JD-GP-20	JD-GP-21	JD-GP-22	JD-GP-23	JD-GP-24 & JD-GP-24MS/MSD	JD-GP-124 (Duplicate)	JD-GP-25	JD-GP-26	JD-GP-27
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	4-6 ft	1-3 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	4-6 ft	1-3 ft	6-8 ft	6-8 ft	4-6 ft	1-3 ft	6-8 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCBs (8081/8082)																		
Aroclor 1016 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.072	<0.011	<0.011	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.014
Aroclor 1221 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.072	<0.011	<0.011	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.014
Aroclor 1232 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.072	<0.011	<0.011	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.014
Aroclor 1242 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.072	<0.011	<0.011	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.014
Aroclor 1248 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.072	<0.011	<0.011	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.014
Aroclor 1254 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.072	<0.011	<0.011	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.014
Aroclor 1260 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.072	<0.011	<0.011	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.014

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.

** indicates that the value is not listed in TACO, Section 742, Table A or B.

V3 Table Notes:

0.11 Indicates exceedance of Tier 1 remediation objectives

See attached for notations

Prepared by / Date KJW 5/24/2012

Checked by / Date RKB 5/25/2012, 09/01/12

TABLE 2.3 - SOIL ANALYTICAL RESULTS (PCBs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial					OSE Investigation														V3 Investigation	
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/10/2012	4/10/2012	6/15/2012	6/18/2012
	Industrial-Commercial		Construction Worker			JD-GP-28	JD-GP-29	JD-GP-30	JD-GP-31	JD-GP-32	JD-GP-33	JD-GP-34	JD-GP-35	JD-GP-36	JD-GP-37	JD-GP-38	JD-GP-39	JD-GP-40	JD-GP-41	JD-GP-120	JD-EX-04
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	4-6 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	4-6 ft	1-3 ft	4-6 ft	1-3 ft	1-3 ft	4-6 ft	1-3 ft	11-12 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCBs (8081/8082)																					
Aroclor 1016 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.073	<0.071	<0.079	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	< 0.11	< 0.094
Aroclor 1221 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.073	<0.071	<0.079	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	< 0.11	< 0.094
Aroclor 1232 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.073	<0.071	<0.079	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	< 0.11	< 0.094
Aroclor 1242 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.073	<0.071	<0.079	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	< 0.11	< 0.094
Aroclor 1248 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.073	<0.071	<0.079	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	< 0.11	< 0.094
Aroclor 1254 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.073	<0.071	<0.079	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	< 0.11	< 0.094
Aroclor 1260 (Using value for PCBs)[n]	1[h]	--[c,h]	1[h]	--[c,h]	--[h]	<0.012	<0.073	<0.071	<0.079	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	<0.012	<0.011	0.17	< 0.11	< 0.094

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.

** indicates that the value is not listed in TACO, Section 742, Table A or B.

V3 Table Notes:

0.11 Indicates exceedance of Tier 1 remediation objectives
See attached for notations

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

TABLE 2.4 - SOIL ANALYTICAL RESULTS (PESTICIDES)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial						OSE Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values		4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012-04/10/12	4/2/2012	4/2/2012	4/2/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012
	Industrial-Commercial		Construction Worker				JD-GP-01	JD-GP-02	JD-GP-03	JD-GP-04	JD-GP-05	JD-GP-05A	JD-GP-06	JD-GP-07	JD-GP-08	JD-GP-09	JD-GP-10	JD-GP-11	JD-GP-12	JD-GP-13	JD-GP-14
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL	4-6 ft	3-5 ft	1-3 ft	1-3 ft	1-3 ft	8-10 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft	1-3 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Pesticides\Insecticides\Herbicide (Method - 8081/8082)																					
Aldrin	0.3[e]	6.6[e]	6.1[b]	9.3[e]	2.5	0.94	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Alpha -HCH (*alpha* -BHC)	0.9[e]	1.5[e]	20[e]	2.1[e]	0.003	0.0074	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
alpha-Chlordane	**	**	**	**	**	**	<0.013	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.013	<0.012	<0.012	<0.012	<0.012	<0.014	<0.012	<0.011
beta-BHC	**	**	**	**	**	**	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Chlordane	16[e]	140[e]	100[b]	22[b]	48	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
delta-BHC	**	**	**	**	**	**	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Dieldrin[n]	0.4[e]	2.2[e]	7.8[e]	3.1[e]	0.02	0.603	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Endosulfan[o]	12000[b]	-----[c]	1200[b]	-----[c]	90	*	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Endosulfan II	**	**	**	**	**	**	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Endosulfan Sulfate	**	**	**	**	**	**	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Endrin	610[b]	-----[c]	61[b]	-----[c]	5	*	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	0.036	<0.006	<0.0068	0.052	<0.0073
Endrin aldehyde	**	**	**	**	**	**	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Endrin ketone	**	**	**	**	**	**	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Gamma -HCH (Lindane)[n]	4[e]	-----[c]	96[e]	-----[c]	0.047	*	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
gamma-Chlordane	**	**	**	**	**	**	0.031	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.013	<0.012	0.013	<0.012	0.012	<0.014	<0.012	<0.011
Heptachlor	1[e]	11[e]	28[e]	16[e]	110	0.871	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Heptachlor epoxide	0.6[e]	9.2[e]	2.7[b]	13[e]	3.3	1.005	<0.0065	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	<0.0068	<0.0081	<0.0073
Methoxychlor[o]	10000[b]	-----[c]	1000[b]	-----[c]	780	*	<0.032	<0.03	<0.029	<0.026	<0.03	<0.03	<0.031	<0.032	<0.031	<0.03	<0.031	<0.03	<0.034	<0.03	<0.027
p,p'-DDD	24[e]	-----[c]	520[e]	-----[c]	80	*	0.023	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	0.041	<0.0081	0.016
p,p'-DDE	17[e]	-----[c]	370[e]	-----[c]	270	*	0.015	<0.006	<0.0058	<0.0053	0.007	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	<0.0062	<0.006	0.094	0.0095	0.012
p,p'-DDT	17[e]	1500[e]	100[b]	2100[e]	160	*	0.0088	<0.006	<0.0058	<0.0053	<0.006	<0.006	<0.0061	<0.0064	<0.0062	<0.0059	0.018	<0.006	0.03	0.022	0.01
Toxaphene[n]	5.2[e]	170[e]	110[e]	240[e]	150	*	<0.13	<0.12	<0.12	<0.11	<0.12	<0.12	<0.12	<0.13	<0.12	<0.12	<0.12	<0.12	<0.14	<0.12	<0.11

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.
NA means Not Available; no PQL or EQL available in USEPA analytical methods.

V3 Table Notes:

0.11 Indicates exceedance of Tier 1 remediation objectives
--- --- indicates chemical not analyzed or not sampled
See attached for notations

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

TABLE 2.4 - SOIL ANALYTICAL RESULTS (PESTICIDES)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial						OSE Investigation													
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values		4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012
	Industrial-Commercial		Construction Worker				JD-GP-15	JD-GP-16	JD-GP-17	JD-GP-18	JD-GP-19	JD-GP-20	JD-GP-21	JD-GP-22	JD-GP-23	JD-GP-24 and JD-GP-24MS/MSD	JD-GP-124 (Duplicate)	JD-GP-25	JD-GP-26	JD-GP-27	JD-GP-28	JD-GP-29
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	4-6 ft	1-3 ft	6-8 ft	6-8 ft	4-6 ft	1-3 ft	6-8 ft	4-6 ft	1-3 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Pesticides\Insecticides\Herbicide (Method - 8081/8082)																						
Aldrin	0.3[e]	6.6[e]	6.1[b]	9.3[e]	2.5	0.94	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Alpha -HCH (*alpha* -BHC)	0.9[e]	1.5[e]	20[e]	2.1[e]	0.003	0.0074	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
alpha-Chlordane	**	**	**	**	**	**	<0.012	<0.012	<0.011	<0.011	<0.011	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.014	<0.012	<0.011
beta-BHC	**	**	**	**	**	**	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Chlordane	16[e]	140[e]	100[b]	22[b]	48	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
delta-BHC	**	**	**	**	**	**	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Dieldrin[n]	0.4[e]	2.2[e]	7.8[e]	3.1[e]	0.02	0.603	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Endosulfan[o]	12000[b]	-----[c]	1200[b]	-----[c]	90	*	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Endosulfan II	**	**	**	**	**	**	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Endosulfan Sulfate	**	**	**	**	**	**	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Endrin	610[b]	-----[c]	61[b]	-----[c]	5	*	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	0.011	<0.0055	<0.0059	<0.006	<0.0061	0.03	0.0093	<0.006	0.016
Endrin aldehyde	**	**	**	**	**	**	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Endrin ketone	**	**	**	**	**	**	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Gamma -HCH (Lindane)[n]	4[e]	-----[c]	96[e]	-----[c]	0.047	*	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
gamma-Chlordane	**	**	**	**	**	**	<0.012	<0.012	<0.011	<0.011	<0.011	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.014	<0.012	<0.011
Heptachlor	1[e]	11[e]	28[e]	16[e]	110	0.871	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Heptachlor epoxide	0.6[e]	9.2[e]	2.7[b]	13[e]	3.3	1.005	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	<0.0061	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	<0.007	<0.006	<0.0073
Methoxychlor[o]	10000[b]	-----[c]	1000[b]	-----[c]	780	*	<0.031	<0.031	<0.027	<0.027	<0.028	<0.027	<0.029	<0.03	<0.028	<0.029	<0.03	<0.031	<0.03	<0.035	<0.03	<0.027
p,p'-DDD	24[e]	-----[c]	520[e]	-----[c]	80	*	<0.0062	<0.0062	<0.0072	0.035	<0.0056	<0.0054	<0.0059	0.053	<0.0055	<0.0059	<0.006	<0.0061	<0.0061	0.01	<0.006	<0.0073
p,p'-DDE	17[e]	-----[c]	370[e]	-----[c]	270	*	<0.0062	<0.0062	<0.0072	<0.0053	<0.0056	<0.0054	<0.0059	0.026	<0.0055	0.0096	0.0066	<0.0061	<0.0061	0.01	<0.006	<0.0073
p,p'-DDT	17[e]	1500[e]	100[b]	2100[e]	160	*	<0.0062	<0.0062	<0.0072	0.02	<0.0056	<0.0054	<0.0059	0.033	<0.0055	<0.0059	<0.006	<0.0061	0.017	0.0075	<0.006	<0.0073
Toxaphene[n]	5.2[e]	170[e]	110[e]	240[e]	150	*	<0.12	<0.12	<0.11	<0.11	<0.11	<0.11	<0.12	<0.12	<0.11	<0.12	<0.12	<0.12	<0.12	<0.14	<0.12	<0.11

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.
NA means Not Available; no PQL or EQL available in USEPA analytical methods.

V3 Table Notes:

0.11 Indicates exceedance of Tier 1 remediation objectives
--- --- indicates chemical not analyzed or not sampled
See attached for notations

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

TABLE 2.4 - SOIL ANALYTICAL RESULTS (PESTICIDES)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commercial						OSE Investigation												V3 Companies	
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Route Values		4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/10/2012	4/10/2012	6/15/2012	6/18/2012
	Industrial-Commercial		Construction Worker				JD-GP-30	JD-GP-31	JD-GP-32	JD-GP-33	JD-GP-34	JD-GP-35	JD-GP-36	JD-GP-37	JD-GP-38	JD-GP-39	JD-GP-40	JD-GP-41	JD-GP-120	JD-EX-04
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL	1-3 ft	1-3 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	4-6 ft	1-3 ft	4-6 ft	1-3 ft	1-3 ft	4-6 ft	1-3 ft	11-12 ft
Chemical Name	mg/kg	mg/kg	mg/kg	mg/kg	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Pesticides\Insecticides\Herbicide (Method - 8081/8082)																				
Aldrin	0.3[e]	6.6[e]	6.1[b]	9.3[e]	2.5	0.94	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Alpha -HCH (*alpha* -BHC)	0.9[e]	1.5[e]	20[e]	2.1[e]	0.003	0.0074	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
alpha-Chlordane	**	**	**	**	**	**	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	< 0.0023	< 0.0019
beta-BHC	**	**	**	**	**	**	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Chlordane	16[e]	140[e]	100[b]	22[b]	48	*	----	----	----	----	----	----	----	----	----	----	----	----	< 0.047	< 0.039
delta-BHC	**	**	**	**	**	**	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Dieldrin[n]	0.4[e]	2.2[e]	7.8[e]	3.1[e]	0.02	0.603	<0.0071	0.012	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Endosulfan[o]	12000[b]	-----[c]	1200[b]	-----[c]	90	*	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Endosulfan II	**	**	**	**	**	**	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006 J3	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Endosulfan Sulfate	**	**	**	**	**	**	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006 J3	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Endrin	610[b]	-----[c]	61[b]	-----[c]	5	*	<0.0071	0.013	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	0.017	< 0.0023	< 0.0019
Endrin aldehyde	**	**	**	**	**	**	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006 J3	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Endrin ketone	**	**	**	**	**	**	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Gamma -HCH (Lindane)[n]	4[e]	-----[c]	96[e]	-----[c]	0.047	*	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
gamma-Chlordane	**	**	**	**	**	**	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012 J3	<0.011	<0.012	<0.012	<0.011	<0.012	< 0.0023	< 0.0019
Heptachlor	1[e]	11[e]	28[e]	16[e]	110	0.871	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Heptachlor epoxide	0.6[e]	9.2[e]	2.7[b]	13[e]	3.3	1.005	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	<0.0058	< 0.0023	< 0.0019
Methoxychlor[o]	10000[b]	-----[c]	1000[b]	-----[c]	780	*	<0.026	<0.029	<0.03	<0.031	<0.03	<0.03	<0.03	<0.029	<0.029	<0.03	<0.029	<0.029	< 0.0023	< 0.0019
p,p'-DDD	24[e]	-----[c]	520[e]	-----[c]	80	*	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	0.13	<0.0057	<0.0058	<0.0061	<0.0057	0.014	< 0.0023	< 0.0019
p,p'-DDE	17[e]	-----[c]	370[e]	-----[c]	270	*	<0.0071	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	0.0066 J3	<0.0057	0.0059	<0.0061	<0.0057	0.0093	< 0.0023	< 0.0019
p,p'-DDT	17[e]	1500[e]	100[b]	2100[e]	160	*	0.016	<0.0079	<0.0059	<0.0062	<0.006	<0.0059	<0.006	<0.0057	<0.0058	<0.0061	<0.0057	0.012	< 0.0023	< 0.0019
Toxaphene[n]	5.2[e]	170[e]	110[e]	240[e]	150	*	<0.11	<0.12	<0.12	<0.12	<0.12 J3	<0.12	<0.12	<0.11	<0.12	<0.12	<0.11	<0.12	< 0.047	< 0.039

Part 742 Notes

* indicates that the ADL is less than or equal to the specified remediation objective.
** indicates that the value is not listed in TACO, Section 742, Table A or B.
NA means Not Available; no PQL or EQL available in USEPA analytical methods.

V3 Table Notes:

0.11	Indicates exceedance of Tier 1 remediation objectives
---	--- indicates chemical not analyzed or not sampled

See attached for notations

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/25/2012, 09/01/12

TABLE 2.5 - SOIL ANALYTICAL RESULTS (INORGANICS, MISC.)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commerical												OSE Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A] Counties Within Metropolitan Statistical Areas[B] (For Inorganic Chem.in Background Soils)	[C] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012-04/10/12	4/2/2012	4/2/2012	4/2/2012	4/3/2012	4/3/2012	4/3/2012
	Industrial-Commerical		Construction Worker										JD-GP-01	JD-GP-02	JD-GP-03	JD-GP-04	JD-GP-05	JD-GP-05A	JD-GP-06	JD-GP-07	JD-GP-08	JD-GP-09	JD-GP-10	JD-GP-11
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							4-6 ft	3-5 ft	1-3 ft	1-3 ft	1-3 ft	8-10 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TOTAL INORGANICS (Method - 6010)																								
Metals (Totals)																								
Aluminum [NT]	1,000,000[b]	1,000,000[b]	200,000[b]	870,000[b]	---	**	9500	N/A	N/A	N/A	N/A	N/A	8770	8750	12700	10100	13700	5920	14400	2320	16000	8990	10700	11500
Antimony	820[b]	-----c	82[b]	-----c	----	*	4	20	20	20	20	20	<2.60 B2	<2.38 B2, J3	<2.32 B2	<2.11 B2	<2.38 B2	<2.40 B2, J3	<2.45 B2	<2.56 B2	<2.48 B2	<2.37 B2	<2.46 B2	<2.40 B2
Arsenic[l,n]	13[l]	1200[e]	61[b]	25000[e]	----	*	13	120	120	120	130	130	<2.60 B1	4.03 B1	<2.32 B1	<2.11 B1	<2.38 B1	<2.40 B1, J3	<2.45 B1	3.34 B1	<2.48 B1	<2.37 B1	2.64 B1	<2.40 B1
Barium	140000[b]	910000[b]	14000[b]	870000[b]	----	*	110	1700	1800	2100	---a	---a	79.8 B2	42.8 B2	64.2 B2	43.4 B2	66.8 B2	42.6 B2, J3	36.4 B2	51.7 B2	97.3 B2	63.7 B2	102 B2	46.7 B2
Beryllium	4100[b]	2100[e]	410[b]	44000[e]	----	*	0.59	17000	130000	1000000	---a	---a	0.20	0.20	0.33	<0.11	0.76	0.37	0.22	0.17	1.32	<0.12	0.89	<0.12
Boron	410,000[b]	-----c	41000[b]	-----c	----	*	-	N/A	N/A	N/A	N/A	N/A	17.7 B2	7.28 B2	18.3 B2	17.2 B2	22.8 B2	10.9 B2	21.4 B2	15.6 B2	28.1 B2	15.3 B2	36.9 B2	16.1 B2
Cadmium[l,n]	2000[b,r]	2800[e]	200[b,r]	59000[e]	----	*	0.6	110	590	4300	---a	---a	7.51 B2	5.78 B1	8.14 B1	5.91 B1	9.77 B1	4.03 B2	7.26 B1	7.37 B1	6.53 B1	7.66 B1	16.6 B1	5.27 B1
Calcium[n]	-----g	-----c	-----g	-----c	----	**	9300	N/A	N/A	N/A	N/A	N/A	30400	2820 J3	17700	54900	19400	11200	40900	3970	120000	38200	61800	46600
Chromium, total	6100[b]	420[e]	4100[b]	690[e]	----	*	16.2	N/A	N/A	N/A	N/A	N/A	14.1	13.7	18.5	22.4	19.9	9.76	19.9	6.08	13.9	13.7	16.0	16.6
Cobalt	120000[b]	-----c	12000[b]	-----c	----	*	8.9	N/A	N/A	N/A	N/A	N/A	8.63	5.09	10.4	6.34	9.62	6.24	10.4	4.60	7.91	8.61	8.30	9.69
Copper[n]	82000[b]	-----c	8200[b]	-----c	----	*	19.6	200000	330000	330000	---a	---a	31.7 B1	29.4 B1	33.8 B1	25.2 B1	60.4 B1	11.8 B1	31.6 B1	45.7 B1	32.5 B1	46.6 B1	58.3 B1	18.0 B1
Cyanide (amenable)	41000[b]	-----c	4100[b]	-----c	----	*	0.51	120	120	120	120	120	0.30	0.11	0.35	0.48	0.43	0.06 J3	<0.04	0.12	0.24	0.28	0.24	1.16
Iron	-----c	-----c	-----c	-----c	----	*	15900	N/A	N/A	N/A	N/A	N/A	19600 J6	17800 J3	22100	15000	26100	11600 J6	20300	18100	15500	21000	29100	14000
Lead	800[y]	-----c	700[y]	-----c	----	*	36	1420	1420	1420	1420	3760	65.9 B2	30.0 J3, B2	42.9 B2	33.3 B2	79.9 B2	23.0 B2, J3	15.2 B2	144 B2	66.6 B2	54.5 B2	134 B2	15.9 B2
Magnesium[n]	-----g	-----c	730,000	-----c	----	**	4820	N/A	N/A	N/A	N/A	N/A	17200	2640	9940	31800	11600	6650	23800	1550	47200	21800	34600	24300
Manganese	41,000[b, w]	91000[b]	4100[b, w]	8700[b]	----	*	636	N/A	N/A	N/A	N/A	N/A	350	59.9 J3	315	639	339	276 B1	372	145	906	515	657	378
Mercury[l,n,s]	610[b]	16[b]	61[b]	0.1[b]	----	*	0.06	16	32	40	---a	---a	0.08	0.06	0.06	0.03	0.02 J3	0.04	<0.01	0.06	0.05	0.05	0.11	0.01
Nickel[l]	41000[b]	21000[e]	4100[b]	440000[e]	----	*	18	3500	14000	76000	---a	---a	22.0	15.4	27.8	16.5	31.7	13.6	30.7	10.6	18.3	19.4	26.0	21.5
Potassium[n]	-----g	-----c	-----g	-----c	----	**	1268	N/A	N/A	N/A	N/A	N/A	1600	1770	2640	1910	2350	1080	3590	318	2210	1930	1880	2280
Selenium[l,n]	10000[b]	-----c	1000[b]	-----c	----	*	0.48	4.5	3.3	2.4	1.8	1.3	<2.60 B1	<2.38 B1, J3	<2.32 B1	<2.11 B1	<2.38 B1	<2.40 B1, J5	<2.45 B1	<2.56 B1	<2.48 B1	<2.37 B1	<2.46 B1	<2.40 B1
Silver	10000[b]	-----c	1000[b]	-----c	----	*	0.55	N/A	N/A	N/A	N/A	N/A	<0.65 B1, J5	<0.60 J5	<0.58 J5	<0.53 J5	<0.60 J5	<0.60 B1	<0.61 J5	<0.64 J5	<0.62 J5	<0.59 J5	<0.62 J5	<0.60 J5
Sodium[n]	-----g	-----c	-----g	-----c	----	**	130	N/A	N/A	N/A	N/A	N/A	<260	<238	<232	<211	<238	<240	<245	<256	572	<237	<246	<240
Strontium [NT]	1000000[b]	-----c	410000[b]	-----c	----	**	-	-	-	-	-	-	23.0	9.67	22.9	30.8	29.5	12.9 B2, V	29.7	12.0	85.7	23.0	54.8	30.2
Thallium	160[b,u]	-----c	160[b,u]	-----c	----	*	0.32	30	34	38	44	49	<2.60 B1	<2.38 B1	<2.32 B1	<2.11 B1	<2.38 B1	<2.40 B1	<2.45 B1	<2.56 B1	<2.48 B1	<2.37 B1	<2.46 B1	<2.40 B1
Vanadium	14000[b]	-----c	1400[b]	-----c	----	*	25.2	N/A	N/A	N/A	N/A	N/A	15.9 B1	25.5 B1	20.7 B1	25.6 B1	20.7 B1	12.8 B1	21.4 B1	5.85 B1	15.7 B1	14.4 B1	14.7 B1	17.5 B1
Zinc[l]	610000[b]	-----c	61000[b]	-----c	----	*	95	15000	32000	110000	---a	---a	197 B1	56.8 B1, J3	153 B1	85.9 B1	282 B1	73.8 B1, J3	59.3 B1	308 B1	122 B1	140 B1	1050 B1	109 B1

		Soil Component of the Groundwater Ingestion Exposure Route Values Class II																						
		(mg/L)																						
SPLP Aluminum [NT]		5		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Barium		2.0[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Beryllium		0.5[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Boron		2.0[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Cadmium[l,n]		0.05[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Chromium		1.0[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Cobalt		1.0[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Copper[n]		0.65[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Iron		5.0[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Magnesium		1200		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Manganese		10.0[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Nickel[l]		2.0[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Selenium[l,n]		0.05[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Silver		----		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Thallium		0.02[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Vanadium		0.1[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Zinc[l]		10[m]		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

TABLE 2.5 - SOIL ANALYTICAL RESULTS (INORGANICS, MISC.)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commerical												OSE Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A'] Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils)	[C'] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012	4/2/2012-04/10/12	4/2/2012	4/2/2012	4/2/2012	4/3/2012	4/3/2012	4/3/2012
	Industrial-Commerical		Construction Worker										JD-GP-01	JD-GP-02	JD-GP-03	JD-GP-04	JD-GP-05	JD-GP-05A	JD-GP-06	JD-GP-07	JD-GP-08	JD-GP-09	JD-GP-10	JD-GP-11
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							4-6 ft	3-5 ft	1-3 ft	1-3 ft	1-3 ft	8-10 ft	4-6 ft	1-3 ft	4-6 ft	6-8 ft	1-3 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TCLP Arsenic[J,n]					0.2[m]								----	----	----	----	----	----	----	----	----	----	----	----
TCLP Cadmium[J,n]					0.05[m]								----	----	----	----	----	----	----	----	----	----	----	----
TCLP Chromium					1.0[m]								----	----	----	----	----	----	----	----	----	----	----	----
TCLP Silver					----								----	----	----	----	----	----	----	----	----	----	----	----
OTHER PARAMETERS																								
pH													7.3	7.6	9.7	10.6	7.9	7.3	8.0	7.1	8.1	7.3	7.9	7.7
Ethylene Glycol [NT]	1000000 b	8600 b	160000 b	5600 b	56 mg/kg	**							----	----	----	----	----	----	----	----	----	----	----	----
Propylene Glycol [NT]	1000000 b	-----c	1000000 b	49 b	560 mg/kg	**							----	----	----	----	----	----	----	----	----	----	----	----
TPH (GRO)													----	----	----	----	----	----	----	----	----	----	----	----
TPH (DRO)													----	----	----	----	----	----	----	----	----	----	----	----
TPH (ERO)													----	----	----	----	----	----	----	----	----	----	----	----
Organic Carbon Content, 440[o] (%)													----	----	----	----	----	----	----	----	----	----	----	----
Organic Carbon, Fractional [%]													----	----	----	----	----	----	----	----	----	----	----	----
Reactive Cyanide													----	----	----	----	----	----	----	----	----	----	----	----
Reactive Sulfide													----	----	----	----	----	----	----	----	----	----	----	----

Part 742 Notes

*	* indicates that the ADL is less than or equal to the specified remediation objective.
**	**indicates that the value is not listed in TACO, Section 742, Table A or B.
N/A	N/A means Not Applicable
---a	No data available for this pH range

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/12, 09/01/12

V3 Table Notes:

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 remediation objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

[A'] Section 742, Appendix A, Table G: Concentrations of Inorganic Chemicals in Background Soils

[B'] Counties within Metropolitan Statistical Areas: Boone, Champaign, Clinton, Cook, DuPage, Grundy, Henry, Jersey, Kane, Kankakee, Kendall, Lake, Macon, Madison, McHenry, McLean, Mendard, Monroe, Peoria, Rock Island, Sangamon, St. Clair, Tazewell, Will, Winnebago and Woodford.

[C'] Section 742, Appendix B, Table C: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I Groundwater)

See attached for notations

	Industrial-Commerical												OSE Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A] Counties Within Metropolitan Statistical Areas[B] (For Inorganic Chem.in Background Soils)	[C] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/4/2012
	Industrial-Commerical		Construction Worker										JD-GP-12	JD-GP-124	JD-GP-13	JD-GP-14	JD-GP-15	JD-GP-16	JD-GP-17	JD-GP-18	JD-GP-19	JD-GP-20	JD-GP-21	JD-GP-22
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							6-8 ft	3-5 ft	1-3 ft	1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TOTAL INORGANICS (Method - 6010)																								
Metals (Totals)																								
Aluminum [NT]	1,000,000[b]	1,000,000[b]	200,000[b]	870,000[b]	---	**	9500	N/A	N/A	N/A	N/A	N/A	11600	18900	1080	5150	9860	9250	11900	3540	4920	1930	12500	11400
Antimony	820[b]	-----c	82[b]	-----c	----	*	4	20	20	20	20	20	<2.74 B2	<2.38 B2	<2.43 B2	<2.18 B2	<2.47 B2	<2.46 B2	4.34 B2	3.12 B2	<2.22 B2	<2.15 B2	<2.35 B2	<2.44 B2
Arsenic[l,n]	13[l]	1200[e]	61[b]	25000[e]	----	*	13	120	120	120	130	130	<2.74 B1	<2.38 B1	4.44 B1	<2.18 B1	<2.47 B1	2.99 B1	<2.15 B1	2.81 B1	<2.22 B1	<2.15 B1	2.48 B1	4.32 B1
Barium	140000[b]	910000[b]	14000[b]	870000[b]	----	*	110	1700	1800	2100	---a	---a	83.1 B2	338 B2	32.5 B2	42.8 B2	205 B2	60.6 B2	114 B2	52.4 B2	32.9 B2	21.5 B2	63.3 B2	114 B2
Beryllium	4100[b]	2100[e]	410[b]	44000[e]	----	*	0.59	17000	130000	1000000	---a	---a	<0.14	1.01	<0.12	<0.11	<0.12	<0.12	0.60	0.21	0.63	<0.11	0.70	0.76
Boron	410,000[b]	-----c	41000[b]	-----c	----	*	-	N/A	N/A	N/A	N/A	N/A	15.8 B2	37.4 B2	13.2 B2	14.9 B2	14.3 B2	10.9 B2	35.3 B2	36.3 B2	22.8 B2	15.5 B2	22.0 B2	28.2 B2
Cadmium[l,n]	2000[b,r]	2800[e]	200[b,r]	59000[e]	----	*	0.6	110	590	4300	---a	---a	7.06 B1	5.47 B2	2.49 B1	3.91 B1	4.92 B1	5.67 B1	5.57 B1	4.16 B2	2.65 B2	2.16 B2	5.96 B2	7.27 B2
Calcium[n]	-----g	-----c	-----g	-----c	----	**	9300	N/A	N/A	N/A	N/A	N/A	31700	86900	7040	68000	36000	31500	110000	76200	189000	137000	72600	82200
Chromium, total	6100[b]	420[e]	4100[b]	690[e]	----	*	16.2	N/A	N/A	N/A	N/A	N/A	18.0	25.2	3.37	37.4	13.0	17.6	28.4	10.9	25.2	5.68	24.9	25.6
Cobalt	120000[b]	-----c	12000[b]	-----c	----	*	8.9	N/A	N/A	N/A	N/A	N/A	10.5	8.00	1.40	4.30	6.95	7.06	4.32	3.24	2.31	2.33	7.74	7.10
Copper[n]	82000[b]	-----c	8200[b]	-----c	----	*	19.6	200000	330000	330000	---a	---a	29.9 B1	32.7 B1	9.13 B1	21.3 B1	23.1 B1	22.2 B1	46.7 B1	150 B1	9.89 B1	43.1 B1	20.3 B1	80.6 B1
Cyanide (amenable)	41000[b]	-----c	4100[b]	-----c	----	*	0.51	120	120	120	120	120	0.62	13.8 J3	0.29	0.29	0.58	0.61	0.71	0.11	0.49	<0.03	0.61	1.07
Iron	-----c	-----c	-----c	-----c	----	*	15900	N/A	N/A	N/A	N/A	N/A	18200	13800 J6	4800	9140	12800	14500	11200	9100 J6	5640 J6	4700 J6	15400 J6	17900 J6
Lead	800[y]	-----c	700[y]	-----c	----	*	36	1420	1420	1420	1420	3760	65.7 B2	42.4 B2	46.8 B2	46.9 B2	40.2 B2	39.0 B2	89.5 B2	115 B2	15.4 B2	36.3 B2	85.0 B2	189 B2
Magnesium[n]	-----g	-----c	730,000	-----c	----	**	4820	N/A	N/A	N/A	N/A	N/A	17900	34500	1970	40800	19000	16100	49300	40000	103000	79300	38400	39200
Manganese	41,000[b, w]	91000[b]	4100[b, w]	8700[b]	----	*	636	N/A	N/A	N/A	N/A	N/A	322	801	207	625	265	434	758	164 B1	815 B1	180 B1	430 B1	549 B1
Mercury[l,n,s]	610[b]	16[b]	61[b]	0.1[b]	----	*	0.06	16	32	40	---a	---a	0.07	0.13	0.16	0.05	0.10	0.02	0.02	0.02	0.17	<0.01	0.04	0.08
Nickel[l]	41000[b]	21000[e]	4100[b]	440000[e]	----	*	18	3500	14000	76000	---a	---a	24.1	17.5	3.30 V	13.7	17.6	16.2	16.3	13.2	8.05	7.73	20.7	20.2
Potassium[n]	-----g	-----c	-----g	-----c	----	**	1268	N/A	N/A	N/A	N/A	N/A	2230	1900	<243	1030	1690	1460	1670	736	815	432	2330	2310
Selenium[l,n]	10000[b]	-----c	1000[b]	-----c	----	*	0.48	4.5	3.3	2.4	1.8	1.3	<2.74 B1	<2.38 B1	<2.43 B1	<2.18 B1	<2.47 B1	<2.46 B1	<2.15 B1	<2.12 B1	<2.22 B1	<2.15 B1	<2.35 B1	<2.44 B1
Silver	10000[b]	-----c	1000[b]	-----c	----	*	0.55	N/A	N/A	N/A	N/A	N/A	<0.68 J5	<0.60 B1, J5	<0.61 J5	<0.54 J5	<0.62 J5	<0.62 J5	<0.54 J5	<0.53 B1, J5	<0.56 B1, J5	<0.54 J5, B1	<0.59 J5, B1	<0.61 B1, J5
Sodium[n]	-----g	-----c	-----g	-----c	----	**	130	N/A	N/A	N/A	N/A	N/A	<274	915	<243	236	257	<246	572	273	238	<215	659	458
Strontium [NT]	1000000[b]	-----c	410000[b]	-----c	----	**	-	-	-	-	-	-	23.0	193	8.53	31.7	37.6	23.1	82.9	38.8 B2	71.4 B2	48.6 B2	45.9 B2	56.4 B2
Thallium	160[b,u]	-----c	160[b,u]	-----c	----	*	0.32	30	34	38	44	49	<2.74 B1	<2.38 B1	<2.43 B1	<2.18 B1	<2.47 B1	<2.46 B1	<2.15 B1	<2.12 B1	<2.22 B1	<2.15 B1	<2.35 B1	<2.44 B1
Vanadium	14000[b]	-----c	1400[b]	-----c	----	*	25.2	N/A	N/A	N/A	N/A	N/A	19.3 B1	24.7 B1	1.79 B1	25.2 B1	17.2 B1	19.0 B1	12.7 B1	8.79 B1	30.2 B1	13.0 B1	20.0 B1	19.9 B1
Zinc[l]	610000[b]	-----c	61000[b]	-----c	----	*	95	15000	32000	110000	---a	---a	156 B1	64.9 B1	109 B1	54.3 B1	106 B1	95.8 B1	409 B1	210 B1	26.3 B1	89.6 B1	108 B1	199 B1

	Soil Component of the Groundwater Ingestion Exposure Route Values Class II																							
	(mg/L)																							
SPLP Aluminum [NT]	5																							
SPLP Barium	2.0[m]																							
SPLP Beryllium	0.5[m]																							
SPLP Boron	2.0[m]																							
SPLP Cadmium[l,n]	0.05[m]																							
SPLP Chromium	1.0[m]																							
SPLP Cobalt	1.0[m]																							
SPLP Copper[n]	0.65[m]																							
SPLP Iron	5.0[m]																							
SPLP Magnesium	1200																							
SPLP Manganese	10.0[m]																							
SPLP Nickel[l]	2.0[m]																							
SPLP Selenium[l,n]	0.05[m]																							
SPLP Silver	----																							
SPLP Thallium	0.02[m]																							
SPLP Vanadium	0.1[m]																							
SPLP Zinc[l]	10[m]																							

TABLE 2.5 - SOIL ANALYTICAL RESULTS (INORGANICS, MISC.)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commerical												OSE Investigation											
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A'] Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils)	[C'] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/3/2012	4/4/2012
	Industrial-Commerical		Construction Worker										JD-GP-12	JD-GP-124	JD-GP-13	JD-GP-14	JD-GP-15	JD-GP-16	JD-GP-17	JD-GP-18	JD-GP-19	JD-GP-20	JD-GP-21	JD-GP-22
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							6-8 ft	3-5 ft	1-3 ft	1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TCLP Arsenic[l,n]					0.2[m]								----	----	----	----	----	----	----	----	----	----	----	----
TCLP Cadmium[l,n]					0.05[m]								----	----	----	----	----	----	----	----	----	----	----	----
TCLP Chromium					1.0[m]								----	----	----	----	----	----	----	----	----	----	----	----
TCLP Silver					----								----	----	----	----	----	----	----	----	----	----	----	----
OTHER PARAMETERS																								
pH													7.4	11.0	7.3	8.0	7.6	7.6	8.1	8.5	8.7	8.7	8.1	8.2
Ethylene Glycol [NT]	1000000 b	8600 b	160000 b	5600 b	56 mg/kg	**							----	----	----	----	----	----	----	----	----	----	----	----
Propylene Glycol [NT]	1000000 b	-----c	1000000 b	49 b	560 mg/kg	**							----	----	----	----	----	----	----	----	----	----	----	----
TPH (GRO)													----	----	----	----	----	----	----	----	----	----	----	----
TPH (DRO)													----	----	----	----	----	----	----	----	----	----	----	----
TPH (ERO)													----	----	----	----	----	----	----	----	----	----	----	----
Organic Carbon Content, 440[0] (%)													----	----	----	----	----	----	----	----	----	----	----	----
Organic Carbon, Fractional [%]													----	----	----	----	----	----	----	----	----	----	----	----
Reactive Cyanide													----	----	----	----	----	----	----	----	----	----	----	----
Reactive Sulfide													----	----	----	----	----	----	----	----	----	----	----	----

Part 742 Notes

*	* indicates that the ADL is less than or equal to the specified remediation objective.
**	**indicates that the value is not listed in TACO, Section 742, Table A or B.
N/A	N/A means Not Applicable
---a	No data available for this pH range

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/12, 09/01/12

V3 Table Notes:

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 remediation objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

[A'] Section 742, Appendix A, Table G: Concentrations of Inorganic Chemicals in Background Soils

[B'] Counties within Metropolitan Statistical Areas: Boone, Champaign, Clinton, Cook, DuPage, Grundy, Henry, Jersey, Kane, Kankakee, Kendall, Lake, Macon, Madison, McHenry, McLean, Mendard, Monroe, Peoria, Rock Island, Sangamon, St. Clair, Tazewell, Will, Winnebago and Woodford.

[C'] Section 742, Appendix B, Table C: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I Groundwater)

See attached for notations

TABLE 2.5 - SOIL ANALYTICAL RESULTS (INORGANICS, MISC.)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commerical												OSE Investigation					OSE Investigation					
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A'] Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils)	[C'] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	4/4/2012	4/4/2012	4/3/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012
	Industrial-Commerical		Construction Worker										JD-GP-23	JD-GP-24 & JD-GP-24MS/MSD	JD-GP-124 (Duplicate)	JD-GP-25	JD-GP-26	JD-GP-27	JD-GP-28	JD-GP-29	JD-GP-30	JD-GP-31	JD-GP-32
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							1-3 ft	6-8 ft	6-8 ft	4-6 ft	1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TOTAL INORGANICS (Method - 6010)																							
Metals (Totals)																							
Aluminum [NT]	1,000,000[b]	1,000,000[b]	200,000[b]	870,000[b]	---	**	9500	N/A	N/A	N/A	N/A	N/A	10100	17700	18900	6390	10800 J3	9680	10500	7040	6290	8440	4290
Antimony	820[b]	-----c	82[b]	-----c	----	*	4	20	20	20	20	20	<2.21 B2	<2.35 B2	<2.38 B2	<2.46 B2	<2.43 B1, J3	<2.80 B1	<2.40 B1	<2.17 B1	<2.11 B2, J3	<2.35 B2	<2.38 B2
Arsenic[l,n]	13[l]	1200[e]	61[b]	25000[e]	----	*	13	120	120	120	130	130	2.92 B1	<2.35 B1	<2.38 B1	<2.46 B1	18.0 B2	<2.80 B2	2.63 B2	<2.17 B2	7.85 B1	<2.35 B1	<2.38 B1
Barium	140000[b]	910000[b]	14000[b]	870000[b]	----	*	110	1700	1800	2100	---a	---a	55.7 B2	188 B2	338 B2	25.1 B2	111 B2, J3	72.6 B2	68.4 B2	41.9 B2	33.8 B2	84.6 B2	20.7 B2
Beryllium	4100[b]	2100[e]	410[b]	44000[e]	----	*	0.59	17000	130000	1000000	---a	---a	0.50	0.61	1.01	<0.12	1.74	0.36	0.45	0.18	0.34	0.63	0.24
Boron	410,000[b]	-----c	41000[b]	-----c	----	*	-	N/A	N/A	N/A	N/A	N/A	20.3 B2	31.3 B2	37.4 B2	11.0 B2	35.0 B2, J3	17.2 B2	14.1 B2	16.4 B2	11.1 B2	17.6 B2	8.65 B2
Cadmium[l,n]	2000[b,r]	2800[e]	200[b,r]	59000[e]	----	*	0.6	110	590	4300	---a	---a	5.28 B2	7.41 B2	5.47 B2	4.34 B2	15.4 B1	7.06 B1	6.01 B1	5.19 B1	5.87 B2	6.19 B2	4.09 B2
Calcium[n]	-----g	-----c	-----g	-----c	----	**	9300	N/A	N/A	N/A	N/A	N/A	32500	57000	86900	26700	25100 J3	32200	31500	58500	16300 J3	38200	25300
Chromium, total	6100[b]	420[e]	4100[e]	690[e]	----	*	16.2	N/A	N/A	N/A	N/A	N/A	17.2	23.1	25.2	9.72	16.9	16.2	14.2	13.5	11.3	39.6	7.19
Cobalt	120000[b]	-----c	12000[b]	-----c	----	*	8.9	N/A	N/A	N/A	N/A	N/A	8.82	10.1	8.00	8.72	9.10	8.04	9.26	6.86	9.02	5.61	13.1
Copper[n]	82000[b]	-----c	8200[b]	-----c	----	*	19.6	200000	330000	330000	---a	---a	20.0 B1	27.1 B1	32.7 B1	16.2 B1	128 B1	35.2 B1	24.9 B1	30.5 B1	34.6 B1	34.7 B1	13.7 B1
Cyanide (amenable)	41000[b]	-----c	4100[b]	-----c	----	*	0.51	120	120	120	120	120	3.25	4.08 J3	13.8 J3	0.11	1.09	0.08 J3	0.67 J3	0.97	0.18	2.81	<0.04
Iron	-----c	-----c	-----c	-----c	----	*	15900	N/A	N/A	N/A	N/A	N/A	15300 J6	20200 J6	13800 J6	11300 J6	48000 J6	18400 J6	17100 J6	14200 J6	17500 J6	12000 J6	12000 J6
Lead	800[y]	-----c	700[y]	-----c	----	*	36	1420	1420	1420	1420	3760	95.8 B2	19.3 B2	42.4 B2	14.1 B2	302	82.3	37.7	56.2	33.1 B2, J3	68.8 B2	10.2 B2
Magnesium[n]	-----g	-----c	730,000	-----c	----	**	4820	N/A	N/A	N/A	N/A	N/A	17000	26700	34500	16600	5090	17300	16300	32700	10800 J3	18500	13900
Manganese	41,000[b, w]	91000[b]	4100[b, w]	8700[b]	----	*	636	N/A	N/A	N/A	N/A	N/A	319 B1	810	801	443	1510 B1	330 B1	398 B1	317 B1	397 B1	629 B1	427 B1
Mercury[l,n,s]	610[b]	16[b]	61[b]	0.1[b]	----	*	0.06	16	32	40	---a	---a	0.26	<0.01	0.13	0.01	0.71	0.58	0.31	0.24	0.25	0.34	0.29
Nickel[l]	41000[b]	21000[e]	4100[b]	440000[e]	----	*	18	3500	14000	76000	---a	---a	21.2	26.3	17.5	15.5	21.7	26.9	20.6	20.9	23.7 J3	15.8	18.7
Potassium[n]	-----g	-----c	-----g	-----c	----	**	1268	N/A	N/A	N/A	N/A	N/A	2390	3410	1900	1140	1170 J3	1730	1570	1680	1350	1310	1030
Selenium[l,n]	10000[b]	-----c	1000[b]	-----c	----	*	0.48	4.5	3.3	2.4	1.8	1.3	<2.21 B1	<2.35 B1	<2.38 B1	<2.46 B1	<2.43 B2, J3	<2.80 B2	<2.40 B2	<2.17 B2	<2.11 B1, J3	<2.35 B1	<2.38 B1
Silver	10000[b]	-----c	1000[b]	-----c	----	*	0.55	N/A	N/A	N/A	N/A	N/A	<0.55 J5, B1	<0.59 B1, J5	<0.60 B1, J5	<0.61 J5, B1	<0.61 J3, J5	<0.70 J5	<0.60 J5	<0.54 J5	<0.53 B1, J5	<0.59 J5, B1	<0.59 J5, B1
Sodium[n]	-----g	-----c	-----g	-----c	----	**	130	N/A	N/A	N/A	N/A	N/A	302	571	915	<246	321 J3	<280	<240	<217	<211	251	<238
Strontium [NT]	1000000[b]	-----c	410000[b]	-----c	----	**	-	-	-	-	-	-	30.6 B2	108	193	13.4	43.1 B2, J3	26.0 B2	23.6 B2	37.4 B2	16.7 B2	32.3 B2	14.7 B2
Thallium	160[b,u]	-----c	160[b,u]	-----c	----	*	0.32	30	34	38	44	49	<2.21 B1	<2.35 B1	<2.38 B1	<2.46 B1	<2.43 B2, J3	<2.80 B2	<2.40 B2	<2.17 B2	<2.11 B1	<2.35 B1	<2.38 B1
Vanadium	14000[b]	-----c	1400[b]	-----c	----	*	25.2	N/A	N/A	N/A	N/A	N/A	19.9 B1	26.7 B1	24.7 B1	13.3 B1	14.4 B1, J3	17.0 B1	18.4 B1	25.1 B1	19.1 B1	17.2 B1	12.2 B1
Zinc[l]	610000[b]	-----c	61000[b]	-----c	----	*	95	15000	32000	110000	---a	---a	88.4 B1	54.9 B1	64.9 B1	53.5 B1	406 B1, J3	188 B1	97.1 B1	89.5 B1	76.2	146	32.4

	Soil Component of the Groundwater Ingestion Exposure Route Values Class II																	
	(mg/L)																	
SPLP Aluminum [NT]	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Barium	2.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Beryllium	0.5[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Boron	2.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Cadmium[l,n]	0.05[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Chromium	1.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Cobalt	1.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Copper[n]	0.65[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Iron	5.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Magnesium	1200	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Manganese	10.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Nickel[l]	2.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Selenium[l,n]	0.05[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Silver	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Thallium	0.02[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Vanadium	0.1[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Zinc[l]	10[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

TABLE 2.5 - SOIL ANALYTICAL RESULTS (INORGANICS, MISC.)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commerical												OSE Investigation					OSE Investigation					
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A]Counties Within Metropolitan Statistical Areas[B] (For Inorganic Chem.in Background Soils)	[C] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	4/4/2012	4/4/2012	4/3/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012	4/4/2012
	Industrial-Commerical		Construction Worker										JD-GP-23	JD-GP-24 & JD-GP-24MS/MSD	JD-GP-124 (Duplicate)	JD-GP-25	JD-GP-26	JD-GP-27	JD-GP-28	JD-GP-29	JD-GP-30	JD-GP-31	JD-GP-32
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							1-3 ft	6-8 ft	6-8 ft	4-6 ft	1-3 ft	6-8 ft	4-6 ft	1-3 ft	1-3 ft	1-3 ft	4-6 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TCLP Arsenic[Ln]					0.2[m]								----	----	----	----	----	----	----	----	----	----	----
TCLP Cadmium[Ln]					0.05[m]								----	----	----	----	----	----	----	----	----	----	----
TCLP Chromium					1.0[m]								----	----	----	----	----	----	----	----	----	----	----
TCLP Silver					----								----	----	----	----	----	----	----	----	----	----	----
OTHER PARAMETERS																							
pH													9.1	11.0	11.0	7.9	7.4	6.9	7.5	8.4	8.6	9.1	8.3
Ethylene Glycol [NT]	1000000 b	8600 b	160000 b	5600 b	56 mg/kg	**							----	----	----	----	----	----	----	----	----	----	----
Propylene Glycol [NT]	1000000 b	-----c	1000000 b	49 b	560 mg/kg	**							----	----	----	----	----	----	----	----	----	----	----
TPH (GRO)													----	----	----	----	----	----	----	----	----	----	----
TPH (DRO)													----	----	----	----	----	----	----	----	----	----	----
TPH (ERO)													----	----	----	----	----	----	----	----	----	----	----
Organic Carbon Content, 440°(%)													----	----	----	----	----	----	----	----	----	----	----
Organic Carbon, Fractional [%]													----	----	----	----	----	----	----	----	----	----	----
Reactive Cyanide													----	----	----	----	----	----	----	----	----	----	----
Reactive Sulfide													----	----	----	----	----	----	----	----	----	----	----

Part 742 Notes

*	* indicates that the ADL is less than or equal to the specified remediation objective.
**	**indicates that the value is not listed in TACO, Section 742, Table A or B.
N/A	N/A means Not Applicable
---a	No data available for this pH range

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/12, 09/01/12

V3 Table Notes:

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 remediation objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

[A] Section 742, Appendix A, Table G: Concentrations of Inorganic Chemicals in Background Soils

[B] Counties within Metropolitan Statistical Areas: Boone, Champaign, Clinton, Cook, DuPage, Grundy, Henry, Jersey, Kane, Kankakee, Kendall, Lake, Macon, Madison, McHenry, McLean, Mendard, Monroe, Peoria, Rock Island, Sangamon, St. Clair, Tazewell, Will, Winnebago and Woodford.

[C] Section 742, Appendix B, Table C: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I Groundwater)

See attached for notations

	Industrial-Commerical												OSE Investigation					V3 Investigation		
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A] Counties Within Metropolitan Statistical Areas[B] (For Inorganic Chem.in Background Soils)	[C] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	4/4/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/10/2012	4/10/2012	6/13/2012	6/13/2012	6/13/2012
	Industrial-Commerical		Construction Worker										JD-GP-33	JD-GP-34	JD-GP-35	JD-GP-36	JD-GP-37	JD-GP-38	JD-GP-39	JD-GP-40	JD-GP-41	JD-GP-101	JD-GP-102	JD-GP-103
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							1-3 ft	4-6 ft	6-8 ft	4-6 ft	1-3 ft	4-6 ft	1-3 ft	1-3 ft	4-6 ft	8-10 ft	8-10 ft	8-10 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TOTAL INORGANICS (Method - 6010)																								
Metals (Totals)																								
Aluminum [NT]	1,000,000[b]	1,000,000[b]	200,000[b]	870,000[b]	---	**	9500	N/A	N/A	N/A	N/A	N/A	8410	3490	7370	9420	14700	33200	16000	13500	6660	----	----	----
Antimony	820[b]	-----c	82[b]	-----c	----	*	4	20	20	20	20	20	<2.48 B2	<2.38 B2	<2.37 B2	<2.40 B2	<2.30 B2	<2.33 B2	<2.42 B2	<0.54 B2	3.20 B2	----	----	----
Arsenic[l,n]	13[l]	1200[e]	61[b]	25000[e]	----	*	13	120	120	120	130	130	<2.48 B1	4.56 B1	<2.37 B1	3.98 B1	5.76 B1	<2.33 B1	2.90 B1	<1.65 B1	<1.67 B1	----	----	----
Barium	140000[b]	910000[b]	14000[b]	870000[b]	----	*	110	1700	1800	2100	---a	---a	64.5 B2	8.14 B2	24.9 B2	72.4 B2	100 B2	1110 B2	76.4 B2	99.1 B2	159 B2	----	----	----
Beryllium	4100[b]	2100[e]	410[b]	44000[e]	----	*	0.59	17000	130000	1000000	---a	---a	0.39	0.19	0.28	0.44	0.65	1.13	0.77	0.19	<0.08	----	----	----
Boron	410,000[b]	-----c	41000[b]	-----c	----	*	-	N/A	N/A	N/A	N/A	N/A	19.4 B2	6.59 B2	11.9 B2	22.7 B2	18.7 B2	83.8 B2	18.1 B2	17.7 B2	64.8 B2	----	----	----
Cadmium[l,n]	2000[b,r]	2800[e]	200[b,r]	59000[e]	----	*	0.6	110	590	4300	---a	---a	5.55 B2	2.37 B2	3.31 B2	6.95 B2	6.19 B2	8.84 B2	6.93 B2	6.70 B1	11.5 B1	----	----	----
Calcium[n]	-----g	-----c	-----g	-----c	----	**	9300	N/A	N/A	N/A	N/A	N/A	40800	16800	54800	57600	25100	91600	5990	19800	35800	----	----	----
Chromium, total	6100[b]	420[e]	4100[b]	690[e]	----	*	16.2	N/A	N/A	N/A	N/A	N/A	15.5	5.89	10.4	19.2	19.1	117	22.3	23.5	113	----	----	----
Cobalt	120000[b]	-----c	12000[b]	-----c	----	*	8.9	N/A	N/A	N/A	N/A	N/A	7.09	5.04	3.85	7.04	9.05	14.0	7.81	8.08	32.8	----	----	----
Copper[n]	82000[b]	-----c	8200[b]	-----c	----	*	19.6	200000	330000	330000	---a	---a	28.7 B1	9.59 B1	11.8 B1	51.4 B1	21.4 B1	28.0 B1	27.1 B1	76.8 B1	176 B1	----	----	----
Cyanide (amenable)	41000[b]	-----c	4100[b]	-----c	----	*	0.51	120	120	120	120	120	0.25	<0.04	<0.04	0.17	0.04	0.31	0.28	----	----	----	----	----
Iron	-----c	-----c	-----c	-----c	----	*	15900	N/A	N/A	N/A	N/A	N/A	14500 J6	7320 J6	9320 J6	16600 J6	17400 J6	22400 J6	21500 J6	17500	14900	----	----	----
Lead	800[y]	-----c	700[y]	-----c	----	*	36	1420	1420	1420	1420	3760	55.8 B2	6.29 B2	6.49 B2	75.9 B2	45.1 B2	23.0 B2	52.1 B2	66.3 B2	617 B2	----	----	----
Magnesium[n]	-----g	-----c	730,000	-----c	----	**	4820	N/A	N/A	N/A	N/A	N/A	24200	9920	31800	34300	16100	29700	4390	11800	16100	----	----	----
Manganese	41,000[b, w]	91000[b]	4100[b, w]	8700[b]	----	*	636	N/A	N/A	N/A	N/A	N/A	386 B1	141 B1	269 B1	396 B1	257 B1	503 B1	118 B1	282	301	----	----	----
Mercury[l,n,s]	610[b]	16[b]	61[b]	0.1[b]	----	*	0.06	16	32	40	---a	---a	0.10 J3	0.01	<0.01	0.06	0.20	<0.01	0.10	0.02	0.18	----	----	----
Nickel[l]	41000[b]	21000[e]	4100[b]	440000[e]	----	*	18	3500	14000	76000	---a	---a	17.6	9.38	10.4	18.0	21.2	28.0	22.9	22.7	78.5	----	----	----
Potassium[n]	-----g	-----c	-----g	-----c	----	**	1268	N/A	N/A	N/A	N/A	N/A	1570	877	1520	1660	2180	2200	1840	1970	867	----	----	----
Selenium[l,n]	10000[b]	-----c	1000[b]	-----c	----	*	0.48	4.5	3.3	2.4	1.8	1.3	<2.48 B1	<2.38 B1	<2.37 B1	<2.40 B1	<2.30 B1	<2.33 B1	<2.42 B1	<1.15 B1	<1.17 B1	----	----	----
Silver	10000[b]	-----c	1000[b]	-----c	----	*	0.55	N/A	N/A	N/A	N/A	N/A	<0.62 J5, B1	<0.60 J5, B1	<0.59 J5, B1	<0.60 J5, B1	<0.57 B1, J5	<0.58 J5, B1	<0.61 J5, B1	<0.07 J5	<0.07 J5	----	----	----
Sodium[n]	-----g	-----c	-----g	-----c	----	**	130	N/A	N/A	N/A	N/A	N/A	<248	<238	<237	<240	<230	3030	<242	<29.0	<29.5	----	----	----
Strontium [NT]	1000000[b]	-----c	410000[b]	-----c	----	**	-	-	-	-	-	-	24.7 B2	10.8 B2	26.4 B2	37.2 B2	23.3 B2	602 B2	26.1 B2	24.3	34.1	----	----	----
Thallium	160[b,u]	-----c	160[b,u]	-----c	----	*	0.32	30	34	38	44	49	<2.48 B1	<2.38 B1	<2.37 B1	<2.40 B1	<2.30 B1	<2.33 B1	<2.42 B1	<1.07 B1	<1.09 B1	----	----	----
Vanadium	14000[b]	-----c	1400[b]	-----c	----	*	25.2	N/A	N/A	N/A	N/A	N/A	18.2 B1	9.17 B1	12.6 B1	19.4 B1	24.8 B1	64.2 B1	32.5 B1	22.3 B1	11.0 B1	----	----	----
Zinc[l]	610000[b]	-----c	61000[b]	-----c	----	*	95	15000	32000	110000	---a	---a	118	30.4	28.9	234 B1	118 B1	54.9 B1	80.3 B1	374 B1	755 B1	----	----	----

	Soil Component of the Groundwater Ingestion Exposure Route Values Class II																						
	(mg/L)																						
SPLP Aluminum [NT]	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Barium	2.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Beryllium	0.5[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Boron	2.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Cadmium[l,n]	0.05[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Chromium	1.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Cobalt	1.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Copper[n]	0.65[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Iron	5.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Magnesium	1200	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Manganese	10.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Nickel[l]	2.0[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Selenium[l,n]	0.05[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Silver	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Thallium	0.02[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Vanadium	0.1[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
SPLP Zinc[l]	10[m]	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

TABLE 2.5 - SOIL ANALYTICAL RESULTS (INORGANICS, MISC.)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

	Industrial-Commerical												OSE Investigation								V3 Investigation		
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A'] Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils)	[C'] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	4/4/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/4/2012	4/5/2012	4/10/2012	4/10/2012	6/13/2012	6/13/2012	6/13/2012
	Industrial-Commerical		Construction Worker										JD-GP-33	JD-GP-34	JD-GP-35	JD-GP-36	JD-GP-37	JD-GP-38	JD-GP-39	JD-GP-40	JD-GP-41	JD-GP-101	JD-GP-102	JD-GP-103
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							1-3 ft	4-6 ft	6-8 ft	4-6 ft	1-3 ft	4-6 ft	1-3 ft	1-3 ft	4-6 ft	8-10 ft	8-10 ft	8-10 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TCLP Arsenic[l,n]					0.2[m]								----	----	----	----	----	----	----	----	----	----	----	----
TCLP Cadmium[l,n]					0.05[m]								----	----	----	----	----	----	----	----	----	----	----	----
TCLP Chromium					1.0[m]								----	----	----	----	----	----	----	----	----	----	----	----
TCLP Silver					----								----	----	----	----	----	----	----	----	----	----	----	----
OTHER PARAMETERS																								
pH													7.7	8.2	8.0	8.1	8.7	8.5	7.7	7.7	8			
Ethylene Glycol [NT]	1000000 b	8600 b	160000 b	5600 b	56 mg/kg	**							----	----	----	----	----	----	----	----	----	----	----	----
Propylene Glycol [NT]	1000000 b	-----c	1000000 b	49 b	560 mg/kg	**							----	----	----	----	----	----	----	----	----	----	----	----
TPH (GRO)													----	----	----	----	----	----	----	----	----	280	230	58
TPH (DRO)													----	----	----	----	----	----	----	----	----	890	1100	760
TPH (ERO)													----	----	----	----	----	----	----	----	----	230	210	180
Organic Carbon Content, 440[0] (%)													----	----	----	----	----	----	----	----	----	----	----	----
Organic Carbon, Fractional [%]													----	----	----	----	----	----	----	----	----	----	----	----
Reactive Cyanide													----	----	----	----	----	----	----	----	----	----	----	----
Reactive Sulfide													----	----	----	----	----	----	----	----	----	----	----	----

Part 742 Notes

*	* indicates that the ADL is less than or equal to the specified remediation objective.
**	**indicates that the value is not listed in TACO, Section 742, Table A or B.
N/A	N/A means Not Applicable
---a	No data available for this pH range

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/12, 09/01/12

V3 Table Notes:

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 remediation objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

[A'] Section 742, Appendix A, Table G: Concentrations of Inorganic Chemicals in Background Soils

[B'] Counties within Metropolitan Statistical Areas: Boone, Champaign, Clinton, Cook, DuPage, Grundy, Henry, Jersey, Kane, Kankakee, Kendall, Lake, Macon, Madison, McHenry, McLean, Mendard, Monroe, Peoria, Rock Island, Sangamon, St. Clair, Tazewell, Will, Winnebago and Woodford.

[C'] Section 742, Appendix B, Table C: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I Groundwater)

See attached for notations

	Industrial-Commerical												V3 Investigation					
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A'] Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils)	[C'] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012
	Industrial-Commerical		Construction Worker										JD-GP-104	JD-GP-105	JD-GP-106	JD-GP-106	JD-GP-107	JD-GP-107	JD-GP-108	JD-GP-108
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							5-7 ft	5-7 ft	3-5ft	10-12ft	0.5-1.5 ft	3-5ft	0.5-1.5 ft	3-5ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TOTAL INORGANICS (Method - 6010)																				
Metals (Totals)																				
Aluminum [NT]	1,000,000[b]	1,000,000[b]	200,000[b]	870,000[b]	---	**	9500	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Antimony	820[b]	-----c	82[b]	-----c	----	*	4	20	20	20	20	20	----	----	----	----	----	----	----	----
Arsenic[l,n]	13[l]	1200[e]	61[b]	25000[e]	----	*	13	120	120	120	130	130	6.7	15	9.3	----	4.7	----	3.1	----
Barium	140000[b]	910000[b]	14000[e]	870000[b]	----	*	110	1700	1800	2100	---a	---a	58	68	50	----	61	----	62	----
Beryllium	4100[b]	2100[e]	410[b]	44000[e]	----	*	0.59	17000	130000	1000000	---a	---a	----	----	----	----	----	----	----	----
Boron	410,000[b]	-----c	41000[b]	-----c	----	*	-	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Cadmium[l,n]	2000[b,r]	2800[e]	200[b,r]	59000[e]	----	*	0.6	110	590	4300	---a	---a	< 0.61	0.65	1.9	----	0.56	----	< 0.57	----
Calcium[n]	-----g	-----c	-----g	-----c	----	**	9300	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Chromium, total	6100[b]	420[e]	4100[b]	690[e]	----	*	16.2	N/A	N/A	N/A	N/A	N/A	15	12	15	----	9.4	----	170	----
Cobalt	120000[b]	-----c	12000[b]	-----c	----	*	8.9	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Copper[n]	82000[b]	-----c	8200[b]	-----c	----	*	19.6	200000	330000	330000	---a	---a	----	----	----	----	----	----	----	----
Cyanide (amenable)	41000[b]	-----c	4100[b]	-----c	----	*	0.51	120	120	120	120	120	----	----	----	----	----	----	----	----
Iron	-----c	-----c	-----c	-----c	----	*	15900	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Lead	800[y]	-----c	700[y]	-----c	----	*	36	1420	1420	1420	1420	3760	26	45	83	----	220	----	42	----
Magnesium[n]	-----g	-----c	730,000	-----c	----	**	4820	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Manganese	41,000[b, w]	91000[b]	4100[b, w]	8700[b]	----	*	636	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Mercury[l,n,s]	610[b]	16[b]	61[b]	0.1[b]	----	*	0.06	16	32	40	---a	---a	0.11	0.021	0.21	----	0.085	----	0.037	----
Nickel[l]	41000[b]	21000[e]	4100[b]	440000[e]	----	*	18	3500	14000	76000	---a	---a	----	----	----	----	----	----	----	----
Potassium[n]	-----g	-----c	-----g	-----c	----	**	1268	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Selenium[l,n]	10000[b]	-----c	1000[b]	-----c	----	*	0.48	4.5	3.3	2.4	1.8	1.3	< 1.2	< 1.1	< 1.2	----	< 1.1	----	< 1.1	----
Silver	10000[b]	-----c	1000[b]	-----c	----	*	0.55	N/A	N/A	N/A	N/A	N/A	< 1.2	< 1.1	< 1.2	----	< 1.1	----	< 1.1	----
Sodium[n]	-----g	-----c	-----g	-----c	----	**	130	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Strontium [NT]	1000000[b]	-----c	410000[b]	-----c	----	**	-	-	-	-	-	-	----	----	----	----	----	----	----	----
Thallium	160[b,u]	-----c	160[b,u]	-----c	----	*	0.32	30	34	38	44	49	----	----	----	----	----	----	----	----
Vanadium	14000[b]	-----c	1400[b]	-----c	----	*	25.2	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----
Zinc[l]	610000[b]	-----c	61000[b]	-----c	----	*	95	15000	32000	110000	---a	---a	----	----	----	----	----	----	----	----

		Soil Component of the Groundwater Ingestion Exposure Route Values Class II		JD-GP-104		JD-GP-106		JD-GP-107			
				5-7 ft		3-5ft		0.5-1.5 ft			
		(mg/L)		mg/L		mg/L		mg/L			
SPLP Aluminum [NT]		5		----	----	----	----	----	----	----	----
SPLP Barium		2.0[m]		----	----	----	----	----	----	----	----
SPLP Beryllium		0.5[m]		----	----	< 0.002	----	----	----	----	----
SPLP Boron		2.0[m]		----	----	----	----	----	----	----	----
SPLP Cadmium[l,n]		0.05[m]		----	----	< 0.002	----	----	----	----	----
SPLP Chromium		1.0[m]		< 0.004	----	< 0.004	----	< 0.004	----	----	----
SPLP Cobalt		1.0[m]		----	----	----	----	----	----	----	----
SPLP Copper[n]		0.65[m]		----	----	----	----	----	----	----	----
SPLP Iron		5.0[m]		----	----	0.59	----	----	----	----	----
SPLP Magnesium		1200		----	----	----	----	----	----	----	----
SPLP Manganese		10.0[m]		----	----	< 0.004	----	----	----	----	----
SPLP Nickel[l]		2.0[m]		----	----	----	----	----	----	----	----
SPLP Selenium[l,n]		0.05[m]		----	----	----	----	----	----	----	----
SPLP Silver		----		< 0.008	----	< 0.008	----	< 0.008	----	----	----
SPLP Thallium		0.02[m]		----	----	< 0.004	----	----	----	----	----
SPLP Vanadium		0.1[m]		----	----	----	----	----	----	----	----
SPLP Zinc[l]		10[m]		----	----	< 0.02	----	----	----	----	----

	Industrial-Commerical													V3 Investigation						
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A'] Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils)	[C'] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012	6/13/2012
	Industrial-Commerical		Construction Worker										JD-GP-104	JD-GP-105	JD-GP-106	JD-GP-106	JD-GP-107	JD-GP-107	JD-GP-108	JD-GP-108
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							5-7 ft	5-7 ft	3-5ft	10-12ft	0.5-1.5 ft	3-5ft	0.5-1.5 ft	3-5ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TCLP Arsenic[Ln]					0.2[m]								----	< 0.01	----	----	----	----	----	----
TCLP Cadmium[Ln]					0.05[m]								----	< 0.005	----	----	----	----	----	----
TCLP Chromium					1.0[m]								----	0.011	----	----	----	----	0.011	----
TCLP Silver					----								----	< 0.01	----	----	----	----	< 0.01	----
OTHER PARAMETERS																				
pH													7.9	8.2	7.9	---	8.7	---	8.3	---
Ethylene Glycol [NT]	1000000 b	8600 b	160000 b	5600 b	56 mg/kg	**							3	1.1	< 0.39	----	----	< 0.41	< 0.37	< 0.38
Propylene Glycol [NT]	1000000 b	-----c	1000000 b	49 b	560 mg/kg	**							< 0.39	< 0.39	< 0.39	----	----	< 0.41	< 0.37	< 0.38
TPH (GRO)													42	48	----	----	----	----	----	----
TPH (DRO)													340	110	----	----	----	----	----	----
TPH (ERO)													140	140	----	----	----	----	----	----
Organic Carbon Content, 440[o] (%)													----	----	----	1.1	----	----	----	----
Organic Carbon, Fractional [%]													----	----	----	0.64	----	----	----	----
Reactive Cyanide													----	----	----	----	----	----	----	----
Reactive Sulfide													----	----	----	----	----	----	----	----

Part 742 Notes

*	* indicates that the ADL is less than or equal to the specified remediation objective.
**	**indicates that the value is not listed in TACO, Section 742, Table A or B.
N/A	N/A means Not Applicable
---a	No data available for this pH range

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/12, 09/01/12

V3 Table Notes:

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 remediation objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

[A'] Section 742, Appendix A, Table G: Concentrations of Inorganic Chemicals in Background Soils

[B'] Counties within Metropolitan Statistical Areas: Boone, Champaign, Clinton, Cook, DuPage, Grundy, Henry, Jersey, Kane, Kankakee, Kendall, Lake, Macon, Madison, McHenry, McLean, Mendard, Monroe, Peoria, Rock Island, Sangamon, St. Clair, Tazewell, Will, Winnebago and Woodford.

[C'] Section 742, Appendix B, Table C: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I Groundwater)

See attached for notations

	Industrial-Commerical												V3 Investigation								
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A'] Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils)	[C'] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	6/13/2012	6/13/2012	6/14/2012	6/14/2012	6/14/2012	6/15/2012	6/19/2012	6/18/2012	6/14/2012
	Industrial-Commerical		Construction Worker										JD-GP-110	JD-GP-113	JD-GP-114	JD-GP-117	JD-GP-119	JD-GP-120	JD-GP-122	JD-EX-04	MSDS JD-GP-117
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							0.5-1.5 ft	14-15 ft	1-2 ft	3-5 ft	5-7 ft	1-3 ft	0.5-1.5 ft	11-12 ft	11-13 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TOTAL INORGANICS (Method - 6010)																					
Metals (Totals)																					
Aluminum [NT]	1,000,000[b]	1,000,000[b]	200,000[b]	870,000[b]	---	**	9500	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	13000	----	10000	----
Antimony	820[b]	-----c	82[b]	-----c	----	*	4	20	20	20	20	20	----	----	----	----	----	< 2.8	----	< 2.1	----
Arsenic[l,n]	13[f]	1200[e]	61[b]	25000[e]	----	*	13	120	120	120	130	130	3.4	----	----	3.3	----	8.5	----	11	38
Barium	140000[b]	910000[b]	14000[b]	870000[b]	----	*	110	1700	1800	2100	---a	---a	41	----	----	56	----	140	----	59	180
Beryllium	4100[b]	2100[e]	410[b]	44000[e]	----	*	0.59	17000	130000	1000000	---a	---a	----	----	----	----	----	0.8	----	0.62	----
Boron	410,000[b]	-----c	41000[b]	-----c	----	*	-	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	----	----	----	----
Cadmium[l,n]	2000[b,r]	2800[e]	200[b,r]	59000[e]	----	*	0.6	110	590	4300	---a	---a	< 0.63	----	----	1.1	----	1.3	----	< 0.52	< 0.6
Calcium[n]	-----g	-----c	-----g	-----c	----	**	9300	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	17000	----	68000	----
Chromium, total	6100[b]	420[e]	4100[b]	690[e]	----	*	16.2	N/A	N/A	N/A	N/A	N/A	82	----	----	22	----	19	----	19	21
Cobalt	120000[b]	-----c	12000[b]	-----c	----	*	8.9	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	9.8	----	13	----
Copper[n]	82000[b]	-----c	8200[b]	-----c	----	*	19.6	200000	330000	330000	---a	---a	----	----	----	----	----	33	----	33	----
Cyanide (amenable)	41000[b]	-----c	4100[b]	-----c	----	*	0.51	120	120	120	120	120	----	----	----	< 0.32	----	< 0.36	----	< 0.3	----
Iron	-----c	-----c	-----c	-----c	----	*	15900	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	24000	----	25000	----
Lead	800[y]	-----c	700[y]	-----c	----	*	36	1420	1420	1420	1420	3760	41	----	----	200	----	55	----	20	49
Magnesium[n]	-----g	-----c	730,000	-----c	----	**	4820	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	10000	----	33000	----
Manganese	41,000[b, w]	91000[b]	4100[b, w]	8700[b]	----	*	636	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	300	----	550	----
Mercury[l,n,s]	610[b]	16[b]	61[b]	0.1[b]	----	*	0.06	16	32	40	---a	---a	0.025	----	----	0.11	----	0.082	----	0.025	0.061
Nickel[l]	41000[b]	21000[e]	4100[b]	440000[e]	----	*	18	3500	14000	76000	---a	---a	----	----	----	----	----	28	----	36	----
Potassium[n]	-----g	-----c	-----g	-----c	----	**	1268	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	1700	----	2800	----
Selenium[l,n]	10000[b]	-----c	1000[b]	-----c	----	*	0.48	4.5	3.3	2.4	1.8	1.3	< 1.3	----	----	< 1.2	----	< 1.4	----	< 1	< 1.2
Silver	10000[b]	-----c	1000[b]	-----c	----	*	0.55	N/A	N/A	N/A	N/A	N/A	< 1.3	----	----	< 1.2	----	< 1.4	----	< 1	< 1.2
Sodium[n]	-----g	-----c	-----g	-----c	----	**	130	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	< 85	----	190	----
Strontium [NT]	1000000[b]	-----c	410000[b]	-----c	----	**	-	-	-	-	-	-	----	----	----	----	----	----	----	----	----
Thallium	160[b,u]	-----c	160[b,u]	-----c	----	*	0.32	30	34	38	44	49	----	----	----	----	----	< 1.4	----	< 1	----
Vanadium	14000[b]	-----c	1400[b]	-----c	----	*	25.2	N/A	N/A	N/A	N/A	N/A	----	----	----	----	----	24	----	21	----
Zinc[l]	610000[b]	-----c	61000[b]	-----c	----	*	95	15000	32000	110000	---a	---a	----	----	----	----	----	210	----	45	----

	Soil Component of the Groundwater Ingestion Exposure Route Values Class II		JD-GP-110			JD-GP-117	JD-GP-119	JD-GP-120	JD-GP-122	JD-EX-04	
			0.5-1.5 ft			3-5 ft	5-7 ft	1-3 ft	0.5-1.5 ft	11-12 ft	
	(mg/L)		mg/L			mg/L	mg/L	mg/L	mg/L	mg/L	
SPLP Aluminum [NT]	5		----	----	----	----	2.2	2.2	----	0.29	----
SPLP Barium	2.0[m]		----	----	----	----	0.056	----	----	----	----
SPLP Beryllium	0.5[m]		----	----	----	----	----	----	----	----	----
SPLP Boron	2.0[m]		----	----	----	----	< 0.2	----	----	----	----
SPLP Cadmium[l,n]	0.05[m]		----	----	----	< 0.002	----	----	----	----	----
SPLP Chromium	1.0[m]		< 0.01	----	----	< 0.004	< 0.004	< 0.004	----	< 0.004	----
SPLP Cobalt	1.0[m]		----	----	----	----	< 0.004	< 0.004	----	< 0.004	----
SPLP Copper[n]	0.65[m]		----	----	----	----	< 0.01	----	----	----	----
SPLP Iron	5.0[m]		----	----	----	----	----	2.9	----	0.51	----
SPLP Magnesium	1200		----	----	----	----	----	----	----	----	----
SPLP Manganese	10.0[m]		----	----	----	----	----	0.014	0.016	< 0.004	----
SPLP Nickel[l]	2.0[m]		----	----	----	----	< 0.004	----	----	----	----
SPLP Selenium[l,n]	0.05[m]		----	----	----	----	< 0.004	----	----	----	----
SPLP Silver	----		< 0.008	----	----	< 0.008	----	< 0.008	----	< 0.008	----
SPLP Thallium	0.02[m]		----	----	----	----	----	----	----	----	----
SPLP Vanadium	0.1[m]		----	----	----	----	< 0.004	< 0.004	----	< 0.004	----
SPLP Zinc[l]	10[m]		----	----	----	----	----	----	----	----	----

	Industrial-Commerical												V3 Investigation								
	Exposure Route-Specific Values for Soils				Soil Component of the Groundwater Ingestion Exposure Route Values		[A'] Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils)	[C'] pH 6.9-7.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.25-7.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 7.75 - 8.24 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.25 - 8.74 for Groundwater Ingestion Class II Groundwater	[C'] pH 8.75 -9.0 for Groundwater Ingestion Class II Groundwater	6/13/2012	6/13/2012	6/14/2012	6/14/2012	6/14/2012	6/15/2012	6/19/2012	6/18/2012	6/14/2012
	Industrial-Commerical		Construction Worker										JD-GP-110	JD-GP-113	JD-GP-114	JD-GP-117	JD-GP-119	JD-GP-120	JD-GP-122	JD-EX-04	MSDS JD-GP-117
	Ingestion	Inhalation	Ingestion	Inhalation	Class II	ADL							0.5-1.5 ft	14-15 ft	1-2 ft	3-5 ft	5-7 ft	1-3 ft	0.5-1.5 ft	11-12 ft	11-13 ft
Chemical Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TCLP Arsenic[Ln]					0.2[m]								----	----	----	----	----	----	----	----	----
TCLP Cadmium[Ln]					0.05[m]								----	----	----	----	----	----	----	----	----
TCLP Chromium					1.0[m]								----	----	----	----	----	----	----	----	----
TCLP Silver					----								----	----	----	----	----	----	----	----	----
OTHER PARAMETERS																					
pH													8.6	---	---	8.2	---	7.3	---	8.1	----
Ethylene Glycol [NT]	1000000 b	8600 b	160000 b	5600 b	56 mg/kg	**							< 4	----	----	----	----	----	----	< 0.38	----
Propylene Glycol [NT]	1000000 b	-----c	1000000 b	49 b	560 mg/kg	**							< 4	----	----	----	----	----	----	< 0.38	----
TPH (GRO)													83	----	----	----	----	----	----	----	----
TPH (DRO)													290	----	----	----	----	----	----	----	----
TPH (ERO)													1200	----	----	----	----	----	----	----	----
Organic Carbon Content, 440[D](%)													----	4.7	4.7	5.6	----	----	----	----	----
Organic Carbon, Fractional [%]													----	2.73	2.73	3.25	----	----	----	----	----
Reactive Cyanide													----	----	----	< 1	----	----	----	< 1	----
Reactive Sulfide													----	----	----	< 10	----	----	----	< 10	----

Part 742 Notes

*	* indicates that the ADL is less than or equal to the specified remediation objective.
**	**indicates that the value is not listed in TACO, Section 742, Table A or B.
N/A	N/A means Not Applicable
---a	No data available for this pH range

Prepared by / Date KJW 5/24/2012
Checked by / Date RKB 5/24/12, 09/01/12

V3 Table Notes:

0.11	Indicates exceedance of background concentrations
0.11	Indicates exceedance of Tier 1 remediation objectives
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/2011. Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

[A'] Section 742, Appendix A, Table G: Concentrations of Inorganic Chemicals in Background Soils

[B'] Counties within Metropolitan Statistical Areas: Boone, Champaign, Clinton, Cook, DuPage, Grundy, Henry, Jersey, Kane, Kankakee, Kendall, Lake, Macon, Madison, McHenry, McLean, Mendard, Monroe, Peoria, Rock Island, Sangamon, St. Clair, Tazewell, Will, Winnebago and Woodford.

[C'] Section 742, Appendix B, Table C: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I Groundwater)

See attached for notations

TABLE 2.6 - GROUNDWATER ANALYTICAL RESULTS (VOCs, PCBs/ PESTICIDES, INORGANICS)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

		OSE Investigation/V3 Investigation					V3 Investigation				
		06/21/12	06/20/12	06/21/12	06/20/12	06/20/12	06/20/12	06/20/12 and 6/21/2012	06/20/12	06/21/12	06/21/12
	Groundwater Remediation Objective	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**	**MW-06**	**MW-07**	**Trip Blank #1**	**Trip Blank #2**	**EB-1**
Chemical Name	Class II (mg/L)	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ORGANICS											
Volatile Organic Compounds (Method - 8260B)											
Acetone	6.3	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.023	< 0.02	< 0.02	----
Benzene	0.025[c]	< 0.005	< 0.005	< 0.005	< 0.005	0.44	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Bromodichloromethane (Dichlorobromomethane)	0.0002	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Bromoform	0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Bromomethane	**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	----
2-Butanone (MEK) [NT]	4.2	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	----
Carbon disulfide	3.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	----
Carbon tetrachloride	0.025[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Chlorobenzene (Monochlorobenzene)	0.5[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Chlorodibromomethane (Dibromochloromethane)	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Chloroethane [NT]	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	----
Chloroform	0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Chloromethane [NT]	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	----
1,1-Dichloroethane	3.5	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
1,2-Dichloroethane (Ethylene dichloride)	0.025[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
1,1-Dichloroethene (1,1-Dichloroethylene)[b]	0.035[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
cis-1,2-Dichloroethene (cis-1,2-Dichloroethylene)	0.2[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
trans-1,2-Dichloroethene (trans-1,2-Dichloroethylene)	0.5[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
1,2-Dichloropropane	0.025[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
cis-1,3-Dichloropropene***	0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----
trans-1,2-Dichloropropene***	0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----
Ethylbenzene	1.0[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
2-Hexanone [NT]	0.035	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	----
4-Methyl-2-pentanone (MIBK) [NT]	0.56	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	----
Methylene chloride (Dichloromethane)	0.05[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Methyl tertiary-butyl ether (MTBE)	0.07	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Styrene	0.5[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
1,1,2,2-Tetrachloroethane [NT]	0.0043	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Tetrachloroethene (Perchloroethylene)	0.025[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Toluene	2.5[c]	< 0.005	< 0.005	< 0.005	< 0.005	0.0053	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
1,1,1-Trichloroethane[b]	1.0[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
1,1,2-Trichloroethane	0.05[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Trichloroethene (Trichloroethylene)	0.025[c]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----
Vinyl Chloride	0.01[c]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	----
Xylenes (total)	10.0[c]	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.005
PCBs (Method - 8082)											
Aroclor 1016 (Using value for PCBs)	0.0025[c]	< 0.0005	< 0.0005	----	----	----	----	< 0.00062	----	----	----
Aroclor 1221 (Using value for PCBs)	0.0025[c]	< 0.0005	< 0.0005	----	----	----	----	< 0.00062	----	----	----
Aroclor 1232 (Using value for PCBs)	0.0025[c]	< 0.0005	< 0.0005	----	----	----	----	< 0.00062	----	----	----
Aroclor 1242 (Using value for PCBs)	0.0025[c]	< 0.0005	< 0.0005	----	----	----	----	< 0.00062	----	----	----
Aroclor 1248 (Using value for PCBs)	0.0025[c]	< 0.0005	< 0.0005	----	----	----	----	< 0.00062	----	----	----
Aroclor 1254 (Using value for PCBs)	0.0025[c]	< 0.0005	< 0.0005	----	----	----	----	0.0079	----	----	----
Aroclor 1260 (Using value for PCBs)	0.0025[c]	< 0.0005	< 0.0005	----	----	----	----	0.006	----	----	----
Pesticides\Insecticides\Herbicides (Method - 8081)											
DDD	0.07	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
DDE	0.05	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
DDT	0.03	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Aldrin	0.07	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Alpha -HCH (*alpha* -BHC)	0.00055	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
alpha-Chlordane		< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
beta-BHC		< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Chlordane	0.01[c]	< 0.001	< 0.001	----	----	----	----	< 0.0012	----	----	----
delta-BHC		< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Dieldrin	0.045	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Endosulfan	0.21	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Endosulfan II		< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Endosulfan sulfate		< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Endrin	0.01[c]	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Endrin aldehyde		< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Endrin ketone		< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Gamma -HCH (Lindane)	0.001[c]	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
gamma-Chlordane		< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Heptachlor	0.002[c]	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Heptachlor epoxide	0.001[c]	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Methoxychlor	0.2[c]	< 0.00005	< 0.00005	----	----	----	----	< 0.000062	----	----	----
Toxaphene	0.015[c]	< 0.001	< 0.001	----	----	----	----	< 0.0012	----	----	----
INORGANICS (Method - 6020)											
Aluminum [NT]	5	7.2	1.3	----	----	----	----	7.5	----	----	----
Antimony	0.024[c]	< 0.006	0.0086	----	----	----	----	< 0.006	----	----	----
Arsenic	0.2[c]	0.01	0.0064	0.012	0.021	0.049	< 0.004	0.012	----	----	----
Barium	2.0[c]	0.36	1	0.065	0.15	0.21	0.45	0.21	----	----	----
Beryllium	0.5[c]	< 0.002	< 0.002	----	----	----	----	< 0.002	----	----	----
Cadmium	0.05[c]	< 0.002	0.01	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	----	----	----
Calcium	----d	150	130	----	----	----	----	160	----	----	----
Chromium, total	1.0[c]	0.014	0.019	0.0072	0.017	< 0.004	0.043	0.015	----	----	----
Cobalt	1.0[c]	0.005	0.011	----	----	----	----	0.0053	----	----	----
Copper	0.65[c]	0.04	0.23	----	----	----	----	0.076	----	----	----
Cyanide	0.6[c]	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Iron	5.0[c]	9.5	29	----	----	----	----	16	----	----	----
Lead	0.1[c]	0.18	0.84	0.0095	0.0098	0.0048	0.0059	0.12	----	----	----
Magnesium	----d	75	64	----	----	----	----	33	----	----	----
Manganese	10.0[c]	1.2	0.96	----	----	----	----	0.46	----	----	----
Mercury	0.01[c]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.00071	----	----	----
Nickel	2.0[c]	0.018	0.12	----	----	----	----	0.023	----	----	----
Potassium	----d	16	14	----	----	----	----	8.6	----	----	----
Selenium	0.05[c]	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	----	----	----
Silver	---	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	----	----	----
Sodium	----d	37	39	----	----	----	----	28	----	----	----
Thallium	0.02[c]	< 0.002	< 0.002	----	----	----	----	< 0.002	----	----	----
Vanadium[b]	0.1[c]	0.02	< 0.004	----	----	----	----	0.018	----	----	----
Zinc	10[c]	0.18	1.9	----	----	----	----	0.35	----	----	----
OTHER PARAMETERS											
Ethylene Glycol [NT]	14	< 10	< 10	< 10	< 10	< 10	< 10	< 10	----	----	----
Propylene Glycol [NT]	140	< 10	< 10	< 10	< 10	< 10	< 10	< 10	----	----	----

Part 742 Notes:

**indicates that the value is not listed in TACO, Section 742, Table E.
NA indicates Not Available

Chemical Name and Groundwater Remediation Objective Notations

a The groundwater remediation objective is equal to ADL for carcinogens according to the proecedures specified in 35 Ill. Adm. Code 620.

b Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.

c Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.

d This chemical is included in the Total Dissolved Solids (TDS) Groundwater Quality Standard of 1,200 mg/L pursuant to 35 IAC 620.410 for Class I Groundwater or 35 IAC 620.420 for Class II Groundwater

V3 Table Notes:

0.11	Indicates exceedance of Tier 1 Class II objectives
---	-- indicates chemical not analyzed or not sampled
***	***indicates value is for (1,3-Dichloropropylene, cis+trans)
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/11.

Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

Prepared by/Date KJW 8/29/2012
Checked by/Date RKB 9/1/2012

TABLE 2.7 - GROUNDWATER ANALYTICAL RESULTS (SVOCs)
SOUTH COD - AREA 2 SITES 5 AND 6
BLUE ISLAND, ILLINOIS

		OSE Investigation/V3 Investigation					V3 Investigation				
		06/21/12	06/20/12	06/21/12	06/20/12	06/20/12	06/20/12	06/20/12 and 6/21/2012	06/20/12	06/21/12	06/21/12
	Groundwater Remediation Objective	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**	**MW-06**	**MW-07**	**Trip Blank #1**	**Trip Blank #2**	**EB-1**
Chemical Name	Class II (mg/L)	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Semivolatiles Base-Neutral/Acid Compounds (Includes Polynuclear Aromatics) (Method - 8270C)											
Acenaphthene	2.1	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----	----	----
Acenaphthylene [NT]	1.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----	----	----
Aniline		< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Anthracene	10.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----	----	----
Benzo(*a*)anthracene	0.00065	< 0.0001	0.0011	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00039	----	----	----
Benzo(*a*) pyrene	0.002[c]	< 0.0001	0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00044	----	----	----
Benzo(*b*)fluoranthene	0.0009	< 0.0001	0.0011	< 0.0001	< 0.0001	< 0.0001	0.0001	0.0004	----	----	----
Benzo(*g,h,i*)perylene [NT]	1.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----	----	----
Benzo(*k*) fluroanthene	0.00085	< 0.0001	0.00082	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00035	----	----	----
Benzidine		< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Benzoic Acid	28	< 0.025	< 0.025	----	----	----	----	< 0.025	----	----	----
Benzyl alcohol [NT]	0.7	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
bis (2-Chloroethoxy)methane	**	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
bis (2-Chloroethyl)ether	0.01	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
bis (2-chloroisopropyl)ether [NT]	0.28	----	----	----	----	----	----	----	----	----	----
bis (2-Ethylhexyl)phthalate	0.06[c]	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
4-Bromophenyl phenyl ether		< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Butyl benzyl phthalate	7	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Carbazole		< 0.0001	0.00034	----	----	----	----	< 0.0001	----	----	----
4-Chloroaniline (p-Chloroaniline)	0.028	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
4-Chloro-3-methylphenol	**	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
2-Chloronaphthalene [NT]	2.8	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
2-Chlorophenol (pH dependant)	0.175	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
4-Chlorophenyl-phenylether	**	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Chrysene	0.0075	< 0.0001	0.0013	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00041	----	----	----
Dibenzo(*a,h*)anthracene	0.0015	< 0.0001	0.00033	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	----	----	----
Dibenzofuran [NT]	0.035	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
1,2-Dichlorobenzene (*o*-Dichlorobenzene)	1.5[c]	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
1,3-Dichlorobenzene	**	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
1,4-Dichlorobenzene (*p*-Dichlorobenzene)	0.375[c]	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
3,3'-Dichlorobenzidine	0.1	< 0.01	< 0.01	----	----	----	----	< 0.01	----	----	----
2,4-Dichlorophenol	0.021	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Diethyl phthalate	5.6	< 0.0001	< 0.0001	----	----	----	----	< 0.0001	----	----	----
2,4-Dimethylphenol	0.14	< 0.0001	< 0.0001	----	----	----	----	< 0.0001	----	----	----
Dimethylphthalate	**	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
4,6-Dinitro-2-methylphenol [NT]	0.00056	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
2,4-Dinitrophenol	0.014	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
2,4-Dinitrotoluene	0.00002	< 0.025	< 0.025	----	----	----	----	< 0.025	----	----	----
2,6-Dinitrotoluene	0.00031	< 0.025	< 0.025	----	----	----	----	< 0.025	----	----	----
Di-n-butylphthalate	3.5	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Di-n-octylphthalate	0.7	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Fluoranthene	1.4	< 0.001	0.0025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----	----	----
Fluorene	1.4	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----	----	----
Hexachlorobenzene	0.0003	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Hexachlorobutadiene [NT]	0.035	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Hexachlorocyclopentadiene	0.5[c]	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Hexachloroethane	0.035	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Indeno(1,2,3-*c,d*)pyrene	0.00215	< 0.0001	0.00051	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00027	----	----	----
Isophorone	1.4	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
2-Methylnaphthalene [NT]	0.14	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
2-Methylphenol (o-cresol)	0.35	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
3&4-Methylphenol [NT]	0.35	< 0.005	0.005	----	----	----	----	< 0.005	----	----	----
Naphthalene	0.22	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0031	< 0.001	----	----	----
2-Nitroaniline [NT]	0.105	< 0.025	< 0.025	----	----	----	----	< 0.025	----	----	----
3-Nitroaniline [NT]	NA	< 0.025	< 0.025	----	----	----	----	< 0.025	----	----	----
4-Nitroanilne [NT]	0.028	< 0.025	< 0.025	----	----	----	----	< 0.025	----	----	----
Nitrobenzene[b]	0.0035	< 0.001	< 0.001	----	----	----	----	< 0.001	----	----	----
2-Nitrophenol	**	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
4-Nitrophenol	**	< 0.025	< 0.025	----	----	----	----	< 0.025	----	----	----
N-Nitrosodimethylamine [NT]	0.0006	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
N-Nitroso-di-n-propylamine	0.0018	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
N-Nitrosodiphenylamine	0.016	< 0.0001	< 0.0001	----	----	----	----	< 0.0001	----	----	----
2, 2'-oxybis(1-Chloropropane)		< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
Pentachlorophenol	0.005[c]	< 0.0005	0.0006	----	----	----	----	< 0.0005	----	----	----
Phenanthrene [NT]	1.05	< 0.001	0.0023	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----	----	----
Phenol	0.1[c]	< 0.005	0.045	----	----	----	----	< 0.005	----	----	----
Pyrene	1.05	< 0.001	0.0021	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	----	----	----
Pyridine		< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
1,2,4-Trichlorobenzene	0.7[c]	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----
2,4,5-Trichlorophenol (pH dependant)	3.5	< 0.01	< 0.01	----	----	----	----	< 0.01	----	----	----
2,4,6-Trichlorophenol (pH dependant)	0.05	< 0.005	< 0.005	----	----	----	----	< 0.005	----	----	----

Part 742 Notes:
**indicates that the value is not listed in TACO, Section 742, Table E.
NA indicates Not Available

Chemical Name and Groundwater Remediation Objective Notations

a The groundwater remediation objective is equal to ADL for carcinogens according to the proecedures specified in 35 Ill. Adm. Code 620.
b Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.
c Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.
d This chemical is included in the Total Dissolved Solids (TDS) Groundwater Quality Standard of 1,200 mg/L pursuant to 35 IAC 620.410 for Class I Groundwater or 35 IAC 620.420 for Class II Groundwater

V3 Table Notes:

0.11	Indicates exceedance of Tier 1 Class II objectives
---	-- indicates chemical not analyzed or not sampled
***	***indicates value is for (1,3-Dichloropropylene, cis+trans)
0.11	Indicates lab detection limit is greater than remediation objective
[NT]	[NT] indicates Non-TACO Chemical, some values are provisional objectives and are subject to change. Non-TACO Chemical Remediation Objectives are prepared by the IEPA Toxicity Assessment Unit, 03/14/11.
	Non-TACO values from http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html

Prepared by/Date	KJW	8/29/2012
Checked by/Date	RKB	9/1/2012

TABLE 3.0 - GROUNDWATER ELEVATIONS
SOUTH COD - AREA 2 SITE 5 AND SITE 6
BLUE ISLAND, ILLINOIS

Well/Waterway	Location	Ground Elevation at Well (based on level at 100')	TOC Elevation (ft.)	6/20/12 Depth to Water (ft.)	6/21/12 Depth to Water (ft.)	Groundwater Elevation/Surface Water (ft.)
MW-01 (Damaged)	Southeast portion of site	---	---	---	---	---
MW-01	10ft. north of former MW-01	102.90	102.46	---	10.61	91.85
MW-02	Central portion of site	101.73	102.44	9.51	---	92.93
MW-03	Southwest portion of site	101.14	100.98	---	3.85	97.13
MW-04	North central portion of site	101.78	101.52	10.48	---	91.04
MW-05	Northwest portion of site	101.84	101.57	8.37	---	93.20
MW-06	East central portion of site	103.54	103.28	---	10.80	92.48
MW-07 (temp)	Northeast portion of site	102.76	102.88	10.60	---	92.28
Midlothian Creek 1	West of northwest property corner in Midlothian Creek	---	---	---	---	93.04
Midlothian Creek 2	North central portion of site in Midlothian Creek	---	---	---	---	89.31
Ditch	East of eastern property boundary, north of Valero pipeline	---	---	---	---	94.19

A topographic survey has not been conducted at the Site to determine elevation above mean sea level. Groundwater elevations are therefore based on an arbitrary elevation of 100'.

Chemical Name and Soil Remediation Objective Notations (For INDUSTRIAL-COMMERCIAL and CONSTRUCTION WORKER Remediation Objectives)

a. Soil remediation objectives based on human health criteria only.
b. Calculated values correspond to a target hazard quotient of 1.
c. No toxicity criteria available for this route of exposure.
d. Soil saturation concentration (C[sat]) = the concentration at which the absorptive limits of the soil particles, the solubility limits of the available soil moisture, and saturation of soil pore air have been reached. Above the soil saturation concentration, the assumptions regarding vapor transport to air and/or dissolved phase transport to groundwater (for chemicals which are liquid at ambient soil temperatures) have been violated, and alternative modeling approaches are required.
e. Calculated values correspond to a cancer risk level of 1 in 1,000,000.
f. Deleted from 742.
g. Chemical-specific properties are such that this route is not of concern at any soil contaminant concentration.
h. 40 CFR 761 contains applicability requirements and methodologies for the development of PCB remediation objectives. Request for approval of a Tier 3 evaluation must address the applicablity of 40 CFR 761.
i. Soil remediation objective for pH of 6.8. If soil pH is other than 6.8, refer to Appendix B, Tables C and D in this Part.
j. Ingestion soil remediation objective adjusted by a factor of 0.5 to account for dermal route.
k. Deleted from 742.
l. Potential for soil-plant-human exposure.
m. The person conducting the remediation has the option to use: (1) TCLP or SPLP test results to compare with the remediation objectives listed in this Table; (2) the total amount of contaminant in the soil sample results to compare with pH specific remediation objectives listed in Appendix B, Table C or D of this Part (see Section 742.510); or (3) the appropriate background value listed in Appendix A, Table G. If the person conducting the remediation wishes to calculate soil remediation objectives based on background concentration, this should be done in accordance with Subpart D of this Part.
n. The Agency reserves the right to evaluate the potential for remaining contaminant concentrations to pose significant threats to crops, livestock, or wildlife.
o. For agrichemical facilities, remediation objectives for surficial soils which are based on field application rates may be more appropriate for currently registered pesticides. Consult the Agency for further information.
p. For agrichemical facilities, soil remediation objectives based on site-specific background concentrations of Nitrate as N may be more appropriate. Such determinations shall be conducted in accordance with the procedures set forth in Subparts D and I of this Part.
q. The TCLP extraction must be done using water at a pH of 7.0.
r. Value based on dietary Reference Dose.
s. Value for Ingestion based on Reference Dose for Mercuric chloride (CAS No. 7487-94-7); value for Inhalation based on Reference Concentration for elemental Mercury (CAS No. 7439-97-6). Inhalation remediation objective only applies at sites where elemental mercury is a contaminant of concern.
t. For the ingestion route for arsenic for industrial/commercial, see 742, Appendix A, Table G.
u. Value based on Reference Dose for thallium sulfate (CAS No. 7446-18-6).
v. Deleted from 742.
w. Value based on Reference Dose adjusted for dietary intake.
x. For any populated areas as defined in Section 742.200, Appendix A, Table H may be used.
y. Value based on maintaining fetal blood lead below 10 ug/dl, using the USEPA adults Blood Lead Model.

Chemical Name and Soil Remediation Objective Notations (For RESIDENTIAL REMEDIATION OBJECTIVES)

a. Soil remediation objectives based on human health criteria only.
b. Calculated values correspond to a target hazard quotient of 1.
c. No toxicity criteria available for this route of exposure.
d. Soil saturation concentration (C[sat]) = the concentration at which the absorptive limits of the soil particles, the solubility limits of the available soil moisture, and saturation of soil pore air have been reached. Above the soil saturation concentration, the assumptions regarding vapor transport to air and/or dissolved phase transport to groundwater (for chemicals which are liquid at ambient soil temperatures) have been violated, and alternative modeling approaches are required.
e. Calculated values correspond to a cancer risk level of 1 in 1,000,000.
f. Deleted from 742.
g. Chemical-specific properties are such that this route is not of concern at any soil contaminant concentration.
h. 40 CFR 761 contains applicability requirements and methodologies for the development of PCB remediation objectives. Request for approval of a Tier 3 evaluation must address the applicablity of 40 CFR 761.
i. Soil remediation objective for pH of 6.8. If soil pH is other than 6.8, refer to Appendix B, Tables C and D in this Part.
j. Ingestion soil remediation objective adjusted by a factor of 0.5 to account for dermal route.
k. A preliminary remediation goal of 400 mg/kg has been set for lead based on *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities* , OSWER Directive #9355.4-12.
l. Potential for soil-plant-human exposure.
m. The person conducting the remediation has the option to use: (1) TCLP or SPLP test results to compare with the remediation objectives listed in this Table; (2) where applicable, the total amount of contaminant in the soil sample results tc with pH specific remediation objectives listed in Appendix B, Table C or D of this Part (see Section 742.510): or (3) the appropriate background value listed in Appendix A, Table G. If the person conducting the remediation wishes to calculate soil remediation objectives based on background concentration, this should be done in accordance with Subpart D of this Part.
n. The Agency reserves the right to evaluate the potential for remaining contaminant concentrations to pose significant threats to crops, livestock, or wildlife.
o. For agrichemical facilities, remediation objectives for surficial soils which are based on field application rates may be more appropriate for currently registered pesticides. Consult the Agency for further information.
p. For agrichemical facilities, soil remediation objectives based on site-specific background concentrations of Nitrate as N may be more appropriate. Such determinations shall be conducted in accordance with the procedures set forth in Subparts D and I of this Part.
q. The TCLP extraction must be done using water at a pH of 7.0.
r. Value based on dietary Reference Dose.
s. Value for Ingestion based on Reference Dose for Mercuric chloride (CAS No. 7487-94-7); value for Inhalation based on Reference Concentration for elemental Mercury (CAS No. 7439-97-6). Inhalation remediation objective only applies at sites where elemental mercury is a contaminant of concern.
t. For the ingestion route for arsenic for industrial/commercial, see 742, Appendix A, Table G.
u. Value based on Reference Dose for thallium sulfate (CAS No. 7446-18-6).
v. Value based on Reference Dose adjusted for dietary intake.
w. For sites located in any populated area as defined in Section 742.200, Appendix A, Table H may be used.
x. The remediation objectives for these chemicals must also include the construction worker inhalation objective in Appendix B, Table B.

IEPA Laboratory Notes and Definitions

V Indicates the analyte was detected in the associated method blank and was outside method blank acceptance criteria.
M Presence of material verified (i.e., positive detection). Value is estimated.
L Actual value not known, but known to be greater than value shown. Value shown is the highest acceptable level for quantitation.
J6 Blank spike failed high - possible high bias or false positive result.
J5 Blank spike failed high, result was less than the reporting limit - impact on data may be minimal.
J3 The reported value failed to meet the established quality control criteria for either precision or accuracy possibly due to matrix effects.
J2 Internal Standard criteria were not met.
J1 Surrogate compound recovery limits have not been met.
B2 The sample matrix caused possible effects on measurement. The result may be biased high.
B1 The sample matrix caused possible effects on measurement. The result may be biased low.