# PRELIMINARY ENVIRONMENTAL SOIL INVESTIGATION REPORT

## JACKSON POND EXPANSION PROJECT

## VILLA PARK, DUPAGE COUNTY, ILLINOIS

**PREPARED FOR:**

VILLAGE OF VILLA PARK
20 S. ARDMORE AVE
VILLA PARK, IL 60181-2696

**PREPARED BY:**

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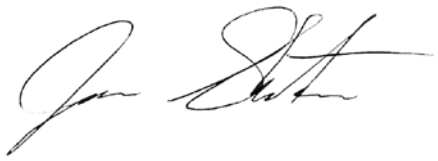
**FEBRUARY 20, 2018**

This Preliminary Environmental Soils Report was prepared by V3 Companies (V3) on behalf of the Village of Villa Park to evaluate environmental conditions related to soils excavated and graded for stormwater improvements planned at and adjacent to Jackson Middle School, in Villa Park, DuPage County, Illinois.

Prepared by:



Jonathan D. Shuptar P.G.
Project Geologist

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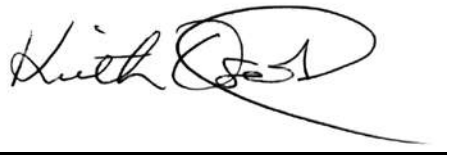

Keith R. Oswald, P.E.
Director – Environment & Geosciences

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# 1.0 INTRODUCTION

This *Preliminary Environmental Soil Investigation Report* was prepared for the Village of Villa Park to evaluate environmental conditions relating to the proposed soil excavation and grading associated with the expansion of Jackson Pond and associated stormwater control structures. The project area and proposed construction is depicted in **Figure 1**. The investigation was conducted in two phases. First, soil boring advancement and soil sampling were conducted to target proposed excavation areas and depths. Based on the initial results, a second sampling event was conducted to characterize surface conditions. Shallow borings were advanced across limits of the entire project to establish environmental conditions, and to measure the thickness of existing topsoil. Field investigation activities were conducted by V3 in November 2017 and February 2018.

The documentation and findings of the investigation are organized within this report as follows:

- **Section 2 – Project Background**: Appropriate background information for the Project Site, construction activities and related environmental concerns.
- **Section 3 – Field Investigation Procedures:** Sampling objectives, general field activities, standard operating procedures, methods, and methodologies (field and laboratory).
- **Section 4 – Field Investigation Results:** Field investigation results including observations, field measurements, sampling rationale, analytical results, comparisons of the analytical results with regulatory standards, the nature and extent of detected contaminants.
- **Section 5 – Conclusions:** Summary of investigation findings.

# 2.0 SITE BACKGROUND

The projects limit for the proposed Jackson Pond Expansion project include the athletic fields at Jackson Middle School, Jackson Pond, village property along High Ridge Road, and village ROW along Jackson Street, High Ridge Road, Leslie Lane, and Ardmore Avenue. Proposed construction includes excavation for the expansion of Jackson Pond, excavation for a new retention basin, and installation of storm sewers. Preliminary designs indicate the project will require over 100,000 CY of earthwork with a majority of the excavation coming from the expansion of Jackson Pond and the new retention basin. Initial plans account for excavated soils by filling and grading within project boundaries. This *Preliminary Environmental Soil Investigation Report* has been conducted to evaluate using excavated soils as onsite fill and the potential for placing any spoils that cannot be managed onsite as “uncontaminated soil” at a *Clean Construction or Demolition Debris* (CCDD) or *Uncontaminated Soil Fill Operation* (USFO) in accordance with 35 Illinois Administrative Code (IAC) Part 1100.

A historical document and records review indicated that prior to development the project area was used for agriculture. The project area was developed in the mid-50’s to mid-60’s. Development consisted of residential properties and school buildings. This is consistent with the current use of the project area. Both Jackson Middle School and Willowbrook High School were identified as *Potentially Impacted Properties* (PIPs). The schools are considered PIPs only due to records indicating both locations contained petroleum USTs.

# 3.0 FIELD INVESTIGATION PROCEDURES

Based on the historic use of properties within the project area and identification of PIPs adjacent to proposed excavations, V3 conducted a field investigation to characterize the environmental conditions of project soils. Based on the findings of the initial field investigation a second sampling event was conducted to characterize the existing conditions of the topsoil across the site. The discussions below provide the basic procedures of the implemented sampling plan. Findings and analytical results are discussed in greater detail in **Section 4.0**.

## 3.1 Sampling Objectives

- Evaluate potential environmental impact to site soils related to identified PIPs (i.e., petroleum USTs at school district properties);
- Establish existing conditions of project soils;
- Evaluate the suitability of excavated soils to be managed onsite;
- Evaluate and delineate soils (to the extent practical) which achieve 35 IAC Part 1100 criteria for acceptance at a CCDD or USFO facility as uncontaminated soil.

## 3.2 Soil Sampling Procedures

The initial soil investigation consisted of 14 soil borings advanced within the project boundary. Of the 14 borings, 6 were drilled by Testing Services Corporation (TSC) as part of a geotechnical investigation of site soils. The geotechnical report completed by TSC is included in **Appendix C**. The remaining 8 borings were drilled by Earth Solutions Inc. using direct push drilling methods. Environmental samples were collected from all 14 borings.

Under the direction of V3, borings were primarily placed at locations of proposed excavation. Two boring (**GP-07** and **GP-06**) were placed in fill areas to establish existing near surface conditions. See **Figure 1** for excavation and fill areas. The borings were marked and underground utilities were identified by JULIE. If necessary, boring locations were offset to avoid underground utilities.

Soils from each boring were logged and depth intervals were screened for the presence of volatile organic vapors, using a portable photo-ionization detector (PID). Soil samples from each boring were retained for laboratory analysis.

Based on the findings of the initial soil investigation, another round of sampling was conducted to characterize existing Site topsoil conditions. To evaluate project topsoil, 39 shallow borings were advanced across the project area in a 150 foot grid pattern. Borings were drilled by Earth Solutions Inc. using direct push drilling methods. Each boring was advanced and logged to a depth of 5 feet. Surface soil samples were collected from each boring at 0 to 6 inches depth.

## 3.3 Laboratory Methodologies

Laboratory services were performed by STAT Analysis Corporation of Chicago, Illinois (STAT) and First Environmental Laboratories, Inc. of Naperville, Illinois (FEL), both labs are accredited by the Illinois Environmental Laboratory Accreditation Program (IL ELAP). Soil samples were delivered to laboratories under chain of custody.

Analytical parameters and methods used are listed below:

| Parameter | SW Method Number |
|---|---|
| BTEXs | 8260B |
| PAHs | 8270C |
| Total RCRA (8) Metals | 6020/7470A/7471A |
| pH | 9045C |
| SPLP Chromium | 1312/6020 |

Standard chain-of-custody (COC) procedures were followed to ensure adequate documentation accompanied all samples submitted to the laboratory. Complete analytical data reports and copies of the chain of custody form are provided in **Appendix B**. Summary results of analyses are presented in **Section 4.0**. Data comparison to the appropriate MACs and TACO Tier 1 ROs are detailed in **Table 1** through **Table 3**.

# 4.0 FIELD INVESTIGATION RESULTS

Both the environmental and geotechnical borings were completed on November 2nd, 2017. The topsoil investigation was conducted on February 6th and 7th, 2018. The following sections summarize the field observations.

## 4.1 Field Investigation Findings

### 4.1.1 Project Area Geology

The project area has been mapped by ISGS as glacial drift 50 to 200 ft. thick. The surficial glacial units are comprised of the silty and clayey diamictons of the Wedron Formation. The local topography has been graded and shaped by suburban development. Soils observed in borings advanced for this project indicate fill material primarily consisting of reworked native soils was present throughout the project area. The fill material was underlain by glacial drift primarily consisting of silts and clays; however, some borings observed discontinuous lenses and stringers of coarse grain deposits, such as sands, silty sands and silty gravel. Some of the coarse grain deposits were saturated; possibly indicating the presence of isolated lenses of perched groundwater. A consistent water bearing formation was not encountered throughout the project area.

### 4.1.2 Field Observations and Sampling Rationale

V3 did not observe visual or olfactory evidence of impacted soils collected from the borings. Elevated PID readings were not observed in headspace screening of soils. V3 collected soil sample at discrete depth intervals for laboratory analysis in areas of planned excavation and/or fill. Because no field indicators of environmental impact were observed in site borings, the sample depth intervals were selected during the initial sampling event based on a representative distribution of excavation depths. The second sampling depth targeted existing topsoil at 0 to 6 inches depth.

- Proposed Stormwater Sewer. Borings **GT-01, GT-02, GP-02, GP-03, GP-04,** and **GP-08** were advanced along the proposed alignment of storm sewer installations. One sample was collected from each boring. These borings were sampled at intervals between 0 and 10 feet below ground surface (BGS).

- Proposed Jackson Pond Expansion / Retention Basin. Borings **GT-04, GT-05,** and **GT-06** were advanced in locations of proposed excavation for the expansion of Jackson Pond and the new retention basin. One sample was collected from each boring. These borings were sampled at 8 to 10 feet BGS, based on proposed excavation depths.
- Existing Jackson Pond Bottom. Borings **GP-01, GP-05** and **GT-03** were advanced in the bottom of Jackson Pond. Two samples per boring were collected from the borings advanced in the existing basin. Due to urban runoff, retention basins have the potential to have elevated levels of PAHs and metals. Consequently, borings advanced in the basin were sampled near surface and at depth to vertically delineate any possible impacts form urban runoff.
- Proposed Fill Areas. Borings **GP-06** and **GP-07** were advanced in proposed fill locations to establish the existing conditions in the fill areas. These borings were sampled at 0 to 4 feet BGS to evaluate surficial conditions, and possible existing exposure to environmental conditions.
- Topsoil Evaluation. Following the initial soil borings and samples, borings **TS-01** through **TS-39** were advanced across the project area in a 150 foot grid establish the existing arsenic concentrations within surficial soils and to measure the presence and thickness salvageable topsoil. Soil samples were collected at 0 to 6 inches depth.

## 4.2 Sample Analytical Results

### 4.2.1 Laboratory Results

V3 compared the laboratory analytical results to the *Summary of Maximum Allowable Concentrations (MACs) of Chemical Constituents in Uncontaminated Soil Used as Fill Material at Regulated Fill Operations* [Title 35 of the Illinois Administrative Code (IAC), Part 1100, Subpart F] to evaluate soils for possible offsite placement as fill at a CCDD facility. Additionally, the analytical results were also compared to the Illinois Tiered Approach to Corrective Action Objective (TACO) Tier 1 Remediation Objectives (ROs) [Title 35 of the Illinois Administrative Code (IAC), Part 742] to evaluate a conservative baseline risk of exposure.

Soil analytical results are provided in **Table 1** through **Table 3.** The laboratory analytical report, NELAP Accreditation Certificate and chain of custody documents are provided in **Appendix B**.

#### 4.2.1.1 Petroleum Compounds

Laboratory analytical results indicate petroleum related compounds (BTEX and PAHs) were not detected in any samples collected during this investigation, with the exception of **GP-02(2-4)** where low level PAHs were detected. PAHs detected in **GP-02(2-4)** were below the MACs and all applicable TACO Tier 1 ROs.

#### 4.2.1.2 Metals

Laboratory analytical results indicate Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, and Selenium were all detected in samples collected during this investigation. All the metals analyzed for this investigation are naturally occurring and are commonly detected in soils throughout Illinois.

- Arsenic, Barium, Cadmium, Chromium, Lead, and Selenium were all detected at concentrations which exceed the background concentrations established for Metropolitan Statistical Areas (MSAs) under TACO (Section 742, Appendix A, Table G).

- Three samples (**GT-01(8-10), GP-07(0-2), and GP-02(2-4)**) detected Chromium at concentrations which exceeded the MAC but were below the most stringent TACO Tier 1 ROs.
- **GP-05(2-4)** detected selenium at a concentration which exceeded both the MAC and the most stringent TACO Tier 1 RO.
- 11 of the 17 samples collected for the initial investigation detected Arsenic at concentrations that exceeded both the location based MAC and the location based TACO Tier 1 RO for the residential ingestion exposure pathway. The detected exceedances of Arsenic in project soils prompted additional sampling to determine concentrations present within surface soils.
- Analytical results from the topsoil sampling indicate concentrations of Arsenic in surface soils were consistently lower than the previously sampled subsurface soils. Of the 39 samples collected from 0 to 6 inches deep, only one sample (**TS-26**) exceeded the location based MAC.

To view specific chemicals and their concentrations compared to MAC and TACO ROs refer to **Table 1** and **Table 3**.

## 5.0 CONCLUSIONS

The following provides a summary of conclusions based upon the analytical laboratory sample results and the related project setting:

- Analytical results from the investigation indicate that petroleum impacts associated with the identified PIPs (i.e., use and underground storage of petroleum products) are not present in the project area. Consequently, there is no evidence the PIPs are a source of contamination affecting proposed excavation and earthwork.
- Naturally occurring metals were consistently detected throughout the project area. In some samples, concentrations of metals were detected above established average background concentrations, but were below applicable MACs and were also within the typical range of naturally occurring / background soil conditions.
- In select samples, elevated concentrations of chromium and selenium exceed regulatory limits (i.e., MACs). The chromium and selenium MAC exceedances are based on a risk to groundwater from metals leaching from the soil. In some cases (i.e., chromium), V3 used *Synthetic Precipitation Leachate Procedure* (SPLP) analysis to demonstrate that the concentrations being observed can achieve the applicable, alternative soil leaching MAC. Further, it's our experience that additional SPLP analysis would resolve the selenium MAC exceedance.
- The concentrations of chromium and selenium that were observed are typical of background conditions and represent a theoretical risk to groundwater, but do not pose a risk of exposure by incidental ingestion or other direct contact with the soil. Consequently, reuse of the soils at the project site does not represent a risk of exposure from incidental contact by site users.
- Arsenic was consistently detected in subsurface soils at concentrations in exceedance of the respective MAC and the TACO Tier 1 residential soil ingestion exposure route RO. Exceedances of arsenic were detected at multiple depths in areas of proposed excavation as well as within areas of proposed fill. According to the IEPA Technical Report: *A Summary of Selected Background Conditions for Inorganics in Soil* (IEPA 1994), the range of total concentrations of arsenic in background soils within a

*Metropolitan Statistical Area* (MSA) is between 1.1 mg/kg and 24 mg/kg. The concentrations of arsenic detected for this investigation were between 4.4 mg/kg to 28 mg/kg. Only **GP-03(0-2)** detected arsenic beyond the observed range of background soils established by IEPA.

- Although concentrations of arsenic are elevated throughout the project area, the lack of any apparent anthropogenic impact (i.e., a source of contamination), and the distribution and nature of the arsenic observed in soil samples do not represent evidence of contamination.
- The results of the additional topsoil sampling indicate that the surficial fill and topsoil existing throughout the project area do not contain the same elevated concentrations of arsenic encountered in the subsurface glacial deposits. It is V3's experience that encountering elevated levels of naturally occurring metals, particularly Arsenic, is a reoccurring issue in DuPage County and the surrounding area. Consequently, it is our judgment that the elevated arsenic results are most likely indicative of naturally occurring, localized background levels within the subsurface glacial till deposits.
- Review of the data collected from this investigation indicates elevated levels of arsenic were consistently encountered in native subsurface glacial deposits across the project area, including the planned fill areas. However, extensive testing of existing project topsoil indicates the absence of elevated Arsenic concentrations. Available data indicates that stripping, stockpiling and re-spreading the existing topsoil following project earthwork at a minimum thickness of 6 inches would result in no material change from existing conditions.

# FIGURES


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Visio, Vertere, Virtute...
*"The Vision To Transform With Excellence"*

| | | | |
|---|---|---|---|
| PROJECT NO.: 16295.Jackson | CLIENT: Village of Villa Park<br>20 S. Ardmore Ave<br>Villa Park, IL 60181 | TITLE: **PROJECT AREA AND PROPOSED EXCAVATION AND FILL** | |
| CREATED BY: JDS | | | |
| DATE: 01/12/18 | BASE LAYER: ESRI (2017) | SITE: Jackson Pond Expansion Project<br>Villa Park, IL | EXHIBIT: 1 |
| SCALE: See Scale Bar | | | |

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| | |
|---|---|
| PROJECT NO.: | 16295.Jackson |
| CREATED BY: | JDS |
| DATE: | 12/21/17 |
| SCALE: | See Scale Bar |
| CLIENT: | Village of Villa Park<br>20 S. Ardmore Ave<br>Villa Park, IL 60181 |
| BASE LAYER: | ESRI<br>(2017) |

TITLE:

# SOIL BORING LOCATIONS

SITE: Jackson Pond Expansion Project
Villa Park, IL

EXHIBIT: 2

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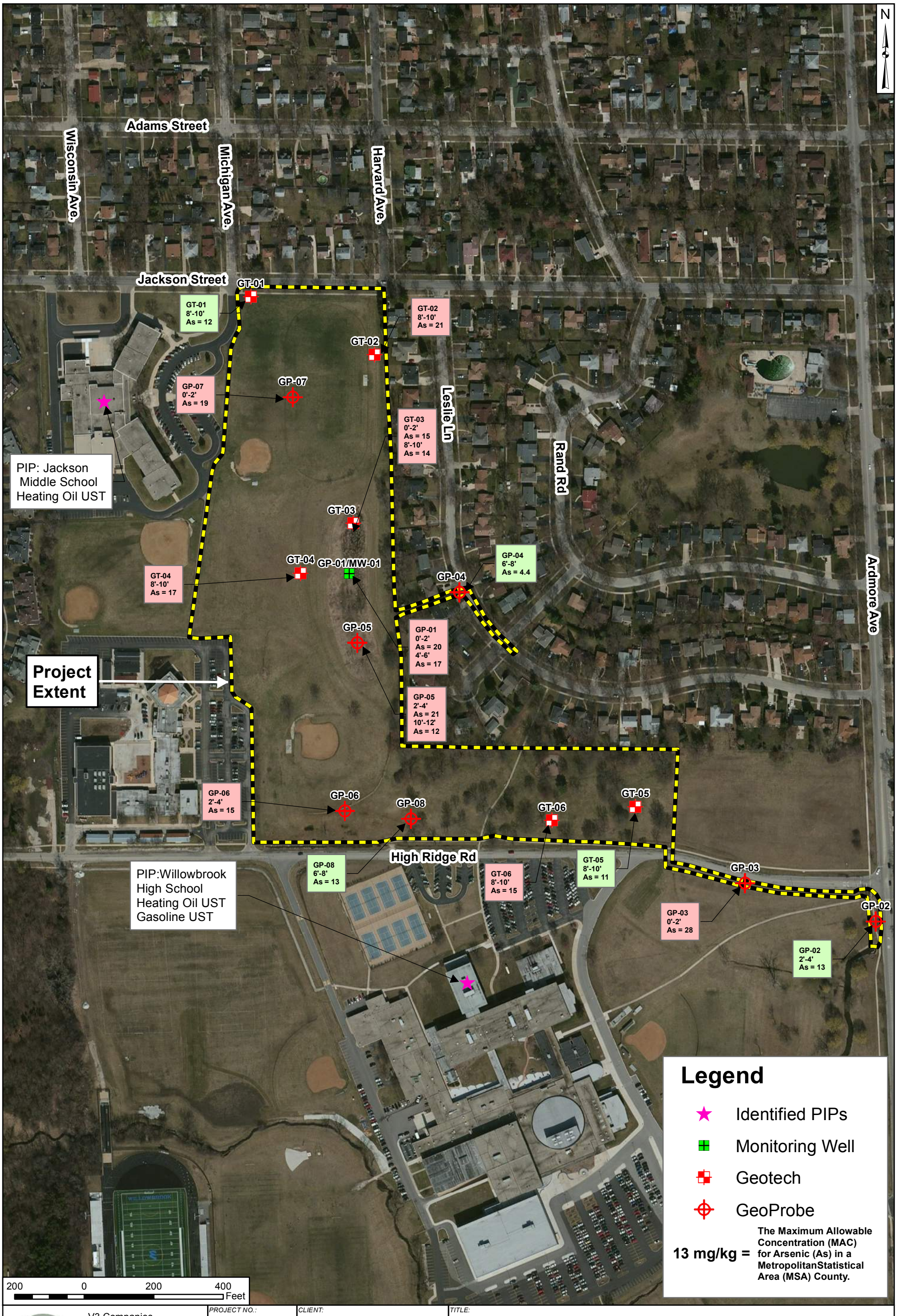


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| | | | |
|---|---|---|---|
| PROJECT NO.: 16295.Jackson | CLIENT: Village of Villa Park, 20 S. Ardmore Ave, Villa Park, IL 60181 | TITLE: **ARSENIC IN SOIL** | |
| CREATED BY: JDS | | | |
| DATE: 12/21/17 | BASE LAYER: ESRI (2017) | SITE: Jackson Pond Expansion Project, Villa Park, IL | EXHIBIT: 3 |
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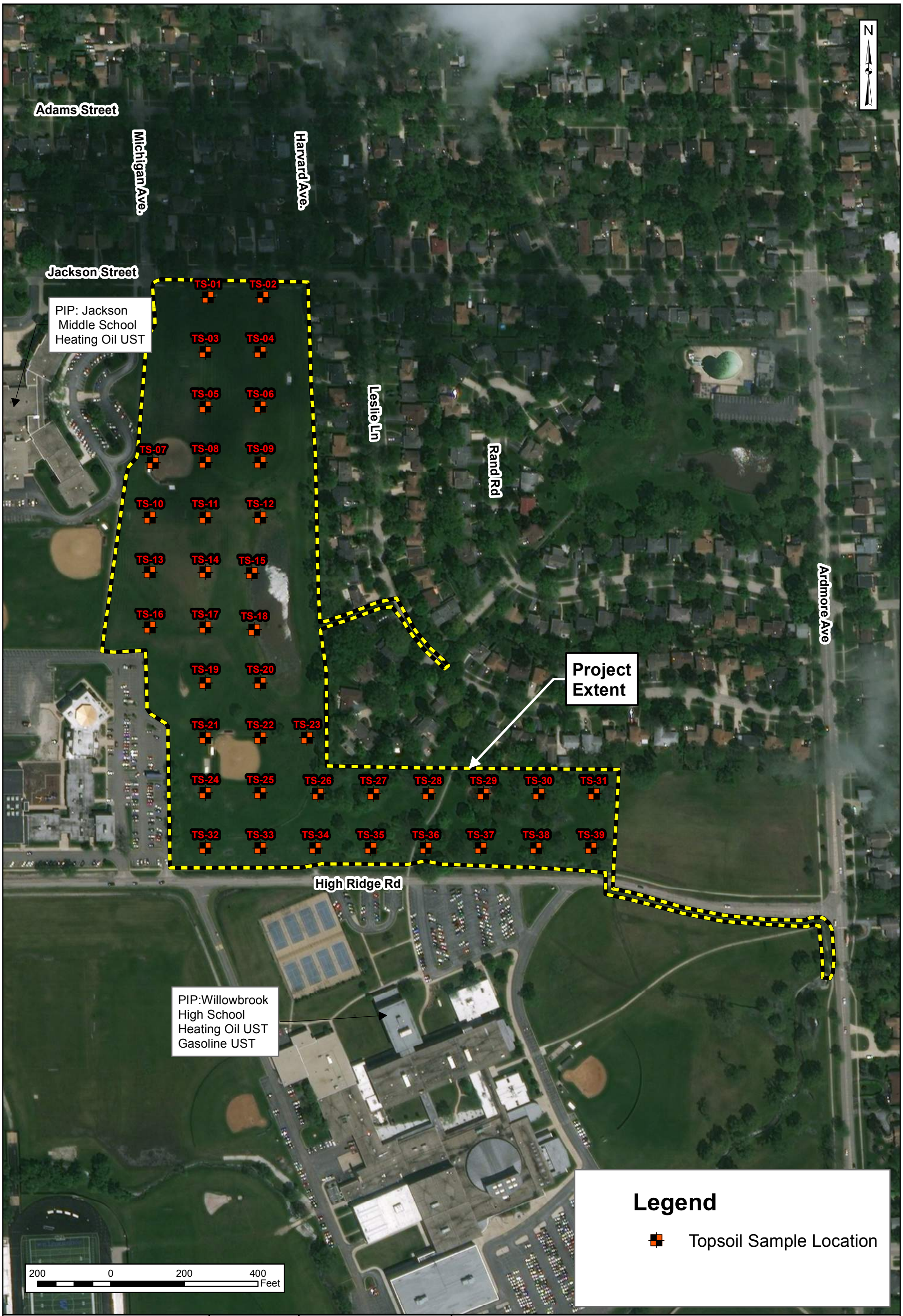


| | | | |
|---|---|---|---|
| V3 Companies<br>7325 Janes Avenue<br>Woodridge, Illinois 60517<br>630.724.9200 phone<br>630.724.92020 fax<br>www.v3co.com | PROJECT NO.: 16295.Jackson<br>CREATED BY: JDS | CLIENT: Village of Villa Park<br>20 S. Ardmore Ave<br>Villa Park, IL 60181 | TITLE: **TOPSOIL SAMPLE LOCATIONS** |
| Visio, Vertere, Virtute...<br>*"The Vision To Transform With Excellence"* | DATE: 02/18/18<br>SCALE: See Scale Bar | BASE LAYER: ESRI (2017) | SITE: Jackson Pond Expansion Project<br>Villa Park, IL<br>EXHIBIT: 4 |

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# TABLES

**TABLE 1 - SOIL ANALYTICAL RESULTS (BTEX and PNAs)**
**JACKSON POND EXPANSION**
**VILLA PARK, ILLINOIS**

| | | 35 IAC Part 742, Appendix B, Tables A and B | | | | | | | | | | | | | Jackson Middle School Property | | | | | | | | ROW along Leslie Ln |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Residential | | Industrial-Commercial | | | | Soil Component of the Groundwater Ingestion Exposure Route Values | | Background Carcinogenic PAH 95th Percentile Concentrations | | | | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 |
| | 35 IAC 1100.Subpart F Maximum Allowable Concentration[a] | Exposure Route-Specific Values for Soils | | Exposure Route-Specific Values for Soils | | | | | | | | | | GT-01 (8-10) | GT-02 (8-10) | GT-03 (0-2) | GT-03 (8-10) | GT-04 (8-10) | GP-01 (0-2) | GP-01 (4-6) | GP-07 (0-2) | GP-04 (6-8) |
| Chemical Name | (mg/kg) | Ingestion (mg/kg) | Inhalation (mg/kg) | Industrial-Commercial Ingestion (mg/kg) | Industrial-Commercial Inhalation (mg/kg) | Construction Worker Ingestion (mg/kg) | Construction Worker Inhalation (mg/kg) | Class I (mg/kg) | Class II (mg/kg) | Chicago (mg/kg) | Within MSA (mg/kg) | Outside MSA (mg/kg) | ADL (mg/kg) | 8-10 ft mg/kg | 8-10 ft mg/kg | 0-2 ft mg/kg | 8-10 ft mg/kg | 8-10 ft mg/kg | 0-2 ft mg/kg | 4-6 ft mg/kg | 0-2 ft mg/kg | 6-8 ft mg/kg |
| **Volatile Organic Compounds (Method - 5035/8260B)** | | | | | | | | | | | | | | | | | | | | | | |
| Benzene | 0.03 b | 12e | 0.8e | 100e | 1.6e | 2,300e | 2.2e | 0.03 | 0.17 | ** | ** | ** | * | < 0.0047 | < 0.0040 | < 0.0047 | < 0.0046 | < 0.0040 | < 0.0051 | < 0.0053 | < 0.0062 | < 0.0045 |
| Ethylbenzene | 13 b | 7,800b | 400d,x | 200,000b | 400d | 20,000b | 58b | 13 | 19 | ** | ** | ** | * | < 0.0047 | < 0.0040 | < 0.0047 | < 0.0046 | < 0.0040 | < 0.0051 | < 0.0053 | < 0.0062 | < 0.0045 |
| Toluene | 12 b | 16,000b | 6,50d,x | 410,000b | 650d | 410,000b | 42b | 12 | 29 | ** | ** | ** | * | < 0.0047 | < 0.0040 | < 0.0047 | < 0.0046 | < 0.0040 | < 0.0051 | < 0.0053 | < 0.0062 | < 0.0045 |
| Xylenes (total) | 5.6 g | 16,000b | 320d | 410,000b | 320d | 41,000b | 5.6b | 150 | 150 | ** | ** | ** | * | < 0.014 | < 0.012 | < 0.014 | < 0.014 | < 0.012 | < 0.015 | < 0.016 | < 0.019 | < 0.014 |
| **Polynuclear Aromatics (PNAs) (Method - 8270C)** | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 570 b | 4,700b | -----c | 120,000b | -----c | 120,000b | -----c | 570b | 2,900 | 0.09 | 0.13 | 0.13 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Acenaphthylene | NE | ** | ** | ** | ** | ** | ** | ** | ** | 0.03 | 0.07 | 0.04 | ** | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Anthracene | 12,000 b | 23,000b | -----c | 610,000b | -----c | 610,000b | -----c | 12,000b | 59,000 | 0.25 | 0.4 | 0.14 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Benzo(*a*)anthracene | 1.8 | 0.9e,w | -----c | 8e | -----c | 170e | -----c | 2 | 8 | 1.1 | 1.8 | 0.72 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Benzo(*a*) pyrene | 2.1 | 0.09e,w | -----c | 0.8e,x | -----c | 17e | -----c | 8 | 82 | 1.3 | 2.1 | 0.98 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Benzo(*b*)fluoranthene | 2.1 | 0.9e,w | -----c | 8e | -----c | 170e | -----c | 5 | 25 | 1.5 | 2.1 | 0.70 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Benzo(*g,h,i*)perylene | NE | ** | ** | ** | ** | ** | ** | ** | ** | 0.68 | 1.7 | 0.84 | ** | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Benzo(*k*) fluoranthene | 9 g | 9e | -----c | 78e | -----c | 1,700e | -----c | 49 | 250 | 0.99 | 1.7 | 0.63 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Chrysene | 88 g | 88e | ---c | 780e | -----c | 17,000e | -----c | 160 | 800 | 1.2 | 2.7 | 1.1 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Dibenzo(*a,h*)anthracene | 0.42 | 0.09e,w | ---c | 0.8e | -----c | 17e | -----c | 2 | 7.6 | 0.20 | 0.42 | 0.15 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Fluoranthene | 3100 g | 3,100b | ---c | 82,000b | -----c | 82,000b | -----c | 4,300b | 21,000 | 2.7 | 4.1 | 1.8 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Fluorene | 560 b | 3,100b | ---c | 82,000b | -----c | 82,000b | -----c | 560b | 2,800 | 0.1 | 0.18 | 0.04 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Indeno(1,2,3-*c,d*)pyrene | 1.6 | 0.9e,w | ---c | 8e | -----c | 170e | -----c | 14 | 69 | 0.86 | 1.6 | 0.51 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Naphthalene | 1.8 g | 1,600b | 170b,x | 41,000b | 270b | 4,100b | 1.8b | 12b | 18 | 0.04 | 0.2 | 0.17 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Phenanthrene | NE | ** | ** | ** | ** | ** | ** | ** | ** | 1.3 | 2.5 | 0.99 | ** | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |
| Pyrene | 2300 g | 2,300b | ---c | 61,000b | -----c | 61,000b | -----c | 4,200b | 21,000 | 1.9 | 3 | 1.2 | * | < 0.041 | < 0.038 | < 0.039 | < 0.041 | < 0.039 | < 0.039 | < 0.038 | < 0.040 | < 0.038 |

**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 applicable MAC |
| **0.11** | Indicates exceedance of Tier 1 remediation objective |
| **0.11** | Indicates exceedance of Tier 1 remediation objective and applicable MAC |
| 0.11 | Indicates exceedance of Tier 1 residential ingestion, but does not exceed background value. TACO allows the use of Background as the remediation objective |
| 0.11 | Indicates lab detection limit is greater than remediation objective |
| | Indicates that the MAC is dependent on the location of the fill site |
| --- | Indicates chemical not analyzed or not sampled |
| a | Concentrations are the results after using methods described in 35 IAC 1100.Subpart F for determining Maximum Allowable Concentrations (MACs) of chemical constitutents in uncontaminated soils used as fill material at regulated fill operations. |
| | See attached for notations for specified MAC or TACO RO. |

**MAC assumes the location of fill site is within a populated area in a Metropolitan Statistical Area excluding Chicago.**

**TABLE 1 - SOIL ANALYTICAL RESULTS (BTEX and PNAs)**
**JACKSON POND EXPANSION**
**VILLA PARK, ILLINOIS**

| | | 35 IAC Part 742, Appendix B, Tables A and B | | | | | | | | | | | | Village of Villa Park Property | | | | | | ROW along High Ridge Rd | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Residential | | Industrial-Commercial | | | | Soil Component of the Groundwater Ingestion Exposure Route Values | | Background Carcinogenic PAH 95th Percentile Concentrations | | | | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 |
| | | | | Exposure Route-Specific Values for Soils | | | | | | | | | | GP-05 (2-4) | GP-05 (10-12) | GP-06 (2-4) | GP-08 (6-8) | GT-06 (8-10) | GT-05 (8-10) | GP-03 (0-2) | GP-02 (2-4) |
| | 35 IAC 1100.Subpart F Maximum Allowable Concentration[a] | Exposure Route-Specific Values for Soils | | Industrial-Commercial | | Construction Worker | | | | | | | | | | | | | | | |
| Chemical Name | (mg/kg) | Ingestion (mg/kg) | Inhalation (mg/kg) | Ingestion (mg/kg) | Inhalation (mg/kg) | Ingestion (mg/kg) | Inhalation (mg/kg) | Class I (mg/kg) | Class II (mg/kg) | Chicago (mg/kg) | Within MSA (mg/kg) | Outside MSA (mg/kg) | ADL (mg/kg) | 2-4 ft | 10-12 ft | 2-4 ft | 6-8 ft | 8-10 ft | 8-10 ft | 0-2 ft | 2-4 ft |
| | | | | | | | | | | | | | | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg |
| **Volatile Organic Compounds (Method - 5035/8260B)** | | | | | | | | | | | | | | | | | | | | | |
| Benzene | 0.03 b | 12e | 0.8e | 100e | 1.6e | 2,300e | 2.2e | 0.03 | 0.17 | ** | ** | ** | * | < 0.0057 | < 0.0050 | < 0.0045 | < 0.0052 | < 0.0050 | < 0.0045 | < 0.0052 | < 0.0058 |
| Ethylbenzene | 13 b | 7,800b | 400d,x | 200,000b | 400d | 20,000b | 58b | 13 | 19 | ** | ** | ** | * | < 0.0057 | < 0.0050 | < 0.0045 | < 0.0052 | < 0.0050 | < 0.0045 | < 0.0052 | < 0.0058 |
| Toluene | 12 b | 16,000b | 6,50d,x | 410,000b | 650d | 410,000b | 42b | 12 | 29 | ** | ** | ** | * | < 0.0057 | < 0.0050 | < 0.0045 | < 0.0052 | < 0.0050 | < 0.0045 | < 0.0052 | < 0.0058 |
| Xylenes (total) | 5.6 g | 16,000b | 320d | 410,000b | 320d | 41,000b | 5.6b | 150 | 150 | ** | ** | ** | * | < 0.017 | < 0.015 | < 0.014 | < 0.016 | < 0.015 | < 0.014 | < 0.016 | < 0.017 |
| **Polynuclear Aromatics (PNAs) (Method - 8270C)** | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 570 b | 4,700b | -----c | 120,000b | -----c | 120,000b | -----c | 570b | 2,900 | 0.09 | 0.13 | 0.13 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | < 0.040 |
| Acenaphthylene | NE | ** | ** | ** | ** | ** | ** | ** | ** | 0.03 | 0.07 | 0.04 | ** | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | < 0.040 |
| Anthracene | 12,000 b | 23,000b | -----c | 610,000b | -----c | 610,000b | -----c | 12,000b | 59,000 | 0.25 | 0.4 | 0.14 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | < 0.040 |
| Benzo(*a*)anthracene | 1.8 | 0.9e,w | -----c | 8e | -----c | 170e | -----c | 2 | 8 | 1.1 | 1.8 | 0.72 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | 0.046 |
| Benzo(*a*) pyrene | 2.1 | 0.09e,w | -----c | 0.8e,x | -----c | 17e | -----c | 8 | 82 | 1.3 | 2.1 | 0.98 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | 0.059 |
| Benzo(*b*)fluoranthene | 2.1 | 0.9e,w | -----c | 8e | -----c | 170e | -----c | 5 | 25 | 1.5 | 2.1 | 0.70 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | 0.075 |
| Benzo(*g,h,i*)perylene | NE | ** | ** | ** | ** | ** | ** | ** | ** | 0.68 | 1.7 | 0.84 | ** | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | 0.045 |
| Benzo(*k*) fluoranthene | 9 g | 9e | -----c | 78e | -----c | 1,700e | -----c | 49 | 250 | 0.99 | 1.7 | 0.63 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | < 0.040 |
| Chrysene | 88 g | 88e | ---c | 780e | -----c | 17,000e | -----c | 160 | 800 | 1.2 | 2.7 | 1.1 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | 0.074 |
| Dibenzo(*a,h*)anthracene | 0.42 | 0.09e,w | ---c | 0.8e | -----c | 17e | -----c | 2 | 7.6 | 0.20 | 0.42 | 0.15 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | < 0.040 |
| Fluoranthene | 3100 g | 3,100b | ---c | 82,000b | -----c | 82,000b | -----c | 4,300b | 21,000 | 2.7 | 4.1 | 1.8 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | 0.12 |
| Fluorene | 560 b | 3,100b | ---c | 82,000b | -----c | 82,000b | -----c | 560b | 2,800 | 0.1 | 0.18 | 0.04 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | < 0.040 |
| Indeno(1,2,3-*c,d*)pyrene | 1.6 | 0.9e,w | ---c | 8e | -----c | 170e | -----c | 14 | 69 | 0.86 | 1.6 | 0.51 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | < 0.040 |
| Naphthalene | 1.8 g | 1,600b | 170b,x | 41,000b | 270b | 4,100b | 1.8b | 12b | 18 | 0.04 | 0.2 | 0.17 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | < 0.040 |
| Phenanthrene | NE | ** | ** | ** | ** | ** | ** | ** | ** | 1.3 | 2.5 | 0.99 | ** | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | 0.070 |
| Pyrene | 2300 g | 2,300b | ---c | 61,000b | -----c | 61,000b | -----c | 4,200b | 21,000 | 1.9 | 3 | 1.2 | * | < 0.039 | < 0.038 | < 0.038 | < 0.040 | < 0.041 | < 0.041 | < 0.040 | 0.10 |

**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.

| | **V3 Table Notes:** |
|---|---|
| **0.11** | Indicates exceedance of applicable MAC |
| **0.11** | Indicates exceedance of Tier 1 remediation objective |
| **0.11** | Indicates exceedance of Tier 1 remediation objective and applicable MAC |
| 0.11 | Indicates exceedance of Tier 1 residential ingestion, but does not exceed background value. TACO allows the use of Background as the remediation objective |
| 0.11 | Indicates lab detection limit is greater than remediation objective |
| | Indicates that the MAC is dependent on the location of the fill site |
| --- | Indicates chemical not analyzed or not sampled |
| a | Concentrations are the results after using methods described in 35 IAC 1100.Subpart F for determining Maximum Allowable Concentrations (MACs) of chemical constitutents in uncontaminated soils used as fill material at regulated fill operations. |
| | See attached for notations for specified MAC or TACO RO. |

**MAC assumes the location of fill site is within a populated area in a Metropolitan Statistical Area excluding Chicago.**

| | | 35 IAC Part 742, Appendix B, Tables A and B | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Residential | | Industrial-Commerical | | | | | | | | | | | | | | | Jackson Middle School Property | | | | | | | |
| | 35 IAC 1100.Subpart F Maximum Allowable Concentration[a] | Exposure Route-Specific Values for Soils | | 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 7.25-7.74 for Groundwater Ingestion Class I Groundwater | [C] pH 7.75 - 8.24 for Groundwater Ingestion Class I Groundwater | [C] pH 8.25 - 8.74 for Groundwater Ingestion Class I 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 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 |
| | | | | Industrial-Commerical | | Construction Worker | | | | | | | | | | | | GT-01 (8-10) | GT-02 (8-10) | GT-03 (0-2) | GT-03 (8-10) | GT-04 (8-10) | GP-01 (0-2) | GP-01 (4-6) | GP-07 (0-2) |
| Chemical Name | (mg/kg) | Ingestion (mg/kg) | Inhalation (mg/kg) | Ingestion (mg/kg) | Inhalation (mg/kg) | Ingestion (mg/kg) | Inhalation (mg/kg) | Class I (mg/L) | Class II (mg/L) | ADL (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | 8-10 ft mg/kg | 8-10 ft mg/kg | 0-2 ft mg/kg | 8-10 ft mg/kg | 8-10 ft mg/kg | 0-2 ft mg/kg | 4-6 ft mg/kg | 0-2 ft mg/kg |
| **INORGANICS (Method - 6010B/7000A)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Metals (Totals)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic[i,n] | 13 | 13t | 750e | 13t | 1200e | 61b | 25,000e | | | * | 13 | 30 | 31 | 32 | 120 | 120 | 130 | 12 | **21** | **15** | **14** | **17** | **20** | **17** | **19** |
| Barium | 1500 d,m | 5,500b | 690,000b | 140,000b | 910,000b | 14,000b | 870,000b | | | * | 110 | 1,800 | 2,100 | ---a | 1,800 | 2,100 | ---a | 130 | 140 | 120 | 52 | 58 | 35 | 27 | 100 |
| Cadmium[i,n] | 5.2 d,m | 78b,r | 1,800e | 2,000b,r | 2,800e | 200b,r | 59,000e | | | * | 0.6 | 59 | 430 | ---a | 590 | 4,300 | ---a | < 0.54 | < 0.48 | < 0.51 | < 0.53 | < 0.54 | < 0.54 | < 0.49 | < 0.53 |
| Chromium, total | 21 d,m | 230b | 270e | 6,100b | 420e | 4,100b | 690e | | | * | 16.2 | N/A | N/A | N/A | N/A | N/A | N/A | **24** | 20 | 21 | 17 | 19 | 18 | 12 | **22** |
| Lead | 107 d,m | 400k | -----c | 800y | -----c | 700y | -----c | | | * | 36 | 107 | 107 | 107 | 1,420 | 1,420 | 1,420 | 21 | 25 | 29 | 17 | 27 | 27 | 26 | 28 |
| Mercury[i,n,s] | 0.89 d,m,n | 23b | 10b, x | 610b | 16b | 61b | 0.1b | | | * | 0.06 | 6.4 | 8.0 | ---a | 32 | 40 | ---a | 0.024 | < 0.022 | 0.034 | < 0.023 | 0.023 | 0.030 | 0.020 | 0.031 |
| Selenium[i,n] | 1.3 d,m | 390b | -----c | 10,000b | -----c | 1,000b | -----c | | | * | 0.48 | 3.3 | 2.4 | 1.8 | 3.3 | 2.4 | 1.8 | < 1.1 | < 0.97 | < 1.0 | < 1.1 | < 1.1 | 1.2 | < 0.98 | < 1.1 |
| Silver | 4.4 d,m | 390b | -----c | 10,000b | -----c | 1,000b | -----c | | | * | 0.55 | 39 | 110 | ---a | N/A | N/A | N/A | < 1.1 | < 0.97 | < 1.0 | < 1.1 | < 1.1 | < 1.1 | < 0.98 | < 1.1 |
| **SPLP INORGANICS (Method - 1312/7421)** | **Soil Component of the Groundwater Ingestion** | | | | | | | **Soil Component of the Groundwater Ingestion Exposure Route** | | | | | | | | | | | | | | | | | |
| | **Class I (mg/L)** | | | | | | | **Class I (mg/L)** | **Class II (mg/L)** | | | | | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| SPLP Chromium | 0.1m | | | | | | | 0.1m | 1.0m | | | | | | | | | < 0.010 | --- | --- | --- | --- | --- | --- | --- |
| **Other Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH@ 25°C (1:10) | 6.25 - 9.0 | | | | | | | | | | | | | | | | | 7.78 | 7.98 | 7.54 | 7.62 | 8.02 | 7.82 | 7.93 | 7.55 |

**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 |

**V3 Table Notes:**

| | |
|---|---|
| **0.11** | Indicates exceedance of applicable MAC |
| **0.11** | Indicates exceedance of Tier 1 remediation objective |
| **0.11** | Indicates exceedance of Tier 1 remediation objective and applicable MAC |
| 0.11 | Indicates constituent detected above applicable background concentration. |
| 0.11 | Indicates lab detection limit is greater than remediation objective |
| **0.11** | Indicates pH is outside allowable range (6.25-9.0) for CCDD acceptance (35 IAC Part 1100) |
| | Indicates that the MAC is dependent on the location of the fill site |
| --- | Indicates chemical not analyzed or not sampled |
| NE | NE indicates Not Established |
| [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, updated June 2016. Non-TACO values from http://www.epa.illinois.gov/topics/cleanup-programs/taco/other-chemicals/index |
| a | Concentrations are the results after using methods described in 35 IAC 1100.Subpart F for determining Maximum Allowable Concentrations of chemical constitutents in uncontaminated soils used as fill material at regulated fill operations. |

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

[B] **Counties within Metropolitan Statistical Areas (MSA):** 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-D: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of Groundwater Ingestion Route (Class I /II Groundwater)
See attached for notations for specified MAC or TACO RO.

**MAC assumes the location of fill site is within a Metropolitan Statistical Area county.**

F

| | | 35 IAC Part 742, Appendix B, Tables A and B | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Residential | | Industrial-Commerical | | | | | | | | | | | | | | | | | | | | | | |
| | 35 IAC 1100.Subpart F Maximum Allowable Concentration[a] | Exposure Route-Specific Values for Soils | | 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 7.25-7.74 for Groundwater Ingestion Class I Groundwater | C' pH 7.75 - 8.24 for Groundwater Ingestion Class I Groundwater | C' pH 8.25 - 8.74 for Groundwater Ingestion Class I 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 | ROW along Leslie Ln | Village of Villa Park Property | | | | | | | ROW along High Ridge Rd | |
| | | | | Industrial-Commerical | | Construction Worker | | | | | | | | | | | | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 | 11/02/2017 |
| | | | | | | | | | | | | | | | | | | GP-04 (6-8) | GP-05 (2-4) | GP-05 (10-12) | GP-06 (2-4) | GP-08 (6-8) | GT-06 (8-10) | GT-05 (8-10) | GP-03 (0-2) | GP-02 (2-4) |
| | | | | | | | | | | | | | | | | | | 6-8 ft | 2-4 ft | 10-12 ft | 2-4 ft | 6-8 ft | 8-10 ft | 8-10 ft | 0-2 ft | 2-4 ft |
| **Chemical Name** | **(mg/kg)** | **Ingestion (mg/kg)** | **Inhalation (mg/kg)** | **Ingestion (mg/kg)** | **Inhalation (mg/kg)** | **Ingestion (mg/kg)** | **Inhalation (mg/kg)** | **Class I (mg/L)** | **Class II (mg/L)** | **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 |
| **INORGANICS (Method - 6010B/7000A)** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Metals (Totals)** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic[Ln] | 13 | 13t | 750e | 13t | 1200e | 61b | 25,000e | | | * | 13 | 30 | 31 | 32 | 120 | 120 | 130 | 4.4 | **21** | 12 | **15** | 13 | **15** | 11 | **28** | 13 |
| Barium | 1500 d,m | 5,500b | 690,000b | 140,000b | 910,000b | 14,000b | 870,000b | | | * | 110 | 1,800 | 2,100 | ---a | 1,800 | 2,100 | ---a | 75 | 35 | 33 | 55 | 33 | 40 | 45 | 97 | 150 |
| Cadmium[Ln] | 5.2 d,m | 78b,r | 1,800e | 2,000b,r | 2,800e | 200b,r | 59,000e | | | * | 0.6 | 59 | 430 | ---a | 590 | 4,300 | ---a | < 0.51 | 0.62 | < 0.50 | < 0.50 | < 0.54 | < 0.54 | < 0.53 | < 0.51 | < 0.55 |
| Chromium, total | 21 d,m | 230b | 270e | 6,100b | 420e | 4,100b | 690e | | | * | 16.2 | N/A | N/A | N/A | N/A | N/A | N/A | 15 | 15 | 14 | 18 | 20 | 15 | 17 | 21 | **24** |
| Lead | 107 d,m | 400k | -----c | 800y | -----c | 700y | -----c | | | * | 36 | 107 | 107 | 107 | 1,420 | 1,420 | 1,420 | 30 | 39 | 18 | 23 | 18 | 20 | 20 | 42 | 93 |
| Mercury[Ln,s] | 0.89 d,m,n | 23b | 10b, x | 610b | 16b | 61b | 0.1b | | | * | 0.06 | 6.4 | 8.0 | ---a | 32 | 40 | ---a | 0.041 | 0.027 | 0.024 | 0.026 | 0.028 | 0.023 | 0.038 | 0.027 | 0.032 |
| Selenium[Ln] | 1.3 d,m | 390b | -----c | 10,000b | -----c | 1,000b | -----c | | | * | 0.48 | 3.3 | 2.4 | 1.8 | 3.3 | 2.4 | 1.8 | < 1.0 | **2.5** | < 1.0 | < 0.99 | < 1.1 | < 1.1 | < 1.1 | < 1.0 | < 1.1 |
| Silver | 4.4 d,m | 390b | -----c | 10,000b | -----c | 1,000b | -----c | | | * | 0.55 | 39 | 110 | ---a | N/A | N/A | N/A | < 1.0 | < 1.1 | < 1.0 | < 0.99 | < 1.1 | < 1.1 | < 1.1 | < 1.0 | < 1.1 |
| **SPLP INORGANICS (Method - 1312/7421)** | **Soil Component of the Groundwater Ingestion** | | | | | | | **Soil Component of the Groundwater Ingestion Exposure Route** | | | | | | | | | | | | | | | | | | |
| | **Class I (mg/L)** | | | | | | | **Class I (mg/L)** | **Class II (mg/L)** | | | | | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| SPLP Chromium | 0.1m | | | | | | | 0.1m | 1.0m | | | | | | | | | --- | --- | --- | --- | --- | --- | --- | --- | 0.0099 |
| **Other Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH@ 25°C (1:10) | 6.25 - 9.0 | | | | | | | | | | | | | | | | | 7.52 | 7.87 | 7.85 | 7.78 | 8.14 | 7.78 | 7.71 | 8.05 | 8.35 |

**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 |

**V3 Table Notes:**

| | |
|---|---|
| **0.11** | Indicates exceedance of applicable MAC |
| **0.11** | Indicates exceedance of Tier 1 remediation objective |
| **0.11** | Indicates exceedance of Tier 1 remediation objective and applicable MAC |
| 0.11 | Indicates constituent detected above applicable background concentration. |
| 0.11 | Indicates lab detection limit is greater than remediation objective |
| **0.11** | Indicates pH is outside allowable range (6.25-9.0) for CCDD acceptance (35 IAC Part 1100) |
| | Indicates that the MAC is dependent on the location of the fill site |
| --- | Indicates chemical not analyzed or not sampled |
| NE | NE indicates Not Established |
| [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, updated June 2016. Non-TACO values from http://www.epa.illinois.gov/topics/cleanup-programs/taco/other-chemicals/index |
| a | Concentrations are the results after using methods described in 35 IAC 1100.Subpart F for determining Maximum Allowable Concentrations of chemical constitutents in uncontaminated soils used as fill material at regulated fill operations. |

**MAC assumes the location of fill site is within a Metropolitan Statistical Area county.**

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

B' **Counties within Metropolitan Statistical Areas (MSA):** 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-D: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of Groundwater Ingestion Route (Class I /II Groundwater)
See attached for notations for specified MAC or TACO RO.

**TABLE 3 - TOPSOIL ANALYTICAL RESULTS (Arsenic)**
**JACKSON POND EXPANSION**
**VILLA PARK, ILLINOIS**

| | | 35 IAC Part 742, Appendix B, Tables A and B | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Residential | | Industrial-Commerical | | | | | | | | | | | | | | | | | |
| | 35 IAC 1100.Subpart F Maximum Allowable Concentration[a] | Exposure Route-Specific Values for Soils | | Exposure Route-Specific Values for Soils | | | | [A']Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils) (mg/kg) | SCGIER pH dependent for Groundwater Ingestion Class I Groundwater | Jackson Middle School Athletic Fields | | | | | | | | | |
| | | | | Industrial-Commerical | | Construction Worker | | | | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 |
| | | | | | | | | | | TS-01 | TS-02 | TS-03 | TS-04 | TS-05 | TS-06 | TS-07 | TS-08 | TS-09 | TS-10 |
| | | Ingestion | Inhalation | Ingestion | Inhalation | Ingestion | Inhalation | | | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft |
| 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 |
| **6010B/7000A)** | | | | | | | | | | | | | | | | | | | |
| **Metals (Totals)** | | | | | | | | | | | | | | | | | | | |
| Arsenic[C'] | 13 | 13t | 750e | 13t | 1200e | 61b | 25,000e | 13 | 25-130 | 8 | 8.1 | 6.7 | 7 | 9.2 | 10 | 10.2 | 7.6 | 6.7 | 9.4 |

| | | 35 IAC Part 742, Appendix B, Tables A and B | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Residential | | Industrial-Commerical | | | | | | | | | | | | | | | | | |
| | 35 IAC 1100.Subpart F Maximum Allowable Concentration[a] | Exposure Route-Specific Values for Soils | | Exposure Route-Specific Values for Soils | | | | [A']Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils) (mg/kg) | SCGIER pH dependent for Groundwater Ingestion Class I Groundwater | Jackson Middle School near sledding hill and Jackson Pond | | | | | | | | Village property: Sledding hill | Village property: Jackson Pond |
| | | | | Industrial-Commerical | | Construction Worker | | | | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/06/2018 |
| | | | | | | | | | | TS-11 | TS-12 | TS-13 | TS-14 | TS-15 | TS-16 | TS-17 | TS-18 | TS-19 | TS-20 |
| | | Ingestion | Inhalation | Ingestion | Inhalation | Ingestion | Inhalation | | | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft |
| 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 |
| **6010B/7000A)** | | | | | | | | | | | | | | | | | | | |
| **Metals (Totals)** | | | | | | | | | | | | | | | | | | | |
| Arsenic[C'] | 13 | 13t | 750e | 13t | 1200e | 61b | 25,000e | 13 | 25-130 | 7.3 | 7.7 | 7.5 | 7.5 | 9 | 5.8 | 8.6 | 9.6 | 8.2 | 7.6 |

**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 |

**MAC assumes the location of fill site is within a Metropolitan Statistical Area county.**

**V3 Table Notes:**

| | |
|---|---|
| **0.11** | Indicates exceedance of applicable MAC |
| **0.11** | Indicates exceedance of Tier 1 remediation objective |
| **0.11** | Indicates exceedance of Tier 1 remediation objective and applicable MAC |
| 0.11 | Indicates constituent detected above applicable background concentration. |
| 0.11 | Indicates lab detection limit is greater than remediation objective |
| **0.11** | Indicates pH is outside allowable range (6.25-9.0) for CCDD acceptance (35 IAC Part 1100) |
| | Indicates that the MAC is dependent on the location of the fill site |
| --- | Indicates chemical not analyzed or not sampled |
| NE | NE indicates Not Established |
| [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, updated June 2016. Non-TACO values from http://www.epa.illinois.gov/topics/cleanup-programs/taco/other-chemicals/index |
| a | Concentrations are the results after using methods described in 35 IAC 1100.Subpart F for determining Maximum Allowable Concentrations of chemical constitutents in uncontaminated soils used as fill material at regulated fill operations. |

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

[B'] **Counties within Metropolitan Statistical Areas (MSA):** 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-D: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I /II Groundwater)
See attached for notations for specified MAC or TACO RO.

**TABLE 3 - TOPSOIL ANALYTICAL RESULTS (Arsenic)**
**JACKSON POND EXPANSION**
**VILLA PARK, ILLINOIS**

| | | 35 IAC Part 742, Appendix B, Tables A and B | | | | | | | | Village property: Athletic Field | | | | | | Village Property | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Residential | | Industrial-Commerical | | | | | | | | | | | | | | | |
| | 35 IAC 1100.Subpart F Maximum Allowable Concentration[a] | Exposure Route-Specific Values for Soils | | Exposure Route-Specific Values for Soils | | | | [A']Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils) (mg/kg) | SCGIER pH dependent for Groundwater Ingestion Class I Groundwater | | | | | | | | | | |
| | | | | Industrial-Commerical | | Construction Worker | | | | 02/06/2018 | 02/06/2018 | 02/06/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 |
| | | | | | | | | | | TS-21 | TS-22 | TS-23 | TS-24 | TS-25 | TS-26 | TS-27 | TS-28 | TS-29 | TS-30 |
| | | Ingestion | Inhalation | Ingestion | Inhalation | Ingestion | Inhalation | | | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft |
| 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 |
| **6010B/7000A) Metals (Totals)** | | | | | | | | | | | | | | | | | | | |
| Arsenic[LH] | 13 | 13t | 750e | 13t | 1200e | 61b | 25,000e | 13 | 25-130 | 8.8 | 8.6 | 8.9 | 8.8 | 8.6 | **13.1** | 6.5 | 12.7 | 7.6 | 4.4 |

| | | 35 IAC Part 742, Appendix B, Tables A and B | | | | | | | | Village Property | Village property: Athletic Field | | Village Property | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Residential | | Industrial-Commerical | | | | | | | | | | | | | | | |
| | 35 IAC 1100.Subpart F Maximum Allowable Concentration[a] | Exposure Route-Specific Values for Soils | | Exposure Route-Specific Values for Soils | | | | [A']Counties Within Metropolitan Statistical Areas[B'] (For Inorganic Chem.in Background Soils) (mg/kg) | SCGIER pH dependent for Groundwater Ingestion Class I Groundwater | | | | | | | | | | |
| | | | | Industrial-Commerical | | Construction Worker | | | | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | 02/07/2018 | |
| | | | | | | | | | | TS-31 | TS-32 | TS-33 | TS-34 | TS-35 | TS-36 | TS-37 | TS-38 | TS-39 | |
| | | Ingestion | Inhalation | Ingestion | Inhalation | Ingestion | Inhalation | | | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | 0-0.5ft | |
| 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 | |
| **6010B/7000A) Metals (Totals)** | | | | | | | | | | | | | | | | | | | |
| Arsenic[LH] | 13 | 13t | 750e | 13t | 1200e | 61b | 25,000e | 13 | 25-130 | 8.3 | 8.2 | 9.8 | 11.2 | 8.8 | 9.2 | 8.4 | 10.6 | 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 |

**MAC assumes the location of fill site is within a Metropolitan Statistical Area county.**

**V3 Table Notes:**

| | |
|---|---|
| **0.11** | Indicates exceedance of applicable MAC |
| **0.11** | Indicates exceedance of Tier 1 remediation objective |
| **0.11** | Indicates exceedance of Tier 1 remediation objective and applicable MAC |
| 0.11 | Indicates constituent detected above applicable background concentration. |
| 0.11 | Indicates lab detection limit is greater than remediation objective |
| **0.11** | Indicates pH is outside allowable range (6.25-9.0) for CCDD acceptance (35 IAC Part 1100) |
| | Indicates that the MAC is dependent on the location of the fill site |
| --- | Indicates chemical not analyzed or not sampled |
| NE | NE indicates Not Established |
| [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, updated June 2016. Non-TACO values from http://www.epa.illinois.gov/topics/cleanup-programs/taco/other-chemicals/index |
| a | Concentrations are the results after using methods described in 35 IAC 1100.Subpart F for determining Maximum Allowable Concentrations of chemical constitutents in uncontaminated soils used as fill material at regulated fill operations. |

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

[B'] **Counties within Metropolitan Statistical Areas (MSA):** 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-D: pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I /II Groundwater)
See attached for notations for specified MAC or TACO RO.

**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 to 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, 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.

**Notations for 'Summary of Maximum Allowable Concentrations of Chemical Constituents In Uncontaminated Soil Used as Fill Material At Regulated Fill Operations (35 IAC 1100, Subpart F)**

| | |
|---|---|
| a | Concentrations are the results after using methods described in 35 IAC 1100, Subpart F for determining Maximum Allowable Concentrations of chemical constitutents in uncontaminated soils used as fill material at regulated fill operations. |
| b | Value is the TACO Class I Soil Component of the Groundwater Ingestion Exposure Route concentration (35 IAC 742, Appendix B, Tables A and B). |
| c | Value is the TACO-defined Acceptable Detection Limit (ADL) for the chemical in soil. |
| d | Value is the lowest TACO Class I concentration between column range 6.25 to 6.64 and column range 8.75 to 9.0 from the pH-Specific Soil Remediation Objectives table for Inorganic and Ionizing Organic Chemicals for the Soil Component of the Groundwater Ingestion Exposure Route concentration (35 IAC 742, Appendix B, Tables C). (See 35 IAC 1100.605(a)(2); 1100.605(a)(3)(A)). |
| e | Value is the location-specific allowable concentration based upon TACO-defined background values for inorganic chemicals (35 IAC 742, Appendix A, Table G). The location of the fill site determines the allowable concentration. Two background locations are defined; one for counties that are designated as Metropolitan Statistical Areas (MSA) (see Board Note, 35 IAC 742, Appendix A, Table G), the other for counties designated as a non-MSA. |
| f | Value is the location-specific allowable concentration based upon TACO-defined background values for polynuclear aromatic hydrocarbon chemicals (35 IAC 742, Appendix A, Table H). The location of the fill site determines the allowable concentration. Three background locations are defined; one for areas within the corporate limits of the City of Chicago, another for populated areas (defined at 35 IAC 742.200) in counties that are designated as Metropolitan Statistical Areas (MSA) (see Board Note, 35 IAC 742, Appendix A, Table G) excluding the City of Chicago, and the third for populated areas within non-MSA counties. No background concentrations have been defined for locations outside of populated areas; therefore, the maximum allowable concentrations in these locations are determined using 35 IAC 1100, Subpart F. |
| g | Value is the lowest TACO Soil Remediation Objective by the ingestion or inhalation routes of exposure for the Residential and Construction Worker receptors (35 IAC 742, Appendix B, Tables A and B). When applicable, definitions for "MSA" and "populated area" are presented in 35 IAC 742, Appendix A, Table H and 35 IAC 742.200, respectively. |
| h | Value is the TACO Class I Soil Component of the Groundwater Ingestion Exposure Route value multiplied by 20. |
| i | Soil saturation concentration (Csat). |
| j | This chemical is of no concern for soil ingestion and no data are available to assess other routes of exposure. There is no soil concentration limit established for this constituent. |
| k | Value for PCBs is the highest allowable concentration requiring no controls based on USEPA TSCA (40 CFR 761) policy. |
| l | SW-846 methods may not support analytical detection at the concentration specified. Modified or alternative methods may be required to achieve the lowest practical detection level possible. |
| m | As an alternative to the subject maximum allowable concentration value, compliance verification may be determined by comparing soil sample extraction results (TCLP/SPLP) for this constituent to the respective TACO Class I Soil Component of the Groundwater Ingestion Exposure Route objective (35 IAC 742, Appendix B, Table A). (See 35 IAC 1100.610(b)(1)(B); 1100.610(b)(3)(C)). |
| n | Elemental mercury is an inhalation hazard and is evaluated based upon the IRIS inhalation reference concentration for elemental mercury (CAS No. 7439-97-6). All other forms of mercury are evaluated using the IRIS oral reference dose for mercuric chloride (CAS No. 7487-94-7). The inhalation MAC only applies where elemental mercury is a contaminant of concern; the MAC for ionic mercury applies everywhere. |

# APPENDIX A
## BORING LOGS

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: GP-01/MW-01
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | | |
|---|---|---|---|
| Date Started: | 11/02/2017 | Date Finished: 11/02/2017 | Logged by: J. Shuptar |
| Total Depth (ft): | 20.0 | Water Table Depth (ft): 4.0 | Location: |
| Drilling Contr.: | Earth Solutions Inc. | Driller: Georgito Luna | |
| Drill Rig: | 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Elevation (ft) | Sampler Type | Sample Interval Recovery | Blows / 6 in. | PID (~ ppm) | Qp (tsf) | Lithologic Descriptions | Lithology | Permanent Well | Observations | Sample |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | | | | | | | | | | |
| 1 | -1.0 | PL | | NA | 0.0 | 1.50 | **FILL?:** Very dark brown, moist soft clayey silt with organic matter, reworked with brown silt | | | | GP-01 (0-2) |
| 2 | -2.0 | | | | | | | | | | |
| 3 | -3.0 | | | NA | 0.0 | 0.25 | **ML (SILT)** - Gray moist soft silt | | | | |
| 4 | -4.0 | | | | | | | | | | |
| 5 | -5.0 | | | | | | **SM (Silty Sand) -** Gray Saturated loose well graded silty sand w/gravel | | | | GP-01 (4-6) |
| 6 | -6.0 | PL | | NA | 0.0 | 0.25 | **SM (Silty Sand)** - Same as above | | | | |
| 7 | -7.0 | | | | | | | | | | |
| 8 | -8.0 | | | NA | 0.0 | 0.25 | | | | | |
| 9 | -9.0 | | | | | | **SM (Silty Sand) -** Gray Saturated loose poorly graded silty sand | | | | |
| 10 | -10.0 | | | | | | | | | | |
| 11 | -11.0 | PL | | NA | 0.0 | 2.50 | **CL (Lean Clay)** - gray moist medium silty clay with trace gravel | | | | |
| 12 | -12.0 | | | | | | | | | | |
| 13 | -13.0 | | | NA | 0.0 | 2.75 | | | | | |
| 14 | -14.0 | | | | | | | | | | |
| 15 | -15.0 | | | | | | | | | | |
| 16 | -16.0 | PL | | NA | 0.0 | 3.50 | **CL (Lean Clay) -** Same as above | | | | |
| 17 | -17.0 | | | | | | | | | | |
| 18 | -18.0 | | | NA | 0.0 | 3.25 | | | | | |
| 19 | -19.0 | | | | | | | | | | |
| 20 | -20.0 | | | | | | | | | | |

EOB at 20 ft.

Permanent Well Installed: Casing 0-5 ft., Screen 5-15 ft.

PL= Plastic Liner
NA= Not Applicable

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: GP-02
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 11/02/2017 | Date Finished: 11/02/2017 | Logged by: J. Shuptar |
| Total Depth (ft): 10.0 | Water Table Depth (ft): N/A | Location: |
| Drilling Contr.: Earth Solutions Inc. | Driller: Georgito Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Elevation (ft) | Sampler Type | Sample Interval Recovery | Blows / 6 in. | PID (~ ppm) | Qp (tsf) | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | | | | | | | | | |
| 1 | -1.0 | PL | | NA | 0.0 | 2.00 | **Fill** - Black moist soft topsoil | | | |
| 2 | -2.0 | | | | | | | | | |
| 3 | -3.0 | | | NA | 0.0 | 2.00 | **Fill -** Gravel reworked with silt, some clay and topsoil | | | GP-02 (2-4) |
| 4 | -4.0 | | | | | | | | | |
| 5 | -5.0 | | | | | | | | | |
| 6 | -6.0 | PL | | NA | 0.0 | 1.00 | **Fill -** Reworked brown moist medium silt with some gravel and sands | | | |
| 7 | -7.0 | | | | | | | | | |
| 8 | -8.0 | | | NA | 0.0 | 1.75 | | | | |
| 9 | -9.0 | | | | | | | | | |
| 10 | -10.0 | | | | | | | | | |
| 11 | -11.0 | | | | | | | | | |
| 12 | -12.0 | | | | | | | | | |
| 13 | -13.0 | | | | | | | | | |
| 14 | -14.0 | | | | | | | | | |
| 15 | -15.0 | | | | | | | | | |
| 16 | -16.0 | | | | | | | | | |
| 17 | -17.0 | | | | | | | | | |
| 18 | -18.0 | | | | | | | | | |
| 19 | -19.0 | | | | | | | | | |
| 20 | -20.0 | | | | | | | | | |

EOB at 10 ft.

Boring backfilled with soil cuttings and bentonite chips

PL= Plastic Liner
NA= Not Applicable

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: GP-03
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 11/02/2017 | Date Finished: 11/02/2017 | Logged by: J. Shuptar |
| Total Depth (ft): 10.0 | Water Table Depth (ft): N/A | Location: |
| Drilling Contr.: Earth Solutions Inc. | Driller: Georgito Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Elevation (ft) | Sampler Type | Sample Interval Recovery | Blows / 6 in. | PID (~ ppm) | Qp (tsf) | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | | | | | | | | | |
| 1 | -1.0 | PL | | NA | 0.0 | 1.75 | **Fill** - Dark brown, moist, topsoil | | | GP-03 (0-2) |
| 2 | -2.0 | | | | | | | | | |
| 3 | -3.0 | | | NA | 0.0 | 4.50 | **CL (Lean Clay) -** Brown dry stiff silty clay with trace gravel | | | |
| 4 | -4.0 | | | | | | | | | |
| 5 | -5.0 | | | | | | | | | |
| 6 | -6.0 | PL | | NA | 0.0 | 3.75 | **CL (Lean Clay) -** same as above | | | |
| 7 | -7.0 | | | | | | **CL (Lean Clay) -** Gray moist stiff silty clay | | | |
| 8 | -8.0 | | | | | | **SW (Sand) -** Gray Saturated loose well graded sand w/some silt | | | |
| 9 | -9.0 | | | NA | 0.0 | 0.25 | **CH (Clay) -** Gray moist soft clay | | | |
| 10 | -10.0 | | | | | | | | | |
| 11 | -11.0 | | | | | | | | | |
| 12 | -12.0 | | | | | | | | | |
| 13 | -13.0 | | | | | | | | | |
| 14 | -14.0 | | | | | | | | | |
| 15 | -15.0 | | | | | | | | | |
| 16 | -16.0 | | | | | | | | | |
| 17 | -17.0 | | | | | | | | | |
| 18 | -18.0 | | | | | | | | | |
| 19 | -19.0 | | | | | | | | | |
| 20 | -20.0 | | | | | | | | | |

EOB at 10 ft.

Boring backfilled with soil cuttings and bentonite chips

PL= Plastic Liner
NA= Not Applicable

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: GP-04
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 11/02/2017 | Date Finished: 11/02/2017 | Logged by: J. Shuptar |
| Total Depth (ft): 10.0 | Water Table Depth (ft): N/A | Location: |
| Drilling Contr.: Earth Solutions Inc. | Driller: Georgito Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Elevation (ft) | Sampler Type | Sample Interval Recovery | Blows / 6 in. | PID (~ ppm) | Qp (tsf) | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | | | | | | | | | |
| 1 | -1.0 | PL | | NA | 0.0 | 1.00 | **Fill** - Black moist soft topsoil, reworked with brown moist to dry silts and clays | | | |
| 2 | -2.0 | | | | | | | | | |
| 3 | -3.0 | | | NA | 0.0 | 0.75 | | | | |
| 4 | -4.0 | | | | | | | | | |
| 5 | -5.0 | | | | | | | | | |
| 6 | -6.0 | PL | | NA | 0.0 | 0.25 | **CL (Lean Clay) -** Dark gray moist very soft clay with silts and trace gravel, some organics | | | GP-04 (6-8) |
| 7 | -7.0 | | | | | | | | | |
| 8 | -8.0 | | | NA | 0.0 | 0.25 | | | | |
| 9 | -9.0 | | | | | | | | | |
| 10 | -10.0 | | | | | | | | | |
| 11 | -11.0 | | | | | | | | | |
| 12 | -12.0 | | | | | | | | | |
| 13 | -13.0 | | | | | | | | | |
| 14 | -14.0 | | | | | | | | | |
| 15 | -15.0 | | | | | | | | | |
| 16 | -16.0 | | | | | | | | | |
| 17 | -17.0 | | | | | | | | | |
| 18 | -18.0 | | | | | | | | | |
| 19 | -19.0 | | | | | | | | | |
| 20 | -20.0 | | | | | | | | | |

EOB at 10 ft.

Boring backfilled with soil cuttings and bentonite chips

PL= Plastic Liner
NA= Not Applicable

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: GP-05
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 11/02/2017 | Date Finished: 11/02/2017 | Logged by: J. Shuptar |
| Total Depth (ft): 20.0 | Water Table Depth (ft): N/A | Location: |
| Drilling Contr.: Earth Solutions Inc. | Driller: Georgito Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Elevation (ft) | Sampler Type | Sample Interval Recovery | Blows / 6 in. | PID (~ ppm) | Qp (tsf) | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | | | | | | | | | |
| 1 | -1.0 | PL | | NA | 0.0 | 3.5 | **Fill** - Reworked brown silts/sands and some gravel | | | |
| 2 | -2.0 | | | | | | | | | |
| 3 | -3.0 | | | NA | 0.0 | 2.0 | | | | GP-04 (2-4) |
| 4 | -4.0 | | | | | | **ML (Silt)** - Gray moist medium silt with sand and fine gravel | | | |
| 5 | -5.0 | | | | | | | | | |
| 6 | -6.0 | PL | | NA | 0.0 | 3.5 | | | | |
| 7 | -7.0 | | | | | | | | | |
| 8 | -8.0 | | | | | | **ML (Silt) -** Same as above | | | |
| 9 | -9.0 | | | NA | 0.0 | 2.0 | | | | |
| 10 | -10.0 | | | | | | | | | |
| 11 | -11.0 | PL | | NA | 0.0 | 3.5 | **ML (Silt) -** Same as above | | | GP-01 (10-12) |
| 12 | -12.0 | | | | | | | | | |
| 13 | -13.0 | | | NA | 0.0 | 2.0 | **MH (Silt)** - Gray moist medium silt | | | |
| 14 | -14.0 | | | | | | | | | |
| 15 | -15.0 | | | | | | | | | |
| 16 | -16.0 | PL | | NA | 0.0 | 3.5 | | | | |
| 17 | -17.0 | | | | | | | | | |
| 18 | -18.0 | | | | | | **MH (Silt)** - Same as above (only dry) | | | |
| 19 | -19.0 | | | NA | 0.0 | 2.0 | | | | |
| 20 | -20.0 | | | | | | | | | |

EOB at 20 ft.

Boring backfilled with soil cuttings and bentonite chips

PL= Plastic Liner
NA= Not Applicable

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: GP-06
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 11/02/2017 | Date Finished: 11/02/2017 | Logged by: J. Shuptar |
| Total Depth (ft): 10.0 | Water Table Depth (ft): N/A | Location: |
| Drilling Contr.: Earth Solutions Inc. | Driller: Georgito Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Elevation (ft) | Sampler Type | Sample Interval Recovery | Blows / 6 in. | PID (~ ppm) | Qp (tsf) | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | | | | | | | | | |
| 1 | -1.0 | PL | | NA | 0.0 | 1.50 | **Fill** - Black, moist, topsoil (3.5in)<br>**Fill -** Reworked brown silt with some topsoil | | | GP-06 (2-4) |
| 2 | -2.0 | | | | | | | | | |
| 3 | -3.0 | | | NA | 0.0 | 3.00 | **Fill -** Reworked brown dry silty clay with trace gravel | | | |
| 4 | -4.0 | | | | | | | | | |
| 5 | -5.0 | | | | | | **OL (Organic Clay)** - Black organic moist silty clay | | | |
| 6 | -6.0 | PL | | NA | 0.0 | 1.50 | **OL (Organic Clay) -** Same as above | | | |
| 7 | -7.0 | | | | | | | | | |
| 8 | -8.0 | | | NA | 0.0 | 1.00 | **CL (Silty Clay) -** Brown moist soft silty clay with trace gravel | | | |
| 9 | -9.0 | | | | | | | | | |
| 10 | -10.0 | | | | | | | | | |
| 11 | -11.0 | | | | | | | | | |
| 12 | -12.0 | | | | | | | | | |
| 13 | -13.0 | | | | | | | | | |
| 14 | -14.0 | | | | | | | | | |
| 15 | -15.0 | | | | | | | | | |
| 16 | -16.0 | | | | | | | | | |
| 17 | -17.0 | | | | | | | | | |
| 18 | -18.0 | | | | | | | | | |
| 19 | -19.0 | | | | | | | | | |
| 20 | -20.0 | | | | | | | | | |

EOB at 10 ft.

Boring backfilled with soil cuttings and bentonite chips

PL= Plastic Liner
NA= Not Applicable

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: GP-07
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 11/02/2017 | Date Finished: 11/02/2017 | Logged by: J. Shuptar |
| Total Depth (ft): 10.0 | Water Table Depth (ft): N/A | Location: |
| Drilling Contr.: Earth Solutions Inc. | Driller: Georgito Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Elevation (ft) | Sampler Type | Sample Interval Recovery | Blows / 6 in. | PID (~ ppm) | Qp (tsf) | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | | | | | | | | | |
| 1 | -1.0 | PL | | NA | 0.0 | 0.75 | **Fill** - Black, moist, topsoil reworked with brown moist silt. | | | GP-07 (0-2) |
| 2 | -2.0 | | | | | | | | | |
| 3 | -3.0 | | | NA | 0.0 | 3.00 | **ML (Silt) -** Brown stiff silt with trace gravel | | | |
| 4 | -4.0 | | | | | | | | | |
| 5 | -5.0 | | | | | | | | | |
| 6 | -6.0 | PL | | NA | 0.0 | 3.50 | **ML (Silt) -** Same as above | | | |
| 7 | -7.0 | | | | | | | | | |
| 8 | -8.0 | | | NA | 0.0 | 2.75 | | | | |
| 9 | -9.0 | | | | | | | | | |
| 10 | -10.0 | | | | | | | | | |
| 11 | -11.0 | | | | | | | | | |
| 12 | -12.0 | | | | | | | | | |
| 13 | -13.0 | | | | | | | | | |
| 14 | -14.0 | | | | | | | | | |
| 15 | -15.0 | | | | | | | | | |
| 16 | -16.0 | | | | | | | | | |
| 17 | -17.0 | | | | | | | | | |
| 18 | -18.0 | | | | | | | | | |
| 19 | -19.0 | | | | | | | | | |
| 20 | -20.0 | | | | | | | | | |

EOB at 10 ft.

Boring backfilled with soil cuttings and bentonite chips

PL= Plastic Liner
NA= Not Applicable

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: GP-08
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 11/02/2017 | Date Finished: 11/02/2017 | Logged by: J. Shuptar |
| Total Depth (ft): 10.0 | Water Table Depth (ft): N/A | Location: |
| Drilling Contr.: Earth Solutions Inc. | Driller: Georgito Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Elevation (ft) | Sampler Type | Sample Interval Recovery | Blows / 6 in. | PID (~ ppm) | Qp (tsf) | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | | | | | | | | | |
| 1 | -1.0 | PL | | NA | 0.0 | 2.00 | **Fill** - Black, saturated, topsoil. | | | |
| 2 | -2.0 | | | | | | | | | |
| 3 | -3.0 | | | NA | 0.0 | 2.00 | **ML (Silt) -** Yellowish Brown dry medium silt | | | |
| 4 | -4.0 | | | | | | | | | |
| 5 | -5.0 | | | | | | | | | |
| 6 | -6.0 | PL | | NA | 0.0 | 2.25 | **ML (Silt) -** Same as above | | | GP-08 (6-8) |
| 7 | -7.0 | | | | | | | | | |
| 8 | -8.0 | | | NA | 0.0 | 1.25 | **ML (Silt) -** Gray moist soft silt | | | |
| 9 | -9.0 | | | | | | | | | |
| 10 | -10.0 | | | | | | | | | |
| 11 | -11.0 | | | | | | | | | |
| 12 | -12.0 | | | | | | | | | |
| 13 | -13.0 | | | | | | | | | |
| 14 | -14.0 | | | | | | | | | |
| 15 | -15.0 | | | | | | | | | |
| 16 | -16.0 | | | | | | | | | |
| 17 | -17.0 | | | | | | | | | |
| 18 | -18.0 | | | | | | | | | |
| 19 | -19.0 | | | | | | | | | |
| 20 | -20.0 | | | | | | | | | |

EOB at 10 ft.

Boring backfilled with soil cuttings and bentonite chips

PL= Plastic Liner
NA= Not Applicable

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-01
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-01 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | **0.2-0.5:** Black moist topsoil | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | **0.5-1.9:** Topsoil reworked with native silts and clays | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | **1.9 - 5:** Brown moist medium silt with trace gravel | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-02
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-02 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | **0.2-0.5:** Black moist topsoil | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | **0.5-5:** Brown moist medium silt with trace gravel | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-03
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.1:** Black moist topsoil with grass and roots | | | Sample TS-03 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | **0.1-2.4:** Black moist topsoil | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | **2.4 - 5:** Brown moist medium silt with trace gravel | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-04
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-04 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | **0.2-0.9:** Black moist topsoil | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | **0.9-3.7:** Reworked silts and clays with topsoil | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | **3.7- 5:** Brown moist medium silt with trace gravel | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-05
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.3:** Black moist topsoil with grass and roots | | | Sample TS-05 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | **0.3-0.8:** Black moist topsoil | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | **0.8 - 5:** Brown moist medium silt with trace gravel | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-06
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.1:** Black moist topsoil with grass and roots | | | Sample TS-06 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | **0.1-0.3:** Black moist topsoil | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | **0.3 - 5:** Brown moist medium silt with trace gravel | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-07
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | | | | Sample TS-07 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | **0-2.0:** Topsoil reworked with native silts and clays | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | **2.0-5.0:** Brown moist medium silt with trace gravel | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-08
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-08 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | **0.2-0.3:** Black moist topsoil | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | **0.3-2.5:** Topsoil reworked with native silts and clays | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | **2.5 - 5:** Brown moist medium silt with trace gravel | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-09
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-2.8:** Topsoil reworked with native silts and clays | | | Sample TS-09 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | **2.8-5.0:** Brown moist medium silt with trace gravel | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-10
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.1:** Black moist topsoil with grass and roots | | | Sample TS-10 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | **0.1-1.3:** Black moist topsoil | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | **1.3-2.8:** Topsoil reworked with native silts and clays | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | **2.8 - 5:** Brown moist medium silt with trace gravel | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-11
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.6:** Black moist topsoil | | | Sample TS-11 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | **0.6-5:** Brown moist medium silt with trace gravel | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-12
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Slope of Jackson Pond basin |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.3:** Topsoil reworked with native silts and clays | | | Sample TS-12 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | **0.3-5.0:** Brown moist medium silt with trace gravel | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-13
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-13 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | **0.2-0.7:** Black moist topsoil | | | |
| 0.6 | | | | | |
| 0.8 | | **0.7-0.8:** Topsoil reworked with native silts and clays | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | **0.8 - 5:** Brown moist medium silt with trace gravel | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-14
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.5:** Topsoil reworked with native silts and clays | | | Sample TS-14 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | **0.5-5.0:** Brown moist medium silt with trace gravel | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-15
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Slope of Jackson Pond basin |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.3:** Topsoil reworked with native silts and clays | | | Sample TS-15 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | **0.3-5.0:** Brown moist medium silt with trace gravel | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-16
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-16 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | **0.2-1.3:** Black moist topsoil | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | **1.3-5:** Brown moist medium silt with trace gravel | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-17
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Jackson Middle School Athletic Fields |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.8:** Very Dark brown silty topsoil | | | Sample TS-17 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | **0.8-5:** Brown moist medium silt with trace gravel | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-18
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Slope of Jackson Pond basin |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-5:** Reworked silts with trace topsoil, gravel and sand | | | Sample TS-18 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-19
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: On existing sledding hill |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-5:** Reworked silts with very dark brown silty topsoil | | | Sample TS-19 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-20
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Slope of Jackson Pond basin |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.3:** Black moist topsoil with grass and roots | | | Sample TS-20 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | **0.3-1.0:** Topsoil reworked with native silts and clays | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | **1.0-1.7:** Black moist topsoil | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | **1.7 - 2.2:** Very dark brown silty topsoil | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | **2.2 - 5:** Brown moist medium silt with trace gravel | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-21
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property near baseball field |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-21 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | **0.2-0.6:** Black moist topsoil | | | |
| 0.6 | | | | | |
| 0.8 | | **0.6 - 2.8:** Very dark brown silty topsoil | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | **2.8 - 5:** Brown moist medium silt with trace gravel | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-22
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property near baseball field |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.3:** Very Dark brown silty topsoil | | | Sample TS-22 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | **0.3-5:** Brown moist medium silt with trace gravel | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-23
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/06/2018 | Date Finished: 02/06/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.3:** Very Dark brown silt reworked with trace amount of topsoil | | | Sample TS-23 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | **0.3-5:** Brown moist medium silt with trace gravel | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-24
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property near baseball field |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-24 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | **0.2-0.9:** Black moist topsoil | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | **0.9-5:** Brown moist medium silt with trace gravel | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-25
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property near baseball field |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-1.0:** Very Dark brown silt reworked with trace amount of topsoil | | | Sample TS-25 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | **1.0-5:** Brown moist medium silt with trace gravel | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-26
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property near baseball field |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-2.7:** Very Dark brown silt reworked with trace amount of topsoil, and silty topsoil | | | Sample TS-26 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | **2.7-5:** Brown moist medium silt with trace gravel | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-27
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-1.7:** Very Dark brown very silty and clayey topsoil | | | Sample TS-27 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | **1.7-5:** Brown moist medium silt with trace gravel | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-28
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-5:** Brown moist medium silt with trace gravel | | | Sample TS-28 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-29
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-29 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | **0.2-0.9:** Black moist topsoil | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | **0.9-5:** Brown moist medium silt with trace gravel | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-30
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.9:** Very Dark brown very silty and clayey topsoil | | | Sample TS-30 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | **0.9-5:** Brown moist medium silt with trace gravel | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-31
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-31 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | **0.2-0.6:** Black moist topsoil | | | |
| 0.6 | | | | | |
| 0.8 | | **0.6 -1.1:** Very dark brown silty topsoil | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | **1.1 - 5:** Brown moist medium silt with trace gravel | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-32
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property near baseball field |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-1.4:** Very Dark brown very silty and clayey topsoil | | | Sample TS-32 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | **1.4-5:** Brown moist medium silt with trace fine sand | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-33
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property near baseball field |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-5:** Reworked silts with trace topsoil, and poor clayey topsoil | | | Sample TS-33 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-34
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | | | | Sample TS-34 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | **0-4.3:** Very Dark brown silt reworked with trace amount of topsoil, and silty topsoil | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | **4.3-5:** Brown moist medium silt with trace gravel | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-35
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.3:** Black moist topsoil | | | Sample TS-35 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | **0.3-5:** Brown moist medium silt with trace gravel | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-36
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.9:** Black moist topsoil | | | Sample TS-36 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | **0.9-5:** Brown moist medium silt with trace gravel | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-37
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-1.3:** Very Dark brown silt with trace amount of topsoil, and organics | | | Sample TS-37 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | **1.3-5:** Brown moist medium silt with trace gravel | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-38
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0.2-0.6:** Dark brown silty and clayey topsoil | | | Sample TS-38 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | | | | |
| 0.6 | | | | | |
| 0.8 | | **0.6-1.5:** Reworked silty topsoils and silt | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | | | | |
| 3 | | | | | |
| 3.2 | | **1.5-5:** Brown moist medium silt with trace fine gravel | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# SOIL BORING LOG

***Jackson Pond Expansion***
***Jackson Street, Leslie Ln, and High Ridge Rd***
***Villa Park, Illinois***

Boring: TS-39
Sheet No: 1 of 1
Project No: 16295.Jackson

| | | |
|---|---|---|
| Date Started: 02/07/2018 | Date Finished: 02/07/2018 | Logged by: J. Shuptar |
| Total Depth (ft): 5.0 | Water Table Depth (ft): NA | Location: Village property |
| Drilling Contr.: Earth Solutions Inc. | Driller: George Luna | |
| Drill Rig: 7822DT Geoprobe | Hammer: Direct Push | Ground Elev.: |

| Depth (ft) | Sample Interval Recovery | Lithologic Descriptions | Lithology | Observations | Sample |
|---|---|---|---|---|---|
| 0 | | | | | |
| 0.2 | | **0-0.2:** Black moist topsoil with grass and roots | | | Sample TS-39 collected between 0 and 0.5ft. Sample was analyzed for Arsenic. |
| 0.4 | | **0.2-0.4:** Black moist topsoil | | | |
| 0.6 | | **0.4 -0.6:** Very dark brown silty topsoil | | | |
| 0.8 | | | | | |
| 1 | | | | | |
| 1.2 | | | | | |
| 1.4 | | | | | |
| 1.6 | | | | | |
| 1.8 | | | | | |
| 2 | | | | | |
| 2.2 | | | | | |
| 2.4 | | | | | |
| 2.6 | | | | | |
| 2.8 | | **0.6 - 5:** Brown moist medium silt with trace gravel | | | |
| 3 | | | | | |
| 3.2 | | | | | |
| 3.4 | | | | | |
| 3.6 | | | | | |
| 3.8 | | | | | |
| 4 | | | | | |
| 4.2 | | | | | |
| 4.4 | | | | | |
| 4.6 | | | | | |
| 4.8 | | | | | |
| 5 | | | | | |

EOB at 5 ft.

# APPENDIX B

## LABORATORY ANALYTICAL RESULTS

**STAT** Analysis Corporation
*2242 West Harrison St., Suite 200, Chicago, IL 60612-3766*
*Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com*
*Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0*

December 12, 2017

V3 Companies of Illinois
7325 Janes Avenue
Woodridge, IL 60517
Telephone: (630) 724-9200
Fax: (630) 724-9202

Analytical Report for STAT Work Order: 17110104 Revision 1

RE: 16295.Jackson, Jackson Pond Expansion CCDD, Villa Park, IL

Dear Jon Shuptar:

STAT Analysis received 17 samples for the referenced project on 11/3/2017 11:25:00 AM. The analytical results are presented in the following report.

This report is revised to reflect additional analysis requested after the last report revision.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAP standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Martin Kucan

Martin Kucan
Project Manager

**Client:** V3 Companies of Illinois
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, Villa
**Work Order:** 17110104 Revision 1

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Tag Number | Collection Date | Date Received |
|---|---|---|---|---|
| 17110104-001A | GP-07 (0-2) | | 11/2/2017 8:50:00 AM | 11/3/2017 |
| 17110104-001B | GP-07 (0-2) | | 11/2/2017 8:50:00 AM | 11/3/2017 |
| 17110104-002A | GP-01 (0-2) | | 11/2/2017 9:20:00 AM | 11/3/2017 |
| 17110104-002B | GP-01 (0-2) | | 11/2/2017 9:20:00 AM | 11/3/2017 |
| 17110104-003A | GP-01 (4-6) | | 11/2/2017 9:35:00 AM | 11/3/2017 |
| 17110104-003B | GP-01 (4-6) | | 11/2/2017 9:35:00 AM | 11/3/2017 |
| 17110104-004A | GP-05 (2-4) | | 11/2/2017 10:00:00 AM | 11/3/2017 |
| 17110104-004B | GP-05 (2-4) | | 11/2/2017 10:00:00 AM | 11/3/2017 |
| 17110104-005A | GP-05 (10-12) | | 11/2/2017 10:15:00 AM | 11/3/2017 |
| 17110104-005B | GP-05 (10-12) | | 11/2/2017 10:15:00 AM | 11/3/2017 |
| 17110104-006A | GP-06 (2-4) | | 11/2/2017 11:00:00 AM | 11/3/2017 |
| 17110104-006B | GP-06 (2-4) | | 11/2/2017 11:00:00 AM | 11/3/2017 |
| 17110104-007A | GP-08 (6-8) | | 11/2/2017 11:20:00 AM | 11/3/2017 |
| 17110104-007B | GP-08 (6-8) | | 11/2/2017 11:20:00 AM | 11/3/2017 |
| 17110104-008A | GP-03 (0-2) | | 11/2/2017 11:40:00 AM | 11/3/2017 |
| 17110104-008B | GP-03 (0-2) | | 11/2/2017 11:40:00 AM | 11/3/2017 |
| 17110104-009A | GP-02 (2-4) | | 11/2/2017 12:10:00 PM | 11/3/2017 |
| 17110104-009B | GP-02 (2-4) | | 11/2/2017 12:10:00 PM | 11/3/2017 |
| 17110104-010A | GP-04 (6-8) | | 11/2/2017 12:30:00 PM | 11/3/2017 |
| 17110104-010B | GP-04 (6-8) | | 11/2/2017 12:30:00 PM | 11/3/2017 |
| 17110104-011A | GT-01 (8-10) | | 11/2/2017 9:00:00 AM | 11/3/2017 |
| 17110104-011B | GT-01 (8-10) | | 11/2/2017 9:00:00 AM | 11/3/2017 |
| 17110104-012A | GT-02 (8-10) | | 11/2/2017 9:35:00 AM | 11/3/2017 |
| 17110104-012B | GT-02 (8-10) | | 11/2/2017 9:35:00 AM | 11/3/2017 |
| 17110104-013A | GT-03 (0-2) | | 11/2/2017 10:20:00 AM | 11/3/2017 |
| 17110104-013B | GT-03 (0-2) | | 11/2/2017 10:20:00 AM | 11/3/2017 |
| 17110104-014A | GT-03 (8-10) | | 11/2/2017 10:30:00 AM | 11/3/2017 |
| 17110104-014B | GT-03 (8-10) | | 11/2/2017 10:30:00 AM | 11/3/2017 |
| 17110104-015A | GT-04 (8-10) | | 11/2/2017 11:10:00 AM | 11/3/2017 |
| 17110104-015B | GT-04 (8-10) | | 11/2/2017 11:10:00 AM | 11/3/2017 |
| 17110104-016A | GT-06 (8-10) | | 11/2/2017 12:30:00 PM | 11/3/2017 |
| 17110104-016B | GT-06 (8-10) | | 11/2/2017 12:30:00 PM | 11/3/2017 |
| 17110104-017A | GT-05 (8-10) | | 11/2/2017 1:55:00 PM | 11/3/2017 |
| 17110104-017B | GT-05 (8-10) | | 11/2/2017 1:55:00 PM | 11/3/2017 |

**STAT Analysis Corporation**
*2242 West Harrison St., Suite 200, Chicago, IL 60612-3766*
*Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com*
*Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0*

**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-001

**Client Sample ID:** GP-07 (0-2)
**Collection Date:** 11/2/2017 8:50:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0062 | | mg/Kg-dry | 1 | 11/9/2017 |
| Ethylbenzene | ND | 0.0062 | | mg/Kg-dry | 1 | 11/9/2017 |
| Toluene | ND | 0.0062 | | mg/Kg-dry | 1 | 11/9/2017 |
| Xylenes, Total | ND | 0.019 | | mg/Kg-dry | 1 | 11/9/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Acenaphthylene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benz(a)anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benzo(a)pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benzo(b)fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benzo(g,h,i)perylene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benzo(k)fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Chrysene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Dibenz(a,h)anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Fluorene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Naphthalene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Phenanthrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| Pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/9/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 19 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 100 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.53 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 22 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 28 | 0.53 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.031 | 0.024 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.55 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 18.7 | 0.2 | * | wt% | 1 | 11/7/2017 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

**STAT Analysis Corporation**
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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-002

**Client Sample ID:** GP-01 (0-2)
**Collection Date:** 11/2/2017 9:20:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0051 | | mg/Kg-dry | 1 | 11/9/2017 |
| Ethylbenzene | ND | 0.0051 | | mg/Kg-dry | 1 | 11/9/2017 |
| Toluene | ND | 0.0051 | | mg/Kg-dry | 1 | 11/9/2017 |
| Xylenes, Total | ND | 0.015 | | mg/Kg-dry | 1 | 11/9/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Acenaphthylene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benz(a)anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benzo(a)pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benzo(b)fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benzo(g,h,i)perylene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Benzo(k)fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Chrysene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Dibenz(a,h)anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Fluorene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Naphthalene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Phenanthrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| Pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/9/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 20 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 35 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 18 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 27 | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | 1.2 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.030 | 0.022 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.82 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 16.5 | 0.2 | * | wt% | 1 | 11/7/2017 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-003

**Client Sample ID:** GP-01 (4-6)
**Collection Date:** 11/2/2017 9:35:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0053 | | mg/Kg-dry | 1 | 11/9/2017 |
| Ethylbenzene | ND | 0.0053 | | mg/Kg-dry | 1 | 11/9/2017 |
| Toluene | ND | 0.0053 | | mg/Kg-dry | 1 | 11/9/2017 |
| Xylenes, Total | ND | 0.016 | | mg/Kg-dry | 1 | 11/9/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 17 | 0.98 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 27 | 0.98 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.49 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 12 | 0.98 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 26 | 0.49 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 0.98 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 0.98 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.020 | 0.020 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.93 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 13.6 | 0.2 | * | wt% | 1 | 11/7/2017 |

**Qualifiers:**

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HT - Sample received past holding time
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-004

**Client Sample ID:** GP-05 (2-4)
**Collection Date:** 11/2/2017 10:00:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0057 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0057 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0057 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.017 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 21 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 35 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | 0.62 | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 15 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 39 | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | 2.5 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.027 | 0.021 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.87 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 15.5 | 0.2 | * | wt% | 1 | 11/7/2017 |

**Qualifiers:**
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HT - Sample received past holding time
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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-005

**Client Sample ID:** GP-05 (10-12)
**Collection Date:** 11/2/2017 10:15:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0050 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0050 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0050 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.015 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 12 | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 33 | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.50 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 14 | 1.0 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 18 | 0.50 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.024 | 0.021 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.85 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 14.5 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-006

**Client Sample ID:** GP-06 (2-4)
**Collection Date:** 11/2/2017 11:00:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0045 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0045 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0045 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.014 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 15 | 0.99 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 55 | 0.99 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.50 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 18 | 0.99 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 23 | 0.50 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 0.99 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 0.99 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.026 | 0.022 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.78 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 14.3 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-007

**Client Sample ID:** GP-08 (6-8)
**Collection Date:** 11/2/2017 11:20:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ART** |
| Benzene | ND | 0.0052 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0052 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0052 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.016 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 13 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 33 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 20 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 18 | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.028 | 0.023 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 8.14 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 18.7 | 0.2 | * | wt% | 1 | 11/7/2017 |

**Qualifiers:**
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
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E - Value above quantitation range
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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-008

**Client Sample ID:** GP-03 (0-2)
**Collection Date:** 11/2/2017 11:40:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0052 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0052 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0052 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.016 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 28 | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 97 | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.51 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 21 | 1.0 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 42 | 0.51 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.027 | 0.024 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 8.05 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 17.7 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-009

**Client Sample ID:** GP-02 (2-4)
**Collection Date:** 11/2/2017 12:10:00 PM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0058 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0058 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0058 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.017 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | 0.046 | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | 0.059 | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | 0.075 | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | 0.045 | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | 0.074 | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | 0.12 | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | 0.070 | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | 0.10 | 0.040 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 13 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 150 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.55 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 24 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 93 | 0.55 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **SPLP Metals by ICP/MS** | **SW1312/6020A (SW3005A)** | | | Prep Date: **12/8/2017** | | Analyst: **JG** |
| Chromium | 0.0099 | 0.0040 | | mg/L | 2 | 12/8/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.032 | 0.019 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 8.35 | | | pH Units | 1 | 11/6/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-009

**Client Sample ID:** GP-02 (2-4)
**Collection Date:** 11/2/2017 12:10:00 PM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 18.0 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-010

**Client Sample ID:** GP-04 (6-8)
**Collection Date:** 11/2/2017 12:30:00 PM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0045 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0045 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0045 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.014 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 4.4 | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 75 | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.51 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 15 | 1.0 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 30 | 0.51 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.041 | 0.019 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.52 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 13.2 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-011

**Client Sample ID:** GT-01 (8-10)
**Collection Date:** 11/2/2017 9:00:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0047 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0047 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0047 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.014 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 12 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 130 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 24 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 21 | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **SPLP Metals by ICP/MS** | **SW1312/6020A (SW3005A)** | | | Prep Date: **12/8/2017** | | Analyst: **JG** |
| Chromium | ND | 0.010 | | mg/L | 5 | 12/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.024 | 0.019 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.78 | | | pH Units | 1 | 11/6/2017 |

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**Date Reported:** December 12, 2017
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# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-011

**Client Sample ID:** GT-01 (8-10)
**Collection Date:** 11/2/2017 9:00:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 19.8 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-012

**Client Sample ID:** GT-02 (8-10)
**Collection Date:** 11/2/2017 9:35:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.012 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.038 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 21 | 0.97 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 140 | 0.97 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.48 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 20 | 0.97 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 25 | 0.48 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 0.97 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 0.97 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | ND | 0.022 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.98 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 13.6 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-013

**Client Sample ID:** GT-03 (0-2)
**Collection Date:** 11/2/2017 10:20:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0047 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0047 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0047 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.014 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 15 | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 120 | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.51 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 21 | 1.0 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 29 | 0.51 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.0 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.034 | 0.021 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.54 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 16.8 | 0.2 | * | wt% | 1 | 11/7/2017 |

**Qualifiers:**
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*Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0*

**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-014

**Client Sample ID:** GT-03 (8-10)
**Collection Date:** 11/2/2017 10:30:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0046 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0046 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0046 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.014 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 14 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 52 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.53 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 17 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 17 | 0.53 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | ND | 0.023 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.62 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 19.7 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-015

**Client Sample ID:** GT-04 (8-10)
**Collection Date:** 11/2/2017 11:10:00 AM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0040 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.012 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.039 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 17 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 58 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 19 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 27 | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.023 | 0.021 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 8.02 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 16.7 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-016

**Client Sample ID:** GT-06 (8-10)
**Collection Date:** 11/2/2017 12:30:00 PM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **RRS** |
| Benzene | ND | 0.0050 | | mg/Kg-dry | 1 | 11/13/2017 |
| Ethylbenzene | ND | 0.0050 | | mg/Kg-dry | 1 | 11/13/2017 |
| Toluene | ND | 0.0050 | | mg/Kg-dry | 1 | 11/13/2017 |
| Xylenes, Total | ND | 0.015 | | mg/Kg-dry | 1 | 11/13/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 15 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 40 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 15 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 20 | 0.54 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.023 | 0.023 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.78 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 19.4 | 0.2 | * | wt% | 1 | 11/7/2017 |

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**Date Reported:** December 12, 2017
**Date Printed:** December 12, 2017

# ANALYTICAL RESULTS

**Client:** V3 Companies of Illinois
**Work Order:** 17110104 Revision 1
**Project:** 16295.Jackson, Jackson Pond Expansion CCDD, V
**Lab ID:** 17110104-017

**Client Sample ID:** GT-05 (8-10)
**Collection Date:** 11/2/2017 1:55:00 PM
**Matrix:** Soil

| Analyses | Result | RL | Qualifier | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **BTEX by GC/MS** | **SW5035/8260B** | | | Prep Date: **11/3/2017** | | Analyst: **ERP** |
| Benzene | ND | 0.0045 | | mg/Kg-dry | 1 | 11/10/2017 |
| Ethylbenzene | ND | 0.0045 | | mg/Kg-dry | 1 | 11/10/2017 |
| Toluene | ND | 0.0045 | | mg/Kg-dry | 1 | 11/10/2017 |
| Xylenes, Total | ND | 0.014 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Polynuclear Aromatic Hydrocarbons by GC/MS** | **SW8270C (SW3550B)** | | | Prep Date: **11/8/2017** | | Analyst: **DM** |
| Acenaphthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Acenaphthylene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benz(a)anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(a)pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(b)fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(g,h,i)perylene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Benzo(k)fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Chrysene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Dibenz(a,h)anthracene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluoranthene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Fluorene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Indeno(1,2,3-cd)pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Naphthalene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Phenanthrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| Pyrene | ND | 0.041 | | mg/Kg-dry | 1 | 11/10/2017 |
| **Metals by ICP/MS** | **SW6020A (SW3050B)** | | | Prep Date: **11/9/2017** | | Analyst: **JG** |
| Arsenic | 11 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Barium | 45 | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Cadmium | ND | 0.53 | | mg/Kg-dry | 10 | 11/9/2017 |
| Chromium | 17 | 1.1 | | mg/Kg-dry | 10 | 11/10/2017 |
| Lead | 20 | 0.53 | | mg/Kg-dry | 10 | 11/9/2017 |
| Selenium | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| Silver | ND | 1.1 | | mg/Kg-dry | 10 | 11/9/2017 |
| **Mercury** | **SW7471B** | | | Prep Date: **11/8/2017** | | Analyst: **LB** |
| Mercury | 0.038 | 0.021 | | mg/Kg-dry | 1 | 11/8/2017 |
| **pH (25 °C)** | **SW9045C** | | | Prep Date: **11/6/2017** | | Analyst: **RW** |
| pH | 7.71 | | | pH Units | 1 | 11/6/2017 |
| **Percent Moisture** | **D2974** | | | Prep Date: **11/6/2017** | | Analyst: **KKA** |
| Percent Moisture | 18.7 | 0.2 | * | wt% | 1 | 11/7/2017 |

**Qualifiers:**
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E - Value above quantitation range
H - Holding time exceeded

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**CHAIN OF CUSTODY RECORD** **Nº: 908856** **Page : ____ of ____**

Company: V3
Project Number: 16295. Jackson Client Tracking No.:
Project Name: Jackson Pond Expansion CCDD
Project Location: Villa Park, IL
Sampler(s): JS
Report To: Jon Shupta Phone:
Fax:
QC Level: 1 ____ 2 ____ 3 ____ 4 ____ e-mail: JShupta@V3Co.com

Quote No.:
P.O. No.:
Turn Around Time (Days): 1 2 3 4 5 7 10
Results Needed: / / am/pm

| Client Sample Number/Description: | Date Taken | Time Taken | Matrix | Comp. | Grab | Preserv. | No. of Containers | BTEX | PNAs | RCRA 8 | pH | Additional Information: | Lab No.: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GP-07 (0-2) | 11/2/17 | 0850 | S | | X | | 4 | X | X | X | X | | 001 |
| GP-01 (0-2) | 11/2/17 | 0920 | S | | X | | 4 | X | X | X | X | | 002 |
| GP-01 (4-6) | 11/2/17 | 0935 | S | | X | | 4 | X | X | X | X | | 003 |
| GP-05 (2-4) | 11/2/17 | 1000 | S | | X | | 4 | X | X | X | X | | 004 |
| GP-05 (10-12) | 11/2/17 | 1015 | S | | X | | 4 | X | X | X | X | | 005 |
| GP-06 (2-4) | 11/2/17 | 1100 | S | | X | | 4 | X | X | X | X | | 006 |
| GP-08 (6-8) | 11/2/17 | 1120 | S | | X | | 4 | X | X | X | X | | 007 |
| GP-03 (0-2) | 11/2/17 | 1140 | S | | X | | 4 | X | X | X | X | | 008 |
| GP-02 (2-4) | 11/2/17 | 1210 | S | | X | | 4 | X | X | X | X | | 009 |
| GP-04 (6-8) | 11/2/17 | 1230 | S | | X | | 4 | X | X | X | X | | 010 |
| GT-01 (8-10) | 11/2/17 | 0900 | S | | X | | 4 | X | X | X | X | | 011 |
| GT-02 (8-10) | 11/2/17 | 0935 | S | | X | | 4 | X | X | X | X | | 012 |
| GT-03 (0-2) | 11/2/17 | 1020 | S | | X | | 4 | X | X | X | X | | 013 |
| GT-03 (8-10) | 11/2/17 | 1030 | S | | X | | 4 | X | X | X | X | | 014 |
| GT-04 (8-10) | 11/2/17 | 1110 | S | | X | | 4 | X | X | X | X | | 015 |
| GT-06 (8-10) | 11/2/17 | 1230 | S | | X | | 4 | X | X | X | X | | 016 |
| GT-05 (8-10) | 11/2/17 | 1355 | S | | X | | 4 | X | X | X | X | | 017 |

| | | |
|---|---|---|
| Relinquished by: (Signature) | Date/Time: 11/3/17 1105 | Comments: |
| Received by: (Signature) | Date/Time: 11/3/17 11:05 | |
| Relinquished by: (Signature) | Date/Time: 11/3/17 11:25 | |
| Received by: (Signature) | Date/Time: 11/3/17 11:25 | |
| Relinquished by: (Signature) | Date/Time: | |
| Received by: (Signature) | Date/Time: | |

**Preservation Code:** A = None B = $HNO_3$ C = NaOH D = $H_2SO_4$ E = HCl F = 5035/EnCore G = Other

**Laboratory Work Order No.:** 17110104

**Received on Ice:** Yes ☒ No ☐

**Temperature:** 4.2 °C

**STAT Analysis Corporation**

# Sample Receipt Checklist

Client Name V3 | Date and Time Received: 11/3/2017 11:25:00 AM

Work Order Number 17110104 | Received by: JOK

Checklist completed by: _____ (Signature) 11/6/17 (Date) | Reviewed by: MK (Initials) 11/3/17 (Date)

Matrix: | Carrier name STAT Analysis

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels/containers? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container or Temp Blank temperature in compliance? | Yes ☑ | No ☐ | Temperature 4.2 °C |
| Water - VOA vials have zero headspace? | No VOA vials submitted ☒ | Yes ☒ | No ☒ |
| Water - Samples pH checked? | Yes ☒ | No ☒ | Checked by: |
| Water - Samples properly preserved? | Yes ☒ | No ☒ | pH Adjusted? |

Any No response must be detailed in the comments section below.

Comments:

Client / Person contacted: _____ Date contacted: _____ Contacted by: _____

Response:

## Craig Chawla

**From:** Jon Shuptar [jshuptar@v3co.com]
**Sent:** Wednesday, December 06, 2017 7:39 AM
**To:** Craig Chawla
**Cc:** Frank Capoccia
**Subject:** SPLP analysis for samples in Report #17110104

Craig or Frank,

I there are two samples from report #17110104 – Jackson Pond Expansion, that I want to run for SPLP – Chromium.

Is it still possible to run SPLP Chromium on:
**GP-02 (2-4)**
**GT-01 (8-10)**

Looking for standard TAT.

Thanks,
**Jonathan D Shuptar P.G.**
***Geologist***

**V3 Companies**
7325 Janes Ave., Woodridge, IL 60517
Direct: 630.729.6111 | Cell: 517.420.8481 | Fax: 630.724.9202
**jshuptar@v3co.com** | **www.v3co.com**

**First Environmental Laboratories, Inc.**
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1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

February 13, 2018

Mr. Jonathan Shuptar
**V3 COMPANIES**
7325 Janes Ave.
Woodridge, IL 60517

Project ID: 16295 Jackson
First Environmental File ID: 18-0589
Date Received: February 07, 2018

Dear Mr. Jonathan Shuptar:

Attached is the revised report for the project referenced above. These pages supersede the report previously submitted.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

Neal Cleghorn
Project Manager

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# Case Narrative

**V3 COMPANIES**

Lab File ID: **18-0589**

Project ID: **16295 Jackson**

Date Received: **February 07, 2018**

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

The results in this report apply to the samples in the following table:

| Laboratory Sample ID | Client Sample Identifier | Date/Time Collected | |
|---|---|---|---|
| 18-0589-001 | TS-01 | 02/06/18 | 9:05 |
| 18-0589-002 | TS-02 | 02/06/18 | 9:10 |
| 18-0589-003 | TS-03 | 02/06/18 | 9:15 |
| 18-0589-004 | TS-04 | 02/06/18 | 9:20 |
| 18-0589-005 | TS-05 | 02/06/18 | 9:30 |
| 18-0589-006 | TS-06 | 02/06/18 | 9:35 |
| 18-0589-007 | TS-07 | 02/06/18 | 10:00 |
| 18-0589-008 | TS-08 | 02/06/18 | 10:05 |
| 18-0589-009 | TS-09 | 02/06/18 | 10:10 |
| 18-0589-010 | TS-10 | 02/06/18 | 10:25 |
| 18-0589-011 | TS-11 | 02/06/18 | 10:35 |
| 18-0589-012 | TS-12 | 02/06/18 | 10:40 |
| 18-0589-013 | TS-13 | 02/06/18 | 11:00 |
| 18-0589-014 | TS-14 | 02/06/18 | 11:10 |
| 18-0589-015 | TS-15 | 02/06/18 | 11:20 |
| 18-0589-016 | TS-16 | 02/06/18 | 11:40 |
| 18-0589-017 | TS-17 | 02/06/18 | 11:50 |
| 18-0589-018 | TS-18 | 02/06/18 | 11:55 |
| 18-0589-019 | TS-19 | 02/06/18 | 12:15 |
| 18-0589-020 | TS-20 | 02/06/18 | 12:20 |
| 18-0589-021 | TS-21 | 02/06/18 | 13:00 |
| 18-0589-022 | TS-22 | 02/06/18 | 13:20 |
| 18-0589-023 | TS-23 | 02/06/18 | 13:35 |
| 18-0589-024 | TS-28 | 02/07/18 | 8:50 |
| 18-0589-025 | TS-27 | 02/07/18 | 9:10 |

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# Case Narrative

**V3 COMPANIES**

Lab File ID: **18-0589**

Project ID: **16295 Jackson**

Date Received: **February 07, 2018**

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

| | | | |
|---|---|---|---|
| 18-0589-026 | TS-26 | 02/07/18 | 9:15 |
| 18-0589-027 | TS-25 | 02/07/18 | 9:20 |
| 18-0589-028 | TS-24 | 02/07/18 | 9:25 |
| 18-0589-029 | TS-32 | 02/07/18 | 9:30 |
| 18-0589-030 | TS-33 | 02/07/18 | 9:40 |
| 18-0589-031 | TS-34 | 02/07/18 | 9:55 |
| 18-0589-032 | TS-35 | 02/07/18 | 10:10 |
| 18-0589-033 | TS-36 | 02/07/18 | 10:20 |
| 18-0589-034 | TS-37 | 02/07/18 | 10:25 |
| 18-0589-035 | TS-38 | 02/07/18 | 10:35 |
| 18-0589-036 | TS-39 | 02/07/18 | 10:45 |
| 18-0589-037 | TS-31 | 02/07/18 | 11:00 |
| 18-0589-038 | TS-30 | 02/07/18 | 11:35 |
| 18-0589-039 | TS-29 | 02/07/18 | 11:45 |

**Sample Batch Comments:**

Sample acceptance criteria were met.

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# Case Narrative

**V3 COMPANIES**

Lab File ID: **18-0589**

Project ID: **16295 Jackson**

Date Received: **February 07, 2018**

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

The following is a definition of flags that may be used in this report:

| Flag | Description | Flag | Description |
|---|---|---|---|
| A | Method holding time is 15 minutes from collection. Lab analysis was performed as soon as possible. | | |
| B | Analyte was found in the method blank. | L | LCS recovery outside control limits. |
| < | Analyte not detected at or above the reporting limit. | M | MS recovery outside control limits; LCS acceptable. |
| C | Sample received in an improper container for this test. | P | Chemical preservation pH adjusted in lab. |
| D | Surrogates diluted out; recovery not available. | Q | Result was determined by a GC/MS database search. |
| E | Estimated result; concentration exceeds calibration range. | S | Analysis was subcontracted to another laboratory. |
| G | Surrogate recovery outside control limits. | T | Result is less than three times the MDL value. |
| H | Analysis or extraction holding time exceeded. | W | Reporting limit elevated due to sample matrix. |
| J | Estimated result; concentration is less than routine RL but greater than MDL. | N | Analyte is not part of our NELAC accreditation or accreditation may not be available for this parameter. |
| RL | Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.) | ND | Analyte was not detected using a library search routine; No calibration standard was analyzed. |

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# Analytical Report

**Client:** V3 COMPANIES
**Project ID:** 16295 Jackson
**Date Received:** 02/07/18
**Date Reported:** 02/12/18

Results are reported on a dry weight basis.

| Lab No: | Sample ID: | Analyte | | Result | R.L. | Units | Flags |
|---|---|---|---|---|---|---|---|
| **Total Metals** | | **Method: 6010C** | | **Preparation Method 3050B** | | | |
| Analysis Date: 02/12/18 | | | | Preparation Date: 02/08/18 | | | |
| 18-0589-001 | TS-01 | | Date Collected: 02/06/18 | Time Collected: 9:05 | | | |
| % TS: 78.91 | | **Arsenic** | | **8.0** | 1.0 | **mg/kg** | |
| 18-0589-002 | TS-02 | | Date Collected: 02/06/18 | Time Collected: 9:10 | | | |
| % TS: 75.93 | | **Arsenic** | | **8.1** | 1.0 | **mg/kg** | |
| 18-0589-003 | TS-03 | | Date Collected: 02/06/18 | Time Collected: 9:15 | | | |
| % TS: 79.71 | | **Arsenic** | | **6.7** | 1.0 | **mg/kg** | |
| 18-0589-004 | TS-04 | | Date Collected: 02/06/18 | Time Collected: 9:20 | | | |
| % TS: 81.55 | | **Arsenic** | | **7.0** | 1.0 | **mg/kg** | |
| 18-0589-005 | TS-05 | | Date Collected: 02/06/18 | Time Collected: 9:30 | | | |
| % TS: 75.28 | | **Arsenic** | | **9.2** | 1.0 | **mg/kg** | |
| 18-0589-006 | TS-06 | | Date Collected: 02/06/18 | Time Collected: 9:35 | | | |
| % TS: 80.97 | | **Arsenic** | | **10.0** | 1.0 | **mg/kg** | |
| 18-0589-007 | TS-07 | | Date Collected: 02/06/18 | Time Collected: 10:00 | | | |
| % TS: 79.91 | | **Arsenic** | | **10.2** | 1.0 | **mg/kg** | |
| 18-0589-008 | TS-08 | | Date Collected: 02/06/18 | Time Collected: 10:05 | | | |
| % TS: 77.63 | | **Arsenic** | | **7.6** | 1.0 | **mg/kg** | |
| 18-0589-009 | TS-09 | | Date Collected: 02/06/18 | Time Collected: 10:10 | | | |
| % TS: 85.12 | | **Arsenic** | | **6.7** | 1.0 | **mg/kg** | |
| 18-0589-010 | TS-10 | | Date Collected: 02/06/18 | Time Collected: 10:25 | | | |
| % TS: 72.53 | | **Arsenic** | | **9.4** | 1.0 | **mg/kg** | |
| 18-0589-011 | TS-11 | | Date Collected: 02/06/18 | Time Collected: 10:35 | | | |
| % TS: 76.5 | | **Arsenic** | | **7.3** | 1.0 | **mg/kg** | |
| 18-0589-012 | TS-12 | | Date Collected: 02/06/18 | Time Collected: 10:40 | | | |
| % TS: 80.88 | | **Arsenic** | | **7.7** | 1.0 | **mg/kg** | |
| 18-0589-013 | TS-13 | | Date Collected: 02/06/18 | Time Collected: 11:00 | | | |
| % TS: 78.58 | | **Arsenic** | | **7.5** | 1.0 | **mg/kg** | |
| 18-0589-014 | TS-14 | | Date Collected: 02/06/18 | Time Collected: 11:10 | | | |
| % TS: 76 | | **Arsenic** | | **7.5** | 1.0 | **mg/kg** | |

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# Analytical Report

**Client:** V3 COMPANIES
**Project ID:** 16295 Jackson
**Date Received:** 02/07/18
**Date Reported:** 02/12/18

Results are reported on a dry weight basis.

| Lab No: | Sample ID: | Analyte | | Result | R.L. | Units | Flags |
|---|---|---|---|---|---|---|---|
| 18-0589-015 | TS-15 | | Date Collected: 02/06/18 | Time Collected: 11:20 | | | |
| % TS: 81.9 | | **Arsenic** | | **9.0** | 1.0 | **mg/kg** | |
| 18-0589-016 | TS-16 | | Date Collected: 02/06/18 | Time Collected: 11:40 | | | |
| % TS: 76.11 | | **Arsenic** | | **5.8** | 1.0 | **mg/kg** | |
| 18-0589-017 | TS-17 | | Date Collected: 02/06/18 | Time Collected: 11:50 | | | |
| % TS: 79.14 | | **Arsenic** | | **8.6** | 1.0 | **mg/kg** | |
| 18-0589-018 | TS-18 | | Date Collected: 02/06/18 | Time Collected: 11:55 | | | |
| % TS: 79.22 | | **Arsenic** | | **9.6** | 1.0 | **mg/kg** | |
| 18-0589-019 | TS-19 | | Date Collected: 02/06/18 | Time Collected: 12:15 | | | |
| % TS: 79.44 | | **Arsenic** | | **8.2** | 1.0 | **mg/kg** | |
| 18-0589-020 | TS-20 | | Date Collected: 02/06/18 | Time Collected: 12:20 | | | |
| % TS: 79.91 | | **Arsenic** | | **7.6** | 1.0 | **mg/kg** | |
| 18-0589-021 | TS-21 | | Date Collected: 02/06/18 | Time Collected: 13:00 | | | |
| % TS: 82.59 | | **Arsenic** | | **8.8** | 1.0 | **mg/kg** | |
| 18-0589-022 | TS-22 | | Date Collected: 02/06/18 | Time Collected: 13:20 | | | |
| % TS: 78.11 | | **Arsenic** | | **8.6** | 1.0 | **mg/kg** | |
| 18-0589-023 | TS-23 | | Date Collected: 02/06/18 | Time Collected: 13:35 | | | |
| % TS: 63.58 | | **Arsenic** | | **8.9** | 1.0 | **mg/kg** | |
| 18-0589-024 | TS-28 | | Date Collected: 02/07/18 | Time Collected: 8:50 | | | |
| % TS: 82.84 | | **Arsenic** | | **12.7** | 1.0 | **mg/kg** | |
| 18-0589-025 | TS-27 | | Date Collected: 02/07/18 | Time Collected: 9:10 | | | |
| % TS: 66.67 | | **Arsenic** | | **6.5** | 1.0 | **mg/kg** | |
| 18-0589-026 | TS-26 | | Date Collected: 02/07/18 | Time Collected: 9:15 | | | |
| % TS: 82.32 | | **Arsenic** | | **13.1** | 1.0 | **mg/kg** | |
| 18-0589-027 | TS-25 | | Date Collected: 02/07/18 | Time Collected: 9:20 | | | |
| % TS: 75.73 | | **Arsenic** | | **8.6** | 1.0 | **mg/kg** | |
| 18-0589-028 | TS-24 | | Date Collected: 02/07/18 | Time Collected: 9:25 | | | |
| % TS: 76.47 | | **Arsenic** | | **8.8** | 1.0 | **mg/kg** | |

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# Analytical Report

**Client:** V3 COMPANIES
**Project ID:** 16295 Jackson
**Date Received:** 02/07/18
**Date Reported:** 02/12/18

Results are reported on a dry weight basis.

| Lab No: | Sample ID: | Analyte | | Result | R.L. | Units | Flags |
|---|---|---|---|---|---|---|---|
| 18-0589-029 | TS-32 | | Date Collected: 02/07/18 | Time Collected: 9:30 | | | |
| % TS: 81.52 | | **Arsenic** | | **8.2** | 1.0 | **mg/kg** | |
| 18-0589-030 | TS-33 | | Date Collected: 02/07/18 | Time Collected: 9:40 | | | |
| % TS: 78.99 | | **Arsenic** | | **9.8** | 1.0 | **mg/kg** | |
| 18-0589-031 | TS-34 | | Date Collected: 02/07/18 | Time Collected: 9:55 | | | |
| % TS: 84.7 | | **Arsenic** | | **11.2** | 1.0 | **mg/kg** | |
| 18-0589-032 | TS-35 | | Date Collected: 02/07/18 | Time Collected: 10:10 | | | |
| % TS: 69.34 | | **Arsenic** | | **8.8** | 1.0 | **mg/kg** | |
| 18-0589-033 | TS-36 | | Date Collected: 02/07/18 | Time Collected: 10:20 | | | |
| % TS: 77.19 | | **Arsenic** | | **9.2** | 1.0 | **mg/kg** | |
| 18-0589-034 | TS-37 | | Date Collected: 02/07/18 | Time Collected: 10:25 | | | |
| % TS: 75.22 | | **Arsenic** | | **8.4** | 1.0 | **mg/kg** | |
| 18-0589-035 | TS-38 | | Date Collected: 02/07/18 | Time Collected: 10:35 | | | |
| % TS: 78.34 | | **Arsenic** | | **10.6** | 1.0 | **mg/kg** | |
| 18-0589-036 | TS-39 | | Date Collected: 02/07/18 | Time Collected: 10:45 | | | |
| % TS: 77.59 | | **Arsenic** | | **10.0** | 1.0 | **mg/kg** | |
| 18-0589-037 | TS-31 | | Date Collected: 02/07/18 | Time Collected: 11:00 | | | |
| % TS: 78.36 | | **Arsenic** | | **8.3** | 1.0 | **mg/kg** | |
| 18-0589-038 | TS-30 | | Date Collected: 02/07/18 | Time Collected: 11:35 | | | |
| % TS: 77.52 | | **Arsenic** | | **4.4** | 1.0 | **mg/kg** | |
| 18-0589-039 | TS-29 | | Date Collected: 02/07/18 | Time Collected: 11:45 | | | |
| % TS: 79.72 | | **Arsenic** | | **7.6** | 1.0 | **mg/kg** | |

# CHAIN OF CUSTODY RECORD



First Environmental Laboratories, Inc.

**First Environmental Laboratories**
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com • www.firstenv.com
IEPA Certification #100292

Company Name: V3
Street Address: 7325 James Ave
City: Woodridge State: IL Zip: 60517
Phone: 630-729-6111 e-mail: JShuptar@v3co.com
Send Report To: J. Shuptar
Sampled By: JS

Project I.D.:
P.O. #:

Matrix Codes: S = Soil W = Water O = Other

| Date/Time Taken | Sample Description | Matrix | Analyses: Arsenic | | | | | | | | Hold - Do Not Analyze | Comments | Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/6/18 0905 | TS-01 | S | X | | | | | | | | | | 18-0589-001 |
| 2/6/18 0910 | TS-02 | S | X | | | | | | | | | | 002 |
| 2/6/18 0915 | TS-03 | S | X | | | | | | | | | | 003 |
| 2/6/18 0920 | TS-04 | S | X | | | | | | | | | | 004 |
| 2/6/18 0930 | TS-05 | S | X | | | | | | | | | | 005 |
| 2/6/18 0935 | TS-06 | S | X | | | | | | | | | | 006 |
| 2/6/18 1000 | TS-07 | S | X | | | | | | | | | | 007 |
| 2/6/18 1005 | TS-08 | S | X | | | | | | | | | | 008 |
| 2/6/18 1010 | TS-09 | S | X | | | | | | | | | | 009 |
| 2/6/18 1025 | TS-10 | S | X | | | | | | | | | | 010 |
| 2/6/18 1035 | TS-11 | S | X | | | | | | | | | | 011 |
| 2/6/18 1040 | TS-12 | S | X | | | | | | | | | | 012 |

**FOR LAB USE ONLY:**

Cooler Temperature: 0.1-6°C Yes ✓ No__ 1.6 °C
Received within 6 hrs. of collection:
Ice Present: Yes ✓ No__

Sample Refrigerated: Yes__ No__
Refrigerator Temperature: °C
5035 Vials Frozen: Yes__ No__
Freezer Temperature: °C

Program: ☐ TACO/SRP ☒ CCDD ☐ NPDES ☐ LUST ☐ SDWA

Notes and Special Instructions:

Relinquished By: [signature] Date/Time 2/7/18 1250 Received By: [signature] Date/Time 2/7/18 1250
Relinquished By: Date/Time Received By: Date/Time

First Environmental Laboratories, Inc.

**First Environmental Laboratories**
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E-mail: firstinfo@firstenv.com • www.firstenv.com
IEPA Certification #100292

# CHAIN OF CUSTODY RECORD



Company Name: V3
Street Address: 7325 James Ave
City: Woodridge State: IL Zip: 60517
Phone: 630.724.6111 e-mail: JShuptar@V3CO.com
Send Report To: J. Shuptar
Sampled By: SS

Project I.D.: 16295. Jackson
P.O. #:

Matrix Codes: S = Soil W = Water O = Other

Analyses: Arsenic; Hold – Do Not Analyze

| Date/Time Taken | Sample Description | Matrix | Arsenic | Hold – Do Not Analyze | Comments | Lab I.D. |
|---|---|---|---|---|---|---|
| 2/6/18 1100 | TS-13 | S | X | | | 18-0589-013 |
| 2/6/18 1110 | TS-14 | S | X | | | 014 |
| 2/6/18 1120 | TS-15 | S | X | | | 015 |
| 2/6/18 1140 | TS-16 | S | X | | | 016 |
| 2/6/18 1150 | TS-17 | S | X | | | 017 |
| 2/6/18 1155 | TS-18 | S | X | | | 018 |
| 2/6/18 1215 | TS-19 | S | X | | | 019 |
| 2/6/18 1220 | TS-20 | S | X | | | 020 |
| 2/6/18 1300 | TS-21 | S | X | | | 021 |
| 2/6/18 1320 | TS-22 | S | X | | | 022 |
| 2/6/18 1335 | TS-23 | S | X | | | 023 |
| 2/7/18 0850 | TS-28 | S | X | | | 024 |

**FOR LAB USE ONLY:**

Cooler Temperature: 0.1-6°C Yes ✓ No__ 1.6 °C
Received within 6 hrs of collection: ✓
Ice Present: Yes ✓ No__

Sample Refrigerated: Yes__ No__
Refrigerator Temperature:____°C
5035 Vials Frozen: Yes__ No__
Freezer Temperature:____°C

Program: ☐ TACO/SRP ☒ CCDD ☐ NPDES ☐ LUST ☐ SDWA

Notes and Special Instructions:

Relinquished By: [signature] Date/Time 2/7/18 1250 Received By: [signature] Date/Time 2/7/18 1250
Relinquished By: Date/Time Received By: Date/Time

Rev. 5/17

# CHAIN OF CUSTODY RECORD



**First Environmental Laboratories, Inc.**

**First Environmental Laboratories**
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com • www.firstenv.com
IEPA Certification #100292

Company Name: V3
Street Address: 7325 James Ave
City: Woodridge [redacted] State: IL Zip: 60517
Phone: 630.729.6111 e-mail: JShupton@V3Co.com
Send Report To: J. Shupton
Sampled By: JS

Project I.D.: 16295, Jackson
P.O. #:

Matrix Codes: S = Soil W = Water O = Other

Analyses: Arsenic; Hold – Do Not Analyze

| Date/Time Taken | Sample Description | Matrix | Arsenic | | | | | | | Hold – Do Not Analyze | Comments | Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [redacted] | 2/7/18 0910 TS-27 | S | X | | | | | | | | | 18-0589-025 |
| 2/7/18 0915 | TS-26 | S | X | | | | | | | | | 026 |
| 2/7/18 0920 | TS-25 | S | X | | | | | | | | | 027 |
| 2/7/18 0925 | TS-24 | S | X | | | | | | | | | 028 |
| 2/7/18 0930 | TS-32 | S | X | | | | | | | | | 029 |
| 2/7/18 0940 | TS-33 | S | X | | | | | | | | | 030 |
| 2/7/18 0955 | TS-34 | S | X | | | | | | | | | 031 |
| 2/7/18 1010 | TS-35 | S | X | | | | | | | | | 032 |
| 2/7/18 1020 | TS-36 | S | X | | | | | | | | | 033 |
| 2/7/18 1025 | TS-37 | S | X | | | | | | | | | 034 |
| 2/7/18 1035 | TS-38 | S | X | | | | | | | | | 035 |
| 2/7/18 1045 | TS-39 | S | X | | | | | | | | | 036 |

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes✓ No__ 1.6 °C
Received within 6 hrs. of collection:____
Ice Present: Yes✓ No__

Sample Refrigerated: Yes__ No__
Refrigerator Temperature:____°C
5035 Vials Frozen: Yes__ No__
Freezer Temperature:____°C

Program: ☐ TACO/SRP ☐ CCDD ☐ NPDES ☐ LUST ☐ SDWA

Notes and Special Instructions:

Relinquished By: [signature] Date/Time 2/7/18 1250 Received By: [signature] Date/Time 2/7/18 1250
Relinquished By: Date/Time Received By: Date/Time

Rev. 5/17

# CHAIN OF CUSTODY RECORD



**First Environmental Laboratories, Inc.**

**First Environmental Laboratories**
1600 Shore Road, Suite D
Naperville, Illinois 60563
Phone: (630) 778-1200 • Fax: (630) 778-1233
E-mail: firstinfo@firstenv.com • www.firstenv.com
IEPA Certification #100292

Company Name: V3
Street Address: 7325 Janes Ave
City: Woodridge State: IL Zip: 60517
Phone: 630.729.6111 e-mail: jshupfan@v3co.com
Send Report To: J. Shupfan
Sampled By: JS

Project I.D.: 16295. Jackson
P.O. #:

Matrix Codes: S = Soil W = Water O = Other

| Date/Time Taken | Sample Description | Matrix | Analyses: Arsenic | Hold – Do Not Analyze | Comments | Lab I.D. |
|---|---|---|---|---|---|---|
| 2/7/18 1100 | TS-31 | S | X | | | 18-0589-037 |
| 2/7/18 1135 | TS-30 | S | X | | | 038 |
| 2/7/18 1145 | TS-29 | S | X | | | 039 |

FOR LAB USE ONLY:

Cooler Temperature: 0.1-6°C Yes✓ No__ 1.6 °C
Received within 6 hrs of collection:_____
Ice Present: Yes✓ No__

Sample Refrigerated: Yes__ No__
Refrigerator Temperature:_____°C
5035 Vials Frozen: Yes__ No__
Freezer Temperature:_____°C

Program: ☐ TACO/SRP ☒ CCDD ☐ NPDES ☐ LUST ☐ SDWA

Notes and Special Instructions:

Relinquished By: [signature] Date/Time 2/7/18 1250 Received By: [signature] Date/Time 2/7/18 1250
Relinquished By: Date/Time Received By: Date/Time

Rev. 5/17

# APPENDIX C

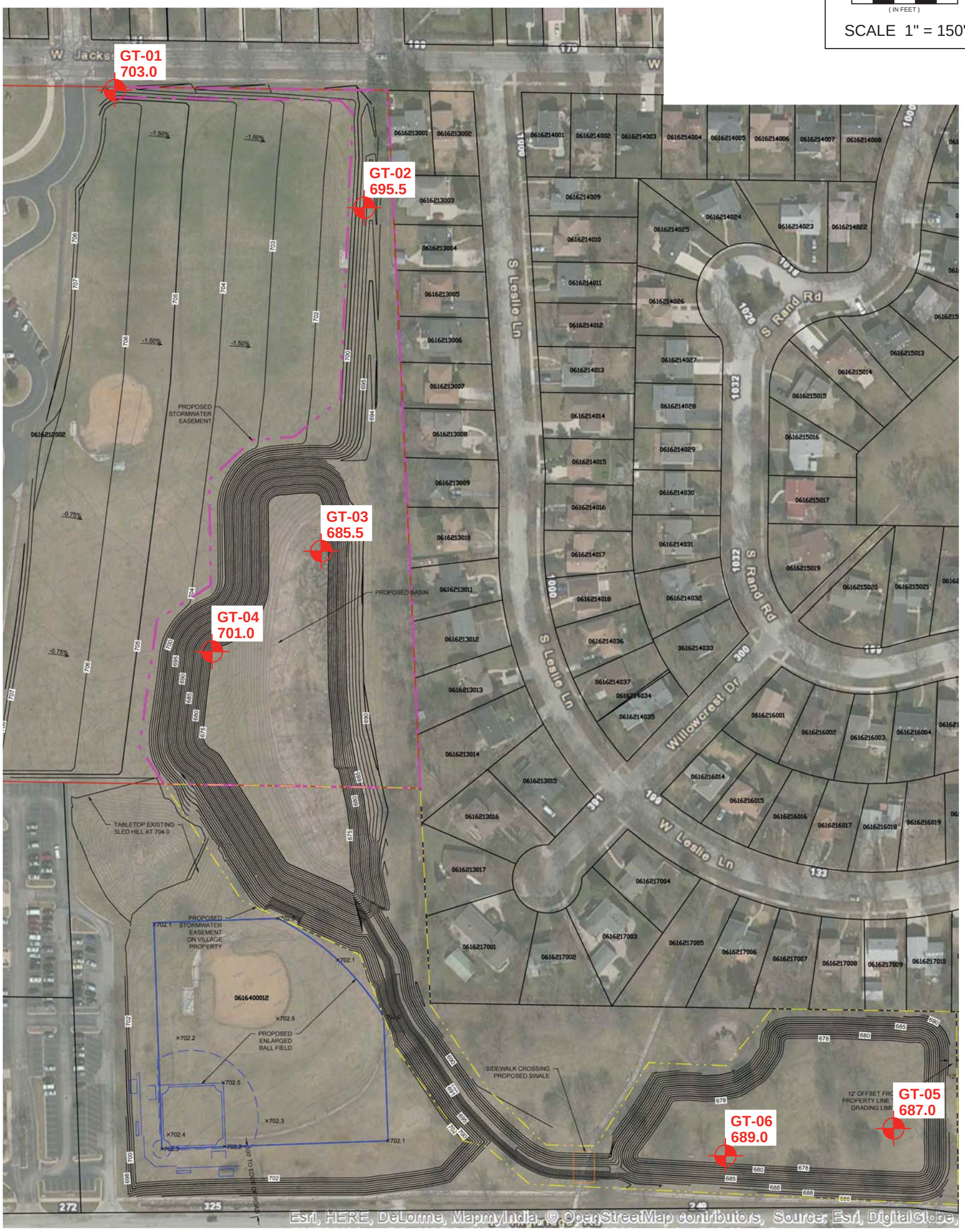
GEOTECHNICAL REPORT (TSC)

N

0 150

( IN FEET )

SCALE 1" = 150'




**NOTE(S):** GROUND SURFACE ELEVATIONS AT THE BORINGS WERE ACQUIRED BY TSC USING A TRIMBLE R8 GNSS RECEIVER, BEING ROUNDED TO THE NEAREST 0.5 FOOT.

LEGEND

SOIL BORING LOCATION

BORING LOCATION PLAN
DRAINAGE IMPROVEMENTS/
JACKSON POND EXPANSION
VILLA PARK, ILLINOIS

TESTING SERVICE CORPORATION
457 EAST GUNDERSEN DRIVE
CAROL STREAM, ILLINOIS 60188

| | |
|---|---|
| DRAWN BY: | TBQ |
| CHECKED BY: | AJB |
| JOB NO. : | L–87,548 |
| DATE: | 11–10–17 |

PAGE NO.

1 OF 1

TESTING SERVICE CORPORATION

*Corporate Office*
360 S. Main Place, Carol Stream, IL 60188-2404
630.462.2600 • Fax 630.653.2988

*Local Offices:*
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650 N. Peace Road, Suite D, DeKalb, IL 60115-8401
815.748.2100 • Fax 815.748.2110

1350 TriState Parkway, Unit 122, Gurnee, IL 60031-9135
847.249.6040 • Fax 844.767.4721

2235 23RD Avenue, Rockford, IL 61104-7334
815.394.2562 • Fax 815.394.2566

203 Earl Road, Suite A, Shorewood, IL 60404-9446
815.744.1510 • Fax 815.744.1728

# Report of Soils Exploration

## Sugar Creek Watershed

## Drainage Improvements/ Jackson Pond Expansion

## Villa Park, Illinois

*Geotechnical & Environmental Engineering*

*Construction Materials Engineering & Testing*

*Laboratory Testing of Soils, Concrete & Asphalt*

*Geo-Environmental Drilling & Sampling*

## V3 Companies, Ltd.

GEOTECHNICAL GROUP

TESTING SERVICE CORPORATION

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630.653.3920 ● Fax 630.653.2726

*Corporate Office:*

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Local Office
November 14, 2017

Mr. Jonathon D. Shuptar, P.G.
V3 Companies, Ltd.
7325 Janes Avenue
Woodridge, IL 60517

RE: L-87,548
Sugar Creek Watershed
Drainage Improvements/
Jackson Pond Expansion
Villa Park, Illinois

Dear Mr. Shuptar:

This report presents results of a soils exploration performed in connection with the proposed Sugar Creek watershed/drainage improvement (storm sewer and detention basins) in Villa Park, Illinois. These geotechnical engineering services have been provided in accordance with TSC Proposal 59,697 dated October 13, 2017 and the attached General Conditions, incorporated herein by reference

The project site consists of a proposed stormwater easement on Jackson Middle School and Village of Villa Park property located on the south side of Jackson Street and extending to the south/southeast to Highridge Road. It is mostly located east of the existing ball fields at Jackson Middle School. A detention basin is presently located near the middle portion of the proposed easement. The site otherwise consists of grass-covered areas with scattered trees on the southeast side.

The proposed project includes the installation of new storm sewer pipe along the north end of the easement. The invert of the 72-inch diameter sewer pipe will be on the order of Elevation 685.0. The proposed drainage improvement project also includes the expansion of the existing detention basin (proposed west basin) with a proposed bottom elevation of 675.0, and new detention basin at the southeast end of the easement (proposed east basin) with a bottom elevation of 678.0.

## Field Investigation and Laboratory Testing

Six (6) soil borings (Nos. GT-01 to GT-06) were performed as part of this subsurface exploration. The borings were staked by TSC at locations selected by V3 Companies. The borings have been plotted on a proposed grading plan provided by V3. Reference is made to the enclosed Boring Location Plan for the drilling layout, ground surface elevations at the boring locations also being shown. These were acquired by TSC using a Trimble R8 GNSS receiver which uses the North American Vertical Datum of 1988 (NAVD88), being rounded to the nearest 0.5 foot.

The following table summarizes the general location and depth of the borings.

| Boring No. | General Location | Depth |
|---|---|---|
| GT-01 & GT-02 | Storm Sewer Alignment | 20' |
| GT-03 & GT-04 | West Basin | 20' - 25' |
| GT-05 & GT-06 | East Basin | 20' |

The borings were drilled and samples tested according to currently recommended American Society for Testing and Materials specifications. Soil sampling was performed at maximum 2½-foot intervals in conjunction with the Standard Penetration Test (SPT), for which driving resistance to a 2" split-spoon sampler (N value in blows per foot) provides an indication of the relative density of granular materials and consistency of cohesive soils. Water level readings were taken during and following completion of drilling operations.

Soil samples were examined in the laboratory to verify field descriptions and to classify them in accordance with the Unified Soil Classification System. Laboratory testing included water content determinations for all cohesive and intermediate (silt or loamy) soil types. An estimate of unconfined compressive strength was obtained for all cohesive materials using a calibrated pocket penetrometer, with actual measurements of unconfined compressive strength performed on representative samples of native clay soils. Dry unit weight tests were also run on specimens of cohesive fill.

Reference is made to the enclosed boring logs which indicate subsurface stratigraphy and soil descriptions, results of field and laboratory tests, as well as water level observations. Definitions of descriptive terminology are also included. While strata changes are shown as a definite line on the boring logs, the actual transition between soil layers will probably be more gradual.

## Discussion of Test Data

Topsoil materials were not found at Boring GT-03 drilled in the area of the existing basin. Clayey topsoil was otherwise encountered at the surface of the remainder of the borings, typically being approximately 8 to 12 inches thick (up to 3 feet deep at Boring GT-01). A sample of the thicker topsoil deposit found in GT-01 exhibited a water content of 26 percent.

Uppermost native soils found underlying the topsoil layer in Borings GT-02 and GT-05 and at the surface of Boring GT-03 consisted of tough to hard silty clay of apparent medium to high plasticity, extending to depths of about 2 to 3 feet below existing grade. These CL/CH materials (Unified classification) were typified by moderate to high unconfined comprehensive strengths / pocket penetrometer readings ranging of 1.5 to 4.25 tons per square foot (tsf) at relatively high water contents between 25 and 30 percent.

Native soils at the boring locations otherwise consisted predominantly of tough to hard silty clay of low to medium plasticity (CL by Unified classification), strata of loose to firm silt, clayey sand, silty sand, and relatively clean sand/sand and gravel also being occasionally encountered in the borings. The predominant clay soils exhibited unconfined compressive strengths ranging from about 1.5 to 6.0 tsf at

water contents typically between 14 and 23 percent (occasionally both lower and higher). The silt, sand and gravel deposits exhibited SPT N values ranging from 5 to 23 blows per foot (bpf), typically exceeding 10 bpf.

Borings GT-02 and GT-04 were “dry” both during and upon completion of drilling operations. Free water was otherwise initially encountered at depths ranging from 8 to 13 feet below existing grade in the remaining four (4) borings. Upon completion of drilling operations water levels had remained within about 2 feet of initial readings.

## Analysis and Recommendations

New Storm Sewer Pipe

Borings GT-01 and GT-02 were drilled along the proposed new storm sewer alignment. As previously discussed, the invert of the 72-inch diameter sewer pipe will be on the order of Elevation 685.0 at the boring locations. This elevation correlates to depths of about 18 and 11 feet below existing grade in Borings GT-01 and GT-02, respectively. Very tough native silty clay soils were encountered at the anticipated sewer bearing depths in the borings. These cohesive materials are considered suitable for support of the sewer pipe and trench backfill.

Conventional open-cut trench methods will likely be utilized for pipe installation. To the extent that laborers will work in the excavations, protection against cave-ins/side wall instability must be provided. Protective measures should include the use of safety trench boxes, sheeting and bracing, or other appropriate methods. In this regard, all excavations should comply with requirements of OSHA 29 CFR, Part 1926 Sub Part P "Excavations" and its appendices as well as any other applicable codes. This document states that excavation safety is the responsibility of the Contractor. Reference to this OSHA requirement should be included in the project specifications.

Based on the cohesive (impervious) nature of the soils found for the full depth of the referenced borings, serious groundwater problems are not anticipated. However, the accumulation of run-off water or seepage at the base of excavations should still be expected to occur during trench excavation and site work. The Contractor should be prepared to remove any accumulations by dewatering/ unwatering procedures, as a minimum to include pumping from strategically placed sumps.

Lateral earth pressures for permanent underground structures will be dependent on the type of backfill used and groundwater levels. Equivalent fluid pressures are given for cohesive and granular backfills, assuming at-rest (Ko) earth pressures. The values shown represent the increase in lateral pressure over a 1.0 foot distance measured in pounds per square foot (psf/ft).

| EQUIVALENT FLUID PRESSURE (PSF/FT) | | |
|---|---|---|
| BACKFILL TYPE | ABOVE WATER TABLE | BELOW WATER TABLE |
| Granular | 50 | 90 |
| Cohesive | 65 | 100 |

Detention Basins

Borings GT-03 and GT-04 were drilled in the area of the proposed west detention basin and Borings GT-05 and GT-06 in the area of the proposed east detention basin. As previously discussed, the bottom elevations for the west and east basins are planned at Elevations 675.0 and 678.0, respectively. These elevations correlate to depths of 10½, 26, 9 and 11 feet below existing grade in Borings GT-03, GT-04, GT-05 and GT-06, respectively.

Cohesive soils predominate at the above referenced borings drilled in the areas of the proposed detention basins. They include tough to hard silty clays which typically extend to the bottom of the proposed basins. Loose to firm silt, clayey sand, silty sand and relatively clean sand/sand and gravel deposits were also encountered interbedded within the cohesive soil mass in the borings. These materials will be stable on the 3H:1V to 5H:1V slopes typically used for detention basins in this area.

If required, water retention should generally not be a problem due to the primarily cohesive nature of subsurface soils. Although permeability tests were not performed on the clay materials, we would estimate their coefficients of permeability to be in the range of $10^{-6}$ to $10^{-8}$ cm/sec, making them practically impervious. However, the cohesive soil mass contained silt, sand and gravel strata as interbedded layers in the borings.

It is recommended that granular soils be removed from the side slopes and bottom of the pond excavations. They should be replaced with cohesive materials for a distance of at least 2.0 feet perpendicular to the cut. “Capping” of sand/sand and gravel layers will promote water retention, the granular strata representing a potential source of leakage.

Replacement materials should consist of clay soil types of medium to high plasticity, ideally containing less than 35 percent sand and gravel size particles. The majority of the cohesive deposits encountered by the borings meet these general requirements. The liner materials should be placed in approximate 10 inch lifts loose measure and compacted to at least 90 percent of maximum dry density as determined by the Modified Proctor test (ASTM D 1557). At the time of placement and compaction the clay fill should also be on the wet side of optimum moisture content, as determined by the laboratory compaction curve.

## Closure

The analysis and recommendations submitted in this report are based upon the data obtained from the six (6) soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings, the nature and extent of which may not become evident until during the course of construction. If variations are then identified, recommendations contained in this report should be re-evaluated after performing on-site observations.

It has been a pleasure to assist you with this work. Please call if there are any questions or if we may be of further service.

Respectfully submitted,

TESTING SERVICE CORPORATION

Alfredo J. Bermudez
Senior Geotechnical Engineer
Registered Professional Engineer
Illinois No. 062-046608

AJB:TRP:ab
Enc.


Timothy R. Peceniak, P.E.
Geotechnical Engineer

# GENERAL CONDITIONS

## Geotechnical and Construction Services

## TESTING SERVICE CORPORATION

**1. PARTIES AND SCOPE OF WORK:** If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

**2. SCHEDULING OF SERVICES:** The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

**3. ACCESS TO SITE:** TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

**4. CLIENT'S DUTY TO NOTIFY ENGINEER:** Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

**5. DISCOVERY OF POLLUTANTS:** TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C.§ 6901, et, seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

**6. MONITORING:** If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

**7. DOCUMENTS AND SAMPLES:** Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

**8. TERMINATION:** TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

**9. PAYMENT:** Client shall be invoiced periodically for services performed. Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.

**10. WARRANTY:** TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to $50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.

In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to $500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.

**11. INDEMNITY:** Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

**12. SUBPOENAS:** TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

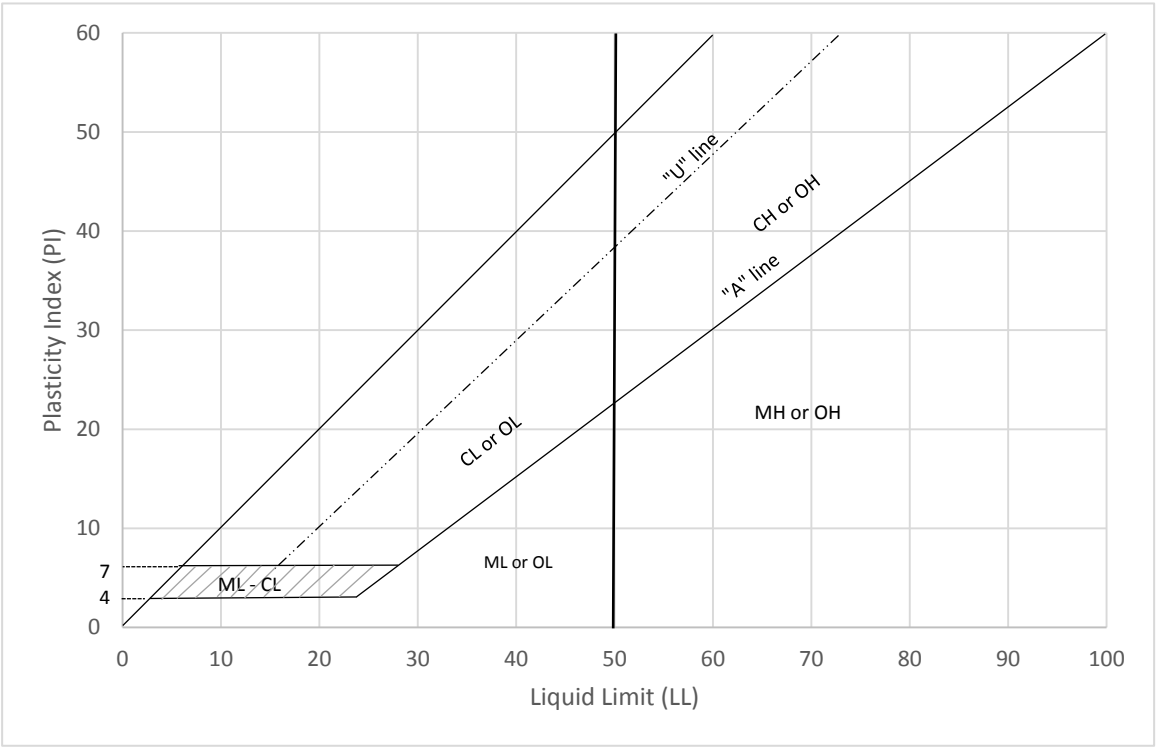
**13. OTHER AGREEMENTS:** TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

# Testing Service Corporation
## Unified Classification Chart

| CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TEST [o] | | | | SOIL CLASSIFICATION | |
|---|---|---|---|---|---|
| | | | | Group Symbol | GROUP NAME [b] |
| COARSE - GRAINED SOILS more than 50% retained on No. 200 sieve | GRAVELS More than 50% of coarse fraction retained on No. 4 sieve | CLEAN GRAVELS less than 5% fines [c] | $C_u \geq 4$ and $1 \leq C_C \leq 3$ [e] | GW | Well-graded gravel [f] |
| | | | $C_u < 4$ and/or $1 > C_C > 3$ [e] | GP | Poorly-graded gravel [f] |
| | | GRAVELS WITH FINES more than 12% fines [c] | Fines classify as ML or MH | GM | Silty gravel [f, g, h] |
| | | | Fines classify as CL or CH | GC | Clayey gravel [f, g, h] |
| | SANDS 50% or more of coarse fraction passes No. 4 sieve | CLEAN SANDS less than 5% fines [d] | $C_u \geq 6$ and $1 \leq C_C \leq 3$ [e] | SW | Well-graded sand [l] |
| | | | $C_u < 6$ and/or $1 > C_C > 3$ [e] | SP | Poorly-graded sand [l] |
| | | SANDS WITH FINES more than 12% fines [d] | Fines classify as ML or MH | SM | Silty sand [g, h, f] |
| | | | Fines classify as CL or CH | SC | Clayey sand [g, h, f] |
| FINE - GRAINED SOILS 50% or more passed the No. 200 sieve | SILTS & CLAYS Liquid limit less than 50% | Inorganic | PI > 7 or plots on or above "A" line j | CL | Lean clay [k, l, m] |
| | | | PI < 4 or plots below "A" line j | ML | Silt [k, l, m] |
| | | Organic | $\frac{\text{Liquid limit – oven dried}}{\text{Liquid limit – not dried}} < 0.75$ | OL | Organic clay [k, l, m, n] Organic silt [k, l, m, o] |
| | SILTS & CLAYS Liquid limit 50% or more | Inorganic | PI plots on or above "A" line | CH | Fat clay [k, l, m] |
| | | | PI plots below "A" line | MH | Elastic silt [k, l, m] |
| | | Organic | $\frac{\text{Liquid limit – oven dried}}{\text{Liquid limit – not dried}} < 0.75$ | OH | Organic clay [k, l, m, p] Organic silt [k, l, m, q] |
| Highly organic soils | | Primarily organic matter, dark in color, and organic odor | | PT | Peat |

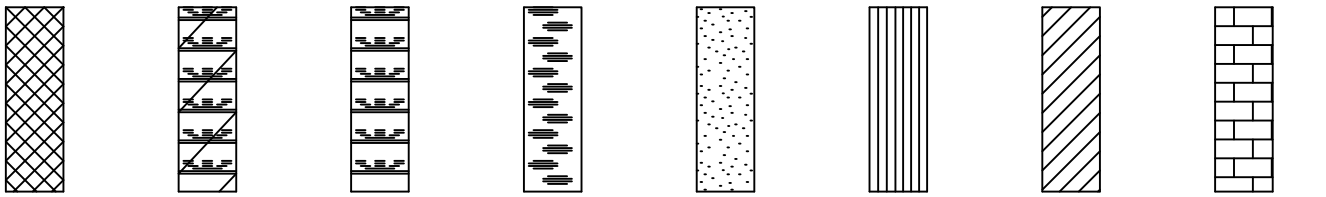
a. Based on the material passing the 3-inch (75-mm) sieve.
b. If field sample contained cobbles and/or boulders, add "with cobbles and/or boulders" to group name
c. Gravels with 5 to 12% fines required dual symbols
GW-GM well graded gravel with silt
GW-GC well graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
d. Sands with 5 to 12% fines require dual symbols
SW-SM well graded sand with silt
SW-SC well graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
e. $C_u = D_{60}/D_{10}$ $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

f. If soils contains ≥ 15% sand, add "with sand" to group name.
g. If fines classify as CL-ML, use dual symbol GC-GM, SC-SM
h. If fines are organic, add "with organic fines" to group name
i. If soils contains ≥ 15% gravel, add "with gravel" to group name
j. If Atterberg Limits plot in hatched area, soil is a CL – ML, silty clay
k. If soils contains 15 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant
l. If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.
m. If soils contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name
n. PI ≥ 4 and plots on or above "A" line
o. PI ≥ 4 and plots below "A" line
p. PI plots on or above "A" line
q. PI plots below "A" line



# TESTING SERVICE CORPORATION

LEGEND FOR BORING LOGS



**FILL** **TOPSOIL** **PEAT** **GRAVEL** **SAND** **SILT** **CLAY** **DOLOMITE**

SAMPLE TYPE

SS = Split Spoon
ST = Thin-Walled Tube
A = Auger
MC = Macro-Core (Geo Probe)

WATER LEVELS:

▼ While Drilling
▽ End of Boring
▼ 24 Hours

FIELD AND LABORATORY TEST DATA

N = Standard Penetration Resistance in Blows per Foot
WC = In-Situ Water Content
Qu = Unconfined Compressive Strength in Tons per Square Foot
* Pocket Penetrometer Measurement: Maximum Reading = 4.5 tsf
$\gamma_{DRY}$ = Dry Unit Weight in Pounds per Cubic Foot

SOIL DESCRIPTION

| MATERIAL | PARTICLE SIZE RANGE |
|---|---|
| BOULDER | Over 12 inches |
| COBBLE | 12 inches to 3 inches |
| Coarse GRAVEL | 3 inches to ¾ inch |
| Small GRAVEL | ¾ inch to No. 4 Sieve |
| Coarse SAND | No. 4 Sieve to No. 10 Sieve |
| Medium SAND | No. 10 Sieve to No. 40 Sieve |
| Fine SAND | No. 40 Sieve to No. 200 Sieve |
| SILT and CLAY | Passing No. 200 Sieve |

COHESIVE SOILS

| CONSISTENCY | Qu (tsf) |
|---|---|
| Very Soft | Less than 0.3 |
| Soft | 0.3 to 0.6 |
| Stiff | 0.6 to 1.0 |
| Tough | 1.0 to 2.0 |
| Very Tough | 2.0 to 4.0 |
| Hard | 4.0 and over |

COHESIONLESS SOILS

| RELATIVE DENSITY | N (bpf) |
|---|---|
| Very Loose | 0 - 4 |
| Loose | 4 - 10 |
| Firm | 10 - 30 |
| Dense | 30 - 50 |
| Very Dense | 50 and over |

| MODIFYING TERM | PERCENT BY WEIGHT |
|---|---|
| Trace | 1 - 10 |
| Little | 10 - 20 |
| Some | 20 - 35 |

PROJECT **Drainage Improvements/Jackson Pond Expansion, Villa Park, IL**

CLIENT **V3 Companies, Ltd., 7325 Janes Avenue, Woodridge, IL**

BORING **GT-01** DATE STARTED **11-2-17** DATE COMPLETED **11-2-17** JOB **L-87,548**

ELEVATIONS

GROUND SURFACE **703.0**

END OF BORING **683.0**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **8.0 '**

AT END OF BORING **10.0 '**

24 HOURS

| SAMPLE NO. | SAMPLE TYPE | LENGTH RECOVERY | N | WC | Qu | $\gamma_{DRY}$ | DEPTH | ELEV. | SOIL DESCRIPTIONS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | | |
| 1 | SS | | 8 | 26.2 | 2.0* | 91 | | | Dark brown clayey TOPSOIL (OL) [Possible Partial Fill] |
| | | | | | | | 3.0 | 700.0 | |
| 2 | SS | | 8 | 23.2 | 2.68<br>2.75* | | | | Very tough brown and gray silty CLAY, little sand, moist (CL) |
| 3 | SS | | 14 | 23.2 | 2.25* | | | | |
| | | | | | | | 8.0 | 695.0 | |
| 4 | SS | | 11 | 17.9 | 4.5+* | | | | Hard brown trace gray silty CLAY, little sand and gravel, moist (CL) |
| 5 | SS | | 18 | 15.4 | 5.75<br>4.5+* | | | | |
| | | | | | | | 13.0 | 690.0 | |
| 6 | SS | | 13 | 14.6 | 4.0* | | | | Very tough brownish-gray silty CLAY, little sand and gravel, moist (CL) |
| | | | | | | | 15.5 | 687.5 | |
| 7 | SS | | 16 | 14.9 | 2.62<br>3.0* | | | | Very tough gray silty CLAY, little sand and gravel, occasional Cobbles, moist (CL) |
| 8 | SS | | 16 | 17.3 | 3.75* | | | | |
| | | | | | | | 20 | | End of Boring at 20.0' |

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

CME Automatic Hammer used for SPT

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 87548.GPJ TSC_ALL.GDT 11/10/17

PROJECT **Drainage Improvements/Jackson Pond Expansion, Villa Park, IL**

CLIENT **V3 Companies, Ltd., 7325 Janes Avenue, Woodridge, IL**

BORING **GT-02** DATE STARTED **11-2-17** DATE COMPLETED **11-2-17** JOB **L-87,548**

ELEVATIONS

GROUND SURFACE **695.5**

END OF BORING **675.5**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

| LENGTH RECOVERY | SAMPLE NO. | SAMPLE TYPE | N | WC | Qu | $\gamma_{DRY}$ | DEPTH | ELEV. | SOIL DESCRIPTIONS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0.7 | 694.8 | Black clayey TOPSOIL (OL) |
| | 1 | SS | 12 | 24.6 | 3.90<br>4.25* | | 3.0 | 692.5 | Very tough to hard brown silty CLAY, little sand, trace organic, moist (CL/CH) |
| | 2 | SS | 9 | 21.3 | 1.66<br>1.75* | | 5.5 | 690.0 | Tough brown and gray silty CLAY, little sand, moist (CL) |
| | 3 | SS | 12 | 18.8 | 3.0* | | 8.0 | 687.5 | Very tough brown trace gray silty CLAY, little sand, trace gravel, moist (CL) |
| | 4 | SS | 9 | 17.5 | 2.62<br>2.75* | | | | Very tough gray trace brown silty CLAY, little sand, trace gravel, moist (CL) |
| | 5 | SS | 16 | 14.4 | 2.5* | | 13.0 | 682.5 | |
| | 6 | SS | 11 | 16.4 | 2.25* | | | | Tough to very tough gray silty CLAY, little sand and gravel, moist (CL) |
| | 7 | SS | 14 | 15.5 | 2.0* | | | | |
| | 8 | SS | 18 | 16.1 | 2.11<br>1.75* | | | | End of Boring at 20.0' |

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

CME Automatic Hammer used for SPT

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 87548.GPJ TSC_ALL.GDT 11/10/17

PROJECT **Drainage Improvements/Jackson Pond Expansion, Villa Park, IL**

CLIENT **V3 Companies, Ltd., 7325 Janes Avenue, Woodridge, IL**

BORING **GT-03** DATE STARTED **11-2-17** DATE COMPLETED **11-2-17** JOB **L-87,548**

ELEVATIONS

GROUND SURFACE **685.5**

END OF BORING **665.5**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **13.0 '**

AT END OF BORING **11.0 '**

24 HOURS

| SAMPLE NO. | SAMPLE TYPE | LENGTH RECOVERY | N | WC | Qu | $\gamma_{DRY}$ | DEPTH | ELEV. | SOIL DESCRIPTIONS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | | |
| 1 | SS | | 5 | 25.3 | 2.0* | | | | Tough to very tough brown trace black silty CLAY, trace sand, trace gravel, trace roots, moist (CL/CH) [Possible Fill] |
| | | | | | | | 2.0 | 683.5 | |
| 2 | SS | | 9 | 21.5 | 2.5* | | | | Very tough brown silty CLAY, little sand, trace gravel, moist (CL) |
| | | | | | | | 3.0 | 682.5 | |
| 3 | SS | | 12 | 17.6 | 3.0* | | | | |
| 4 | SS | | 12 | 17.8 | 2.43<br>2.5* | | | | Very tough gray silty CLAY, little sand and gravel, moist (CL) |
| 5 | SS | | 12 | 14.5 | 2.75* | | | | |
| 6 | SS | | 15 | 14.1 | 2.75* | | | | |
| | | | | | | | 13.0 | 672.5 | |
| 7 | SS | | 23 | | | | | | Firm grayish-brown SAND and GRAVEL, little silt, occasional Cobbles, wet (GP-GM) |
| | | | | | | | 15.5 | 670.0 | |
| 8 | SS | | 18 | 18.9 | | | | | Firm gray trace brown SILT, little sand, trace gravel, very moist (ML) |
| | | | | | | | 18.0 | 667.5 | |
| 9 | SS | | 14 | 10.7 | | | | | Firm brownish-gray clayey SAND, trace gravel, very moist (SC) |
| | | | | | | | | | End of Boring at 20.0' |

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

CME Automatic Hammer used for SPT

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **Drainage Improvements/Jackson Pond Expansion, Villa Park, IL**

CLIENT **V3 Companies, Ltd., 7325 Janes Avenue, Woodridge, IL**

BORING **GT-04** DATE STARTED **11-2-17** DATE COMPLETED **11-2-17** JOB **L-87,548**

ELEVATIONS

GROUND SURFACE **701.0**

END OF BORING **676.0**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **Dry**

AT END OF BORING **Dry**

24 HOURS

DISTANCE BELOW SURFACE IN FEET

| LENGTH RECOVERY | SAMPLE NO. | SAMPLE TYPE | N | WC | Qu | $\gamma_{DRY}$ | DEPTH | ELEV. | SOIL DESCRIPTIONS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0.8 | 700.2 | Black clayey TOPSOIL (OL) |
| | 1 | SS | 8 | 23.4 | 2.0* | | 3.0 | 698.0 | Tough to very tough brown silty CLAY, little sand, trace roots, moist (CL) |
| | 2 | SS | 5 | 22.8 | | | 5.5 | 695.5 | Loose brown SILT, little sand, very moist (ML) |
| | 3 | SS | 12 | 20.7 | 2.81<br>3.25* | | 10.5 | 690.5 | Very tough to hard brown silty CLAY, little sand, trace gravel, moist (CL) |
| | 4 | SS | 15 | 19.5 | 4.5+* | | | | |
| | 5 | SS | 20 | 16.8 | 2.5* | | 15.5 | 685.5 | Very tough to tough gray silty CLAY, little sand, trace gravel, moist (CL) |
| | 6 | SS | 14 | 17.6 | 1.5* | | | | |
| | 7 | SS | 16 | 17.8 | 3.00<br>3.25* | | 23.0 | 678.0 | Very tough to hard gray silty CLAY, little sand, trace gravel, moist (CL)<br>* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. |
| | 8 | SS | 19 | 19.1 | 4.60<br>4.5* | | | | |
| | 9 | SS | 21 | 8.7 | | | | | Firm brown clayey SAND, trace gravel, moist (SC) |

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 25.0'

PROJECT **Drainage Improvements/Jackson Pond Expansion, Villa Park, IL**

CLIENT **V3 Companies, Ltd., 7325 Janes Avenue, Woodridge, IL**

BORING **GT-05** DATE STARTED **11-2-17** DATE COMPLETED **11-2-17** JOB **L-87,548**

ELEVATIONS

GROUND SURFACE **687.0**

END OF BORING **667.0**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **10.5 '**

AT END OF BORING

24 HOURS

DISTANCE BELOW SURFACE IN FEET

| LENGTH RECOVERY | SAMPLE NO. | SAMPLE TYPE | N | WC | Qu | $\gamma_{DRY}$ | DEPTH | ELEV. | SOIL DESCRIPTIONS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | | |
| | | | | | | | 1.0 | 686.0 | Black clayey TOPSOIL (OL) |
| | 1 | SS | 10 | 29.8 | 1.5* | | | | Tough dark brown silty CLAY, little sand, trace organic, very moist (CL/CH) |
| | | | | | | | 3.0 | 684.0 | |
| | 2 | SS | 12 | 24.9 | 3.0* | | | | Very tough to hard brown trace gray silty CLAY, trace to little sand and gravel, moist (CL) |
| | 3 | SS | 11 | 20.1 | 4.54<br>4.5+* | | | | |
| | | | | | | | 8.0 | 679.0 | |
| | 4 | SS | 12 | 14.9 | 3.0* | | | | Very tough gray silty CLAY, little sand and gravel, occasional sand seams, moist (CL) |
| | | | | | | | 10.5 | 676.5 | |
| | 5 | SS | 15 | 17.4 | | | | | Firm gray silty SAND, trace gravel, occasional clay seams, very moist (SM) |
| | | | | | | | 13.0 | 674.0 | |
| | 6 | SS | 19 | | | | | | Firm gray SAND and GRAVEL, little silt, occasional Cobbles, wet (GP-GM) |
| | | | | | | | 15.5 | 671.5 | |
| | 7 | SS | 14 | 14.8 | 3.25* | | | | Very tough to tough gray silty CLAY, little to some sand and gravel, moist (CL) |
| | 8 | SS | 14 | 15.8 | 1.60<br>1.5* | | | | |
| | | | | | | | 20 | | End of Boring at 20.0' |

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

CME Automatic Hammer used for SPT

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **Drainage Improvements/Jackson Pond Expansion, Villa Park, IL**

CLIENT **V3 Companies, Ltd., 7325 Janes Avenue, Woodridge, IL**

BORING **GT-06** DATE STARTED **11-2-17** DATE COMPLETED **11-2-17** JOB **L-87,548**

ELEVATIONS

GROUND SURFACE **689.0**

END OF BORING **669.0**

WATER LEVEL OBSERVATIONS

WHILE DRILLING **10.5 '**

AT END OF BORING **9.0 '**

24 HOURS

| SAMPLE NO. | SAMPLE TYPE | LENGTH RECOVERY | N | WC | Qu | $\gamma_{DRY}$ | DEPTH | ELEV. | SOIL DESCRIPTIONS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | | |
| | | | | | | | | | Black clayey TOPSOIL (OL) |
| | | | | | | | 1.0 | 688.0 | |
| 1 | SS | | 6 | 21.8 | 1.5* | | | | Tough brown silty CLAY, little sand, moist (CL) |
| | | | | | | | 3.0 | 686.0 | |
| 2 | SS | | 10 | 17.8 | 4.5+* | | | | Hard to very tough brown trace gray silty CLAY, little sand, trace gravel, moist (CL) |
| 3 | SS | | 12 | 18.7 | 3.58<br>3.5* | | | | |
| | | | | | | | 8.0 | 681.0 | |
| 4 | SS | | 7 | 15.4 | 2.5* | | | | ▽ Very tough gray silty CLAY, some sand, trace gravel, occasional sand seams, moist (CL) |
| | | | | | | | 10.5 | 678.5 | ▼ |
| 5 | SS | | 13 | 19.1 | | | | | Firm gray SAND, trace gravel, little silt, wet (SP-SM) |
| | | | | | | | 13.0 | 676.0 | |
| 6 | SS | | 10 | 12.4 | 2.75* | | | | Very tough gray sandy CLAY, trace gravel, moist (CL) |
| | | | | | | | 15.5 | 673.5 | |
| 7 | SS | | 12 | 14.8 | 2.36<br>2.25* | | | | Very tough gray silty CLAY, little sand and gravel, moist (CL) |
| 8 | SS | | 18 | 13.6 | 2.5* | | | | |
| | | | | | | | | | End of Boring at 20.0' |

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

CME Automatic Hammer used for SPT

DISTANCE BELOW SURFACE IN FEET

0 5 10 15 20 25

DRILL RIG NO. **262**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 87548.GPJ TSC_ALL.GDT 11/10/17

N

0 150
( IN FEET )

~~SCALE 1"= 150'~~

N-T-S


**NOTE(S):** GROUND SURFACE ELEVATIONS AT THE BORINGS WERE ACQUIRED BY TSC USING A TRIMBLE R8 GNSS RECEIVER, BEING ROUNDED TO THE NEAREST 0.5 FOOT.

LEGEND

SOIL BORING LOCATION

BORING LOCATION PLAN
DRAINAGE IMPROVEMENTS/
JACKSON POND EXPANSION
VILLA PARK, ILLINOIS

TESTING SERVICE CORPORATION
457 EAST GUNDERSEN DRIVE
CAROL STREAM, ILLINOIS 60188

| | |
|---|---|
| DRAWN BY: | TBQ |
| CHECKED BY: | AJB |
| JOB NO. : | L-87,548 |
| DATE: | 11-10-17 |

PAGE NO.
1 OF 1