THORIUM SCREENING INVESTIGATION AND SOIL MANAGEMENT WORKPLAN – EXCAVATION/TRENCHING FOR SITE PREPARATION AND FOUNDATION CONSTRUCTION

545 North McClurg Court
Chicago, Illinois

Prepared for
GHB-630, LLC
Chicago, Illinois

Prepared By

GaiaTech Incorporated

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1.0 INTRODUCTION

GHB-630, LLC (GHB-630) retained GaiaTech Incorporated (GaiaTech) to prepare this Thorium Screening Investigation and Soil Management Workplan (the "Workplan") to be used for excavation/trenching activities for site preparation and foundation construction of the site at located at 545 North McClurg Court (formerly known as 410 East Grand Avenue) in Chicago, Cook County, Illinois (the "Site" or "Subject Property"). The 1.2 acre Site is currently developed with an asphalt paved parking lot and has been proposed for redevelopment with a multistory mixed use building. The location of the Site is depicted on Figure 1.

Previous work in the general vicinity of the Site (i.e., the Streeterville Investigation Area) has indicated the presence of fill materials which exhibited impact by thorium in excess of the United States Environmental Protection Agency (USEPA) Action Limit of 7.1 picoCuries/gram (pCi/g). The purpose of the Workplan is to document the protocols, techniques and methodologies to be implemented, prior to and during the proposed construction activities, in order to screen and manage fill/spoils on the Site and in selected areas of the adjacent Right-of-Way (ROW) and street where excavation or trenching related to the pending site redevelopment may occur. The Workplan proposes conducting a radiological survey of the Site surface, followed by additional selective surveying of the locations of proposed foundation structures. Thorium impacted fill that could be encountered/disturbed/handled during general construction activities will then be removed and disposed of properly prior to building construction. Similar Workplans (prepared by GaiaTech) were previously reviewed and commented on by the USEPA for use during redevelopment of the nearby properties (345 East Ohio Street, Chicago/Streeter I and 355 East Ohio Street, Chicago/Streeter II). These prior Workplans were prepared and approved in 2004 and 2006, respectively. Similar project procedures and screening techniques, as established in the prior Workplans, will be used on this Site.

It should be noted that this Workplan is not considered a Remedial Action Plan. Rather, it is limited to establishing verification sampling and soil removal protocols and procedures that are considered necessary to 1) be protective of construction worker safety, and 2) provide for proper management of excavated soils. The goal is to implement this Workplan before construction of the proposed mixed-use development so that the Site will not present undue risk to the Health and Safety of construction workers (i.e., no special procedures or environmental oversight will be required during construction with respect to radiological impact) and to avoid the unwanted disturbance of potential radiologically-contaminated fill. GHB-630, LLC is the current owner of the Subject Property. Previous work in the Streeterville Investigation Area has indicated that the thorium impact is primarily found in the near surface urban fill materials. For purposes of this Workplan the terms soil and fill are used interchangeably but generally refer to the near surface urban fill materials found throughout the Site and surrounding vicinity.

Previous downhole logging conducted in 2008 and 2012 and surface screening conducted in 2008 at the Site did not identify areas or samples with confirmed thorium contamination in excess of the USEPA Action Limit of 7.1 pCi/g. Nevertheless, follow-up surveying of the surface soils/urban fill materials and locations of the proposed foundation structures will be completed to determine if the onsite urban fill materials are radiologically contaminated. If urban fill materials are determined to be radiologically contaminated, the onsite areas will be

designated for later removal and disposal prior to general construction activities. If thorium contamination is found to exist beyond the designated areas noted for surveying these areas will not be disturbed or removed.

Other potential areas include the City of Chicago owned right-of-way (ROW) along Grand Avenue, Ohio Street and McClurg Court. The area outside the Site perimeter/property line will be designated as the ROW and street area for purposes of discussion within this Workplan. The fill/soils in the ROW and street will also be screened in 18-inch lifts as necessary to make the area safe for future construction activities.

This Workplan discusses two phases to the surface/subsurface screening activities. The first Phase will occur prior to construction activities at the Site, while the second Phase screening activities will occur during construction activities. Phase I will include the initial screening of the surface fill after the removal of the onsite asphalt pavement and follow-up screening of the subsurface fill in selective zones and deeper areas (potholing for caissons). These areas include proposed excavations related to the installation of various subgrade structures such as sheet piling installation, caisson drilling, utility installation, subgrade structure removal, frost walls, elevator pits and grade beams. Phase II will include surveying of those ROW areas adjacent to the Site, specifically in those areas where proposed construction activities will occur, including sheet piling, utilities, driveways and planter areas. Also included in Phase II will be the surveying of areas where utilities will be installed in the street areas adjacent to the Site.

1.1 Background

The 1.2-acre Site is currently developed with an asphalt paved parking lot. The Site is bounded by McClurg Court to the west, Grand Avenue to the south, Ohio Street to the north and a parking structure/residential high rise to the east (Figure 1).

The current Site consists of five contiguous parcels with the overall dimensions of 300-feet by 218-feet. The Site is currently known as 545 North McClurg Court, but may be noted in previous reports as being part of one or more of the following parcels:

17-100211-008 – 410 East Grand Avenue
17-100211-009 – 414 East Grand Avenue
17-100210-012 – 401 East Ohio Street
17-100211-015 – 411 East Ohio Street
17-100211-017 - 415 East Ohio Street

According to various historical sources, the Site and surrounding area were historically located within Lake Michigan. Various fill materials were used to fill in this portion of the lake and raise the grade of the area in the late 1890s and early 1900s. The Site was then initially developed between 1906 and 1927 with a building of unknown use. Between 1927 and 1950, the Site was redeveloped with structures occupied by Callaghan and Company Book Bindery, Wholesale Growers and a restaurant/bakery. Between 1953 and 1974, the Rehabilitation Institute of Chicago (RIC) became the owner and occupant of the former on-site buildings. RIC reportedly utilized the building located at 410-414 East Grand

Avenue as a training center. Between 1974 and 1988, the Site buildings were removed and the Site was developed into the current parking lot. RIC owned the Site until 2009, when it was sold to GHB-630, LLC; the current owner of the Subject Property.

From the 1900's through the 1930's, Lindsay Light and Chemical (Lindsay Light) operated a gas light mantle facility in the Streeterville area (Note: This facility was not located on the Subject Property). Lindsay Light's operations included the extraction of thorium ore in the manufacturing process. The process resulted in the generation of unknown quantities of thorium contaminated tailings and associated waste/debris materials. These tailings and debris materials were reportedly subsequently used as "fill" at various properties throughout the general Streeterville area, including at properties near the subject Site. The potential exists that some radiologically impacted fill materials may also be present at the subject Site.

The USEPA and the City of Chicago have established a special area as the "Streeterville Thorium Investigation Area", the designated Moratorium Area. The Moratorium Area is comprised of public Right-Of-Ways, streets and properties that are known or have a potential to be contaminated with thorium. The Subject Property is within the designated Moratorium Area. The USEPA requires the screening (for potential thorium contamination) of the urban fill materials being disturbed at properties located within the Moratorium Area. The screening is to be conducted in approximate 18-inch lifts and is discussed further in this Workplan.

1.2 Summary of Previous Radiation Surveying and Sampling

2008 Surface Radiation Survey: STS/AECOM completed a surface survey of the Site in 2008. The Site was set up with a 5 x 5 meter survey grid, except in two locations where parked cars could not be moved. The survey collected readings at each nodal point, as well as at intermediate areas. The survey utilized the gamma detection meter Ludlum Model 2221 with the sodium iodide (NaI) 2 x 2 inch unshielded 44-10 probe. Maximum field screening measurements were compared to the established unshielded instrument cutoff value of 18,073 counts per minute (cpm). This cutoff value has been correlated with the USEPA cleanup threshold/Action Level of 7.1 pCi/g of total radium for thorium impacted soil/fill in the Streeterville Thorium Investigation Area. The report indicates that none of the readings observed during the completion of the surface survey exceeded the instrument's threshold limit/USEPA Action Level. The results of the surface survey are included as Appendix A.

2009 Phase II Investigation: A Phase II investigation was conducted by STS/AECOM at the Site in November 2009. Part of the investigation included the screening of soil samples and soils generated during the boring process. The investigation included the installation of 16 soil borings, with three of the borings being converted to temporary well points to provide for the collection and analysis of Site groundwater samples for selected chemical constituents. Four of the 16 borings could not be advanced beyond 2 feet in depth, due to the presence of relatively shallow building foundation structures. The other 12 borings may not fully penetrate the fill materials.

Individual soil samples collected via split spoon sampler, as well as the spoils produced from the drilling process, were surveyed with a Ludlum 2221 meter and 2 x 2 inch unshielded NaI 44-10 probe. Readings obtained from the soil drilling spoils and sample spoons ranged from 5,100 to 7,700 cpm, which were reportedly well within the established background concentrations of the Site. The survey of the shallow fill did not indicate the presence of materials exhibiting evidence of radiological impact in excess of the USEPA Action Level of 7.1 pCi/g.

Several soil and groundwater samples were also collected from the soil borings for chemical analysis of selected constituents, including the following: volatile organic compounds (VOCs), semi-VOCs (SVOCs), pesticides and eight Resource Conservation and Recovery Act (RCRA) metals. The laboratory results indicated that the fill materials exhibited concentrations of various constituents, including: polynuclear aromatic hydrocarbons (PNAs) and total lead. Various samples indicated PNA and lead concentrations exceeding one or more of the residential, construction worker and/or commercial criteria established under the Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO) regulations (35 Illinois Administrative Code [IAC] Part 742). Tables and analytical reports from this report are included as Appendix B. The locations of the 2009 borings are shown on Figure 2.

2012 Geotechnical Investigation and Downhole Radiation Survey: An additional radiological survey of the Site soils was conducted concurrently (by GaiaTech) during a geotechnical study in 2012. A total of six geotechnical borings (B-1 through B-6) were advanced by GEI Consultants between March 13 and 21, 2012. The location and placement of each boring was predetermined by the geotechnical engineering company. As needed, boring locations were adjusted to bypass existing impenetrable concrete structures such as pile caps, caissons or other large foundation structures.

During this work, GaiaTech and its subcontractor, Radiation Safety Services, Inc. (RSSI), performed a subsurface survey for evidence of potential radiological impact to the fill materials at the Site. This included an assessment of drilling spoils, split spoon soil samples and downhole logging. The survey was conducted by a field technician utilizing a Ludlum Model 193 or 2200 meter with 2 x 2 NaI probe/gamma detectors. The field technician was under the direction of a certified health physicist, with oversight by a GaiaTech engineer.

The soil borings were initially drilled using a flight auger or a hollow stem auger (HSA) and followed up with a direct push probe with a split spoon sampler attachment. Generally, fill materials were encountered extending to depths between 15 and 20 feet bgs. Native soils encountered below the fill materials were observed to consist of gray to brown sand or brown/gray silty sand materials. Groundwater was encountered within the fill material at a depth of approximately 12 to 14 feet bgs.

The downhole gamma logging survey was conducted at five of the six boring locations (except B-4) to further evaluate fill materials above the water table (to protect the survey instrument from water damage). For the downhole survey, a 3-inch diameter schedule 40

PVC casing was installed into the borehole and, if a HSA was used, the auger was removed to facilitate downhole logging for thorium impact. After the installation of the casing, surveying was accomplished by lowering the survey meter to the bottom of the casing and slowly raising the meter and recording the readings in a field notebook. Readings were collected at approximate 1-foot intervals using a 1-minute time interval to obtain stable meter readings. If no elevated readings were noted, the casing was pulled from the hole for reuse. The remaining fill materials below the water table were screened directly from the split spoon samples collected for geotechnical purposes. The borehole was then sealed with grout to near the surface. Soil cuttings were placed in the top layer of the borehole and the hole was patched with asphalt.

Two gamma meters were utilized for the survey. The downhole survey was performed utilizing a Ludlum Model 2200 meter with an unshielded Ludlum Model 44-10 (2 x 2) thallium doped NaI gamma scintillation detector/probe. The split spoons were surveyed with a Ludlum Model 193 with a Ludlum Model 44-10 (2 x 2) shielded probe.

Prior to the survey, the site specific background level was established. The Ludlum 2200 established a downhole background level of 2,612-3,825 cpm, while the Ludlum 193 established a background level of between 2,000-3,000 cpm for surface surveying. If field screening readings were noted at levels three (3) or more times in excess of the general background conditions, a subsurface soil sample was collected by drilling a boring immediately adjacent to the suspect boring location and advancing it to just above the depth of the suspect reading. A split-spoon sampler was then advanced to include the depth interval that corresponded to the elevated reading. A soil sample was then retrieved from the sampler by the RSSI field technician, placed in a laboratory supplied container, transported under chain-of-custody procedures and analyzed at RSSI Laboratories in Morton Grove, Illinois. Soil cuttings generated during the drilling process from the suspect boring location were checked for elevated readings before returning them to the borehole. The soil cuttings did not exhibit evidence of radiological impact above background conditions.

The field screening readings of the split spoon samples were also noted to be within or below the established background levels. Downhole field screening readings were higher than the split spoon sample readings. However, only one location, B-6 at the 3-4 foot interval, indicated a reading in excess of 10,000 cpm, which was about 3 times greater than background. The elevated reading was encountered immediately beneath a 1-foot thick subsurface concrete structure (possibly an old foundation or floor). Confirmatory soil sampling was then completed immediately adjacent to the suspect boring location, in order to confirm the presence of soil impact. The results of the laboratory analyzed sample indicated that the sample contained less than 1 pCi/g, which is below the U.S. EPA Action Level of 7.1 pCi/g. Based on the analytical results, there is no evidence of thorium impacts above the USEPA Action Level at the borehole locations. The survey and analytical results are included as Appendix C. The locations of the 2012 borings are shown on Figure 2.

1.3 Site Geology

Previous soil borings installed at the Site in 2009 and 2012 for a Phase II and geotechnical investigation, encountered fill materials extending to approximate depths of between 12 and 20 feet bgs. The fill was observed to be composed of cinders, slag, sand, gravel, glass and metal pieces. The fill materials were underlain by native soils consisting of gray silty sand or gray to brown sand, to a depth of approximately 33 feet bgs. Underlying this unit was a gray silty clay unit from approximately 33 to 85 feet. Underlying this unit is a hardpan clay unit, with bedrock found at a depth of approximately 120 feet bgs. Bedrock was observed to be composed of dolomite. The boring logs from the 2009 and 2012 investigations are included as Appendix D.

Groundwater was encountered at the Site at a depth of approximately 12 to 14 feet bgs during the installation of the geotechnical borings in 2012. Previous measured groundwater levels from temporary well points collected during the Phase II Investigation in 2009, indicated water levels of 12.9 to 13.5 feet bgs, consistent with the 2012 investigation.

2.0 PERMITS

Necessary permits and sign-offs will be secured prior to the commencement of excavation activities onsite or in the ROW. Permits and sign-offs for work may include but are not limited to the following:

- Foundation permit; (Under General Contractor when the development plan is finalized)
- Excavation permit; (Under General Contractor when the development plan is finalized)
- Department of Environment Form No. DOE_ROW.01
- Board of Underground Review
- Street closure/sidewalk closure permit;
- Consultation with Department of Transportation;
- Meetings with utilities; and
- Consultation with the Chicago Department of Public Health

If screening work on the site is scheduled during the Christmas Holiday time, the City of Chicago maintains a moratorium against performing intrusive work in the streets and sidewalk areas located within the Central Business District from mid-November 2013 through January 2, 2014. Proposed radiological surveying on city owned property will have to be scheduled accordingly.

3.0 REFERRENCED DOCUMENTS AND USEPA MEETING

3.1 Referenced Documents

Previous radiological surveying has been completed at the Site in 2008, 2009 and 2012 as previously described. Relevant sections of the reports with surveying counts and locations of the survey areas are attached for reference. The referenced reports are listed below:

- *Preliminary Findings for Surface Gamma Radiation Survey, 401 East Ohio Street, Chicago, Illinois*, prepared by STS/AECOM, July 7, 2008 (revised September 3, 2008). (Surface walkover survey report, Appendix A)

- *Phase II Environmental Assessment, 401 to 415 East Ohio Street and 410 to 414 East Grand Avenue, Chicago, Illinois*, prepared by STS/AECOM, November 2009. (Soil sample and drilling spoil surveying, tables and soil analytical and reports included as Appendix B, boring logs in Appendix D).

- *Radiation Screening Summary Report – Geotechnical Exploration Oversight, 410 East Grand Avenue, Chicago, Illinois*, prepared by GaiaTech, Inc., March 2012. (Downhole and soil sample surveying summary in Appendix C, boring logs in Appendix D)

In addition to the practices and procedures outlined in this Workplan, the following activities will also be conducted in accordance with similar approved activities/procedures previously reviewed by USEPA for nearby properties (345 and 355 East Ohio Street, Chicago – i.e. 341 East Ohio) including procedures for:

- Gamma radiological surveying
- Soil stockpile sampling (If required, although no stockpiling is anticipated)
- Equipment calibration
- Personal air monitoring
- Decontamination procedures for equipment potentially contaminated with radiologically contaminated soils.

3.2 USEPA Preliminary Meeting

On May 23, 2012 a meeting was held at GaiaTech's office between USEPA representative Mr. Eugene Jablonowski, and representatives of Golub & Company and GaiaTech. The meeting focused on a discussion of the survey plans for the Site. The general approaches and procedures described in this plan were presented and discussed during the meeting. The USEPA indicated that the proposed approach appeared to be reasonable, pending review of the work plan.

4.0 LIST OF CONTRACTORS AND CONSULTANTS

The following contractors/consultants will be involved with the project:

GaiaTech, Inc. - Overall project planning, permitting, onsite coordination, USEPA submittals, coordination and project management.

Qualified Subcontractor for Soil Screening and Laboratory services – Qualified subcontractor (contracted by GaiaTech) will be providing additional technical assistance and experienced screening technicians and/or certified health physicists. The contractor will also provide personnel monitoring services and collect samples for follow-up analysis, as necessary. Qualified subcontractor to GaiaTech will also be providing laboratory and/or air monitoring services, as necessary. Laboratory services (if required) will include analysis of samples by NUTRANL or another USEPA approved method that utilizes performance evaluation (PE) samples provided by USEPA. In some cases, Gamma Spectroscopy will also be used as appropriate. As of the date of this Workplan, the Qualified Subcontractor is assumed to be RSSI.

Soil Screening Excavation Contractor - Qualified removal contractor (subcontracted to GaiaTech/the owner) will provide excavation equipment, operators and laborers as necessary during screening, trenching and remedial activities.

GaiaTech/Owner - Will be providing waste containers, logistics, monitoring, transportation and disposal of radiologically impacted waste generated during onsite and ROW activities (if necessary).

General Construction Contractor - The General Contractor for the proposed building construction will not be involved in the soil screening or removal activities. The building construction work will not proceed until after the on-site areas proposed for excavation have been screened. The General Contractor will not be allowed to operate in the area where screening or remedial activities are being conducted. Contractor may obtain general ROW and street permits for the specific use of GaiaTech and Radiological surveillance personnel and contractors.

5.0 INSTRUMENT CALIBRATION

Soil surveys will be conducted with a calibrated hand-held gamma-ray detector, such as the Ludlum Model 2200 Rate Meter-Scaler with 44-10, 2 x 2 inch NaI probe (unshielded and shielded) or Model 193 with the same probe. Calibration of the Ludlum instrument(s) will also be conducted for the probe that utilizes both a long and short cord; cord length can influence the response of the instrument and the corresponding threshold limit on the instrument. Threshold limits will be provided for comparison for each cord length. Each gamma meter/probe will be calibrated using calibration blocks from the former Tronox facility in West Chicago, Illinois.

Example calibrations sheets for instruments such as the Ludlum Model 193 and 2200 with a 2 x 2 sodium iodide probe are attached in Appendix E (SOP for instrument calibration). Calibration of the instrument will be conducted with USEPA personnel present or with their consent. A form will be completed with the survey results and will contain location, type of instrument, serial number, person doing the measurement, date and time of measurement. Each instrument will have a serial number and calibration results from the former Tronox facility.

6.0 PHASE I - PRE-CONSTRUCTION ACTIVITIES

During previous Site investigations, the onsite surface and subsurface fill had been evaluated for potential radiological impact through a surface survey and with numerous subsurface borings, respectively. To date, no evidence of confirmed radiological impact, exceeding USEPA Action Levels, has been identified at the Site. Nevertheless, since the Site has not been fully surveyed in 18-inch lifts, the potential still exists for radiologically impacted fill materials to be present that could pose a risk to construction workers. Therefore, the subsurface fill materials will be surveyed prior to construction activities. The screening of subsurface soils will be conducted in those areas identified for planned subsurface work. For purposes of this Workplan, the planned onsite subsurface construction activities include (but are not limited to) the installation of steel sheet piling and excavations related to caissons, grade beams, utilities, frost walls, storm water control features, elevator pits, etc. The proposed locations and depths of the various onsite excavations are illustrated on Figures 3, 4 and Appendix F. In addition, the surface soils on the Site will also be surveyed in accordance with this Workplan.

Subsurface screening/surveying is not proposed in other areas that are not planned for excavation or subsurface construction activities. However, if future changes in construction plans include subsurface activities in areas that have not been assessed these activities will not be conducted until such time that the proposed excavation areas have been screened in accordance with the procedures outlined in this Workplan.

Screening at the Site will be completed in two Phases. The first Phase, Phase I, will include surveying activities associated with both surface soils/fill and subsurface fills of the Subject Property prior to construction activities. The onsite activities will occur during the removal of the asphalt pavement but prior to other on-site general subsurface construction activities (i.e., those activities which could potentially cause the disturbance of, or potential worker exposure to, soils/fill that could potentially be contaminated with thorium). Pre-construction screening activities will include those areas on the Site planned for subsurface construction activities, as well as a general reconnaissance of surface fills/soils.

The second phase (Phase II, Section 7.0) will be completed during onsite construction activities and will include surveying in selected off-site areas (the ROW and street areas). Offsite screening in the ROW will be conducted first and street areas will be conducted concurrent with utility installation.

6.1 General Soil/Fill Screening

Prior to the commencement of subsurface construction work, either onsite or later within the ROW/street areas (see Section 7.0), an on-site field technician, under the direction of a certified health physicist (who may not be on-site), will conduct the field screening for the purpose of surveying those soils/fill to be excavated for the presence of radiological contamination. Soil surveying will be conducted with a calibrated Ludlum Model 2200 (Rate Meter-Scaler with 44-10, 2 x 2 inch NaI probe - unshielded and shielded) or Model 193 with the same probe. Calibration of the instruments is described in Section 5.0 with examples attached in Appendix E.

6.1.1 General Procedures for Asphalt Pavement, Concrete Foundations and Rubble

Although the Site surface has been previously surveyed[1], asphalt pavement can shield the underlying soils from effective surveying. After the removal of the asphalt pavement, the surficial fill/soils under the pavement will be re-surveyed. If impacted surface fill are noted this could be indicative of potentially impacted pavement.

During the removal of the pavement, the underside of the pavement and underlying soils will be screened. If the concrete or asphalt has a rough texture, attempts will be made to survey the corresponding indentations to provide adequate coverage of the material with the survey instrument. If the initial survey indicates readings are below the screening level correlating to the action level threshold 7.1 pCi/g, the rubble will be considered clean and disposed as construction debris. If the indicated readings are equal to or above the screening level correlating to the action level threshold 7.1 pCi/g, the rubble/pavement will be broom cleaned to remove obvious adhering soil and resurveyed. The broom used to clean off the contaminated soil will be disposed of with the soil. If the re-survey indicates that the material has been decontaminated, the rubble/pavement will be disposed as construction debris. If the re-survey indicates that the material has not been decontaminated, the rubble/pavement will be disposed as thorium contaminated in accordance with Section 8.0.

6.1.2 General Procedures for Surface Soil Screening

Surveying for pre-construction will include a general reconnaissance (surface screening) and additional subsurface screening in those areas proposed for new construction elements (e.g., foundations, storm water control, utilities, etc.). After the pavement has been removed, GaiaTech and the radiological technician will conduct a survey of the surficial fill at the Site. The survey will be conducted by first setting up a 5-meter grid across the Site. Nodal points for the intersection of the grids will be painted and numbered for reference. Readings will be collected at each nodal point by placing a Ludlum 2200 meter and shielded gamma probe (as described earlier) on the ground surface at the nodal point and allowing the reading to stabilize for 1 minute prior to collecting the meter reading. Meter readings will then be recorded in a field notebook for compilation in a report. The areas between each nodal point will also be surveyed by a walkover survey to assess for additional areas that may have a potential to be in excess of the threshold limit.[2]

If a reading is found to be at or above the screening threshold limit established for the survey meter that corresponds to the action threshold of 7.1 pCi/g, the nodal or area of screened surface soils/fill will be designated as a “Hot Zone” and staked/marked for future investigation/remediation. The surficial soils will remain in place until the surface

[1] Note: Based on the previous site wide survey by STS/AECOM in 2008, the data does not suggest the presence of radiological impact to the asphalt pavement materials.
[2] Depending on the project timeline, an alternative method may be implemented to conduct the initial survey of surficial soils. If implemented, this would include conducting the survey as the pavement is removed.

screening is complete.

Upon discovery of elevated field measurements, the USEPA will be notified. On the direction of the USEPA, a soil sample will be collected for quantification of the isotopes. (See section 11.0 for sampling methods). The soil sample will be analyzed at RSSI's laboratory in Morton Grove, Illinois or other qualified laboratory. The "hot spot" areas of the surface soil/fill contaminated with thorium will be covered by plastic sheeting and isolated with barricades and tapes. Radiologically contaminated soils, if excavated, shall be managed and disposed in accordance with Section 8.0.

If no confirmed or suspected radiological impact is detected during the surface screening survey, no further radiological testing/sampling or screening will be conducted on the surface soils/fill of the Site.

6.2 General Excavation Guidelines

The areas of proposed subsurface excavations and associated previous subsurface screening (Figure 4) will be located/measured and marked in the field (using tape, lathe, paint or similar method). The soils within each area will then be screened for radiological impact using a hand-held gamma-ray detector. Measurements will be made of the fill/soils in-situ by lowering the probe down the sidewalls and across the surface of excavation base to check for suspect soils as the excavation proceeds. The screening will be conducted in excavation lifts that will not exceed 18-inches. Soils/fill exhibiting field screening measurements that correlate to radiological levels in excess of 7.1 pCi/g total radium will be considered to be radiologically contaminated at first. These potentially contaminated soils will be confirmed by laboratory testing of a representative soil sample. As with the surface screening, as each lift is screened, upon discovery of fill materials at or above the field screening measurement that corresponds to an Action Level of 7.1 pCi/g, excavation will stop and a representative soil sample will be collected. The suspect soil will remain in place until the surveying is completed and further evaluation by US EPA is complete. Radiologically contaminated soils requiring excavation shall be managed and disposed in accordance with Section 8.0. Once suspect materials are removed and the USEPA has released the area, the screening will continue until the limits of the proposed excavation or top of the native materials are reached.

Soils identified as containing fill materials that are in areas (onsite and ROW) defined as having proposed subsurface activities (e.g., installation of utilities or other building foundations or structures) with the location of surveyed areas being measured and recorded. Urban fill materials onsite are only subject to subsurface radiological screening/surveying in those areas proposed for subsurface construction work (Note: Final locations and depths to be decided based on the final construction plans and are subject to change to those provided in Appendix F); other areas will not be surveyed (with the exception of surface soils) if no impact is found in the designated survey areas. Radiologically contaminated soils that are identified onsite will be excavated and removed for proper disposal (see removal, monitoring and sampling procedures in Sections 8.0, 9.0 and 10.0).

In some locations, where urban fill materials extend below the water table, the urban fill materials will be surveyed in the excavator bucket after they have been brought up to the surface by the excavator. In some cases, temporary shoring may also be needed to support the excavation and may include the use of trench boxes. Excavated soils will be both surveyed in the bucket and on the ground surface after they have been dumped out of the bucket. Surveying below the water table may continue until native soils are encountered (Note: Screening/surveying of excavated native soil materials, such as from deep caissons, is not required by this Workplan).

If the initial survey indicates readings correlating to a soil radiological level ***below*** the corresponding action level threshold 7.1 pCi/g of total radium, the soils will then be classified as non-radiologically-contaminated soils, consistent with Section 12.0 of this Workplan. This soils/fill can be managed/reused within the Site boundaries by the General Contractor without further radiological considerations. Excavated soils not utilized onsite may be disposed of offsite in an approved landfill as required by the Illinois EPA.

If the radiation survey indicates that screening levels are ***equal to or exceed*** the correlated action level threshold of 7.1 pCi/g, the area will be segregated as a "Hot Zone" and left in place and the USEPA will be notified of the discovery. A representative soil sample(s) will be collected in the area by the USEPA (or with USEPA oversight/approval) to quantify the concentration of radiological contamination (Section 11.0). The analytical report and sample will then be forwarded to the USEPA for potential subsequent confirmatory analysis performed by USEPA's radiological laboratory. After the quantification of the soil sample, if the soils are required to be removed, the radiologically contaminated soils will be excavated and placed in Super Sack® containers, stored onsite in a fenced area, and then shipped offsite for disposal in accordance with Section 8.0. If required by certain conditions, the Super Sack containers may be placed in a metal shipping container(s) with metal integrated top, and temporarily stored onsite, pending off-site disposal in accordance with Section 8.0. After removal of the fill contaminated with thorium, a verification soil sample(s) will be collected by the USEPA (or with USEPA oversight/approval) to confirm the impacted soils have been removed. If the analytical results of the verification sample(s) are below the threshold limit, the area will be released by the USEPA.

In general, the depth of the excavation will be dependent on the depth of the urban fill materials in the given location and/or the depth of the proposed subsurface work. The proposed excavation depths range between 4 and 15 feet bgs, depending on the type of construction work planned in each area.

6.3 Proposed Onsite Construction Activities

Onsite activities in designated new construction areas (e.g., caissons, sheet piling, elevator shafts, utilities, frost walls, etc.) will result in the disturbance of subsurface soils. Soils/fill will be surveyed to cover the depth and width of these proposed foundation structures. For deeper foundations, such as structures that will fully penetrate the fill

materials (i.e., caissons), surveying will be completed to the base of the fill materials. Other areas with shallower proposed foundation structures the fill materials will be surveyed to the proposed depth of the construction activities. The soils in each of the designated construction areas will be surveyed to the top of the water table or the base of the proposed construction activities. Fill soils excavated from below the water table will also be surveyed, using the procedures outlined in Section 6.2.

If suspect contamination is identified the fill will be segregated for sampling and potential disposal. If radiological contaminated fill is confirmed, the fill/soils will be excavated to meet the Action Level of 7.1 pCi/g prior to releasing the area to the General Contractor.

Described below are the specific activities that will disturb potentially radiologically contaminated soils at the Site.

6.3.1 Sheet Piling, Frost Walls and Elevator Pits

Current construction plans call for the installation of steel sheet piling near a portion of the Site perimeter (frost wall) and for the perimeter walls around the elevator pits (4 areas). The sheet piling will likely be placed along the perimeter of the property boundary for construction of frost walls (Figure 3). Sheet piling installation along the perimeter may also require the removal of some of the adjacent concrete sidewalks and old foundations.

Frost Wall – Soils/fill will be surveyed around the Site perimeter and up to the existing edge of the sidewalk. The width of the excavation perpendicular to the sidewalk will be 6 feet, which should provide adequate clearance for construction activities to occur in this area. The depth of the frost wall will not exceed 4-feet in depth. Surveying will be conducted to a depth of 5.5 feet. Some of the excavations may be extended to accommodate surveying caissons located near or adjacent to the proposed frost wall. At the caisson locations surveying will be completed to the top of the native soils. Actual depths will depend on the zone and may in some cases extend deeper (See Figure 4).

Sheet Piling for Elevator Pits – Sheet piling will be installed for the construction of four onsite elevator pits. Sheet piling will also be installed along the eastern property boundaries. Sheet piling is being installed here to provide support for construction activities. Soils/fill within the sheet piling enclosure area will be excavated to at least the top of the water table in this area, to provide the necessary clearance for elevator pit construction. Surveying will be completed in the location of the sheet piling and for those soils within the sheet piling enclosures. The area inside the sheet piling locations will also be surveyed to the base of the fill materials (i.e., top of the native soils).

6.3.2 Caissons and Grade Beams

The future installation of caissons has the potential to generate radiologically contaminated soil cuttings from the upper 15 to 20-feet of soils (estimated maximum fill material depth). As such, each caisson location will be surveyed with 18” lifts to the base

of the fill materials. This may include surveying materials below the water table. Soils requiring surveying below the water table in the caisson locations will be surveyed by removing soils in the excavator bucket and surveying soils directly in the bucket first, then gently dumping the soils on the ground surface for further surveying.

Grade Beam depths vary between 4 feet and 8 feet, with a 14-foot deep cut at the tower elevator core. Accordingly, surveying will be completed to a depth of 5 to 16 feet, depending on the grade beam depth to provide for the installation of the grade beams without disturbing, or exposing workers to, potentially radiologically impacted soils.

6.3.3 Onsite Utilities

New utility conduits/connections are proposed for the new building construction. Utility trenches for hook up of electrical, cable, gas, phone, water and sewer will be surveyed to the proposed installation depth plus a safety factor (not less than 1.5 feet).

6.3.4 Other Miscellaneous Excavations

Site development activities may require other subsurface excavations (e.g., subgrade storm water control feature). These areas will be surveyed to the proposed installation depth.

No subsurface work shall be conducted by the General Construction Contractor within these areas until fill within the vicinity of the proposed work have been surveyed under the direction of a certified health physicist.

7.0 PHASE II – SCREENING DURING CONSTRUCTION OFFSITE

The soils/fill in selected adjacent offsite ROW and street areas will likely be surveyed during construction activities and after the completion of onsite surveying (Phase I); the surveying in the ROW area will be designated as Phase II of the surveying project. Logistically, Phase I is planned such that the General Construction Contractor will mobilize right after the site interior screening has been completed. After securing the site and the ROW, the ROW screening can commence. The ROW and street soil survey will be limited to those areas were proposed subsurface work will occur. The depth and location of the proposed work has not been finalized by the Site Owner as of the date of preparation of this Workplan. Once the locations of proposed excavations (e.g., new sidewalk, tree planter, utilities, etc.) are determined, these areas will be surveyed.

7.1 General Procedures for ROW and Street Soils

Screening will be conducted for offsite areas identified for planned subsurface work only. Other areas that are not planned for excavation or construction activities will not be surveyed, unless warranted based on future changes in planned construction activities. The planned offsite construction activities will include (but are not limited to) the installation of utilities, removal of selected concrete sidewalks, driveways and the installation of landscaping planter areas. In general the depth of the excavation will be dependent on the depth of the proposed structure or utility installation at the given location. The areas of proposed subsurface excavations will be located/measured and marked in the field (using tape, lathe, paint or similar method). Excavation depth is not expected to exceed 4 to 10 feet bgs. Based on the current depth of the planned construction activities, none of the areas will require screening below the water table.

Urban fill materials offsite are only subject to subsurface radiological screening/surveying in those areas proposed for subsurface construction work (Note: Final locations to be decided based on final construction plans). Other areas between these areas will not be surveyed.

Selected soils/fill excavated within the ROW will be initially surveyed by a field technician with a hand-held gamma-ray detector. Fill/soils in areas defined as having proposed subsurface activities will be surveyed in 18-inch lifts. Readings will be made of the fill/soils in-situ by lowering the probe down the sidewalls and across the base of the excavation to check for suspect soils as the excavation proceeds.

If the initial survey indicates readings that correlate to a radiological level in the fill is *below* 7.1 pCi/g of total radium, the fill/soils will then be classified as non-radiologically-contaminated soils, consistent with Section 12.0 of this Workplan. Installation of structures or utilities can then proceed without further radiological considerations. Soils/fill excavated from these areas that are not placed back into the screening excavation or reused onsite will be disposed of offsite in an approved landfill as required by the Illinois EPA. The excavation will then be backfilled with “clean” fill/virgin materials (as allowed by City of Chicago codes), compacted in place and finished with a temporary concrete surface patch.

If the radiation survey indicates radiological levels ***equal to or exceed*** the corresponding action level threshold of 7.1 pCi/g, the area will be designated as a "Hot Zone" and left in place and the USEPA will be notified of the discovery. A representative soil sample(s) will be collected in the area by the USEPA (or with USEPA oversight/approval) to quantify the radiological impact (Section 11.0). The sample will initially be analyzed by the designated radiological laboratory for the confirmation of the presence of radiological contamination. The resultant report and sample will then be forwarded to the USEPA for review and potential subsequent confirmatory analysis performed by USEPA's radiological laboratory.

If the analysis of the soil sample confirms the existence of fill contaminated with thorium, the fill will be shielded (see section 7.2.2 for shielding procedures) or excavated for disposal (see removal and sampling procedures in Sections 8.0 and 11.0). Sidewall or base contamination encountered in a ROW utility trench will be protected by the placement of shielding materials and a tarp and/or plastic sheeting will be used to demarcate contaminated material. After the installation of shielding materials and monitoring of the exposure in the trench and confirmation of safe working levels, workers will be allowed to enter the excavation for utility installation.

No stockpiling of radiologically-contaminated soils will be conducted. As discussed in Section 6.0, excavated soils will generally be placed in Super Sack® containers or lined metal containers for shipment and off-site disposal in accordance with Section 8.0. For excavation of smaller amounts, the Super Sack® containers will be fenced and secured on the subject Site, with appropriate warning signs.

After removal of the impacted soil area, a verification soil sample(s) will be collected by the USEPA (or with their oversight/approval), see verification sample procedures Section 11.0). If the results are below the Action Level, the area will be released by the USEPA.

After the area is released and depending on the utility installation plans, utilities may be immediately installed or the excavation will be backfilled with "clean" materials as previously described.

7.2 Proposed Construction activities in the ROW

Various off-site construction activities, including the removal of parts of the adjacent concrete sidewalk, and installation of new utilities, trees and planters in the ROW, will disturb fill potentially contaminated with thorium. Although the exact construction plans have not been finalized as of the date of this Workplan, some disturbance of the soils in the ROW and Street are anticipated. After the GC secures the site perimeter (including the sidewalks), soils in the ROW/sidewalk area will be surveyed to an appropriate depth corresponding to the depth of construction activities in the area. The surveying of the sidewalk area will likely occur soon after the completion of Phase I (onsite surveying). A description of these activities is listed in the following sections.

7.2.1 Concrete Sidewalk Removal

Site development will require the removal and subsequent replacement of sidewalks overlying the right-of-way along portions of the north, south and west perimeter of the Site. A qualified contractor will remove and handle the concrete in accordance with the procedures outlined in Section 6.0. After the removal of overlying concrete, surface soils/fill will be surveyed by a field technician. If the surface soils are determined to be radiologically contaminated, soils will be removed for disposal as explained previously in more detail in section 7.1.

7.2.2 Utility Installation

Site development will require the installation of new utilities within the ROW. Proposed utility line locations have not been determined, but will be installed through one or more of the adjacent sidewalk areas. For each of these locations, the utility contractor will remove concrete and soils overlying the utility line location to the required depth of utility installation. Soils will be surveyed, excavated and handled in accordance with Section 7.0. The radiation surveying will be concurrently with the installation of the utility in the street. Surveying will be completed on the ground surface prior to excavation as well as *in-situ* along the floor and sidewalls of the excavation and in the bucket as soils are removed from the excavation (if necessary).

As the excavation progresses in 18-inch lifts, the floor and walls will be surveyed by a field technician for radiation. If the excavated areas are found to contain fill contaminated with thorium, GaiaTech will promptly notify the USEPA and USEPA will make a determination at that time. It may be necessary to remove additional contamination prior to backfilling the trench for utilities. Radiological and non-radiological soils will be disposed of as outlined in Sections 8.0 and 12.0, respectively.

Upon confirmation that radiation levels meet the designated 2 mrem/hr criteria, the General Construction Contractor or a specific trade will be able to install utilities as required and backfill the excavation without further environmental oversight. If deemed appropriate by USEPA, the placement of suitable shielding materials may be required prior to installation of utilities and backfilling. Suitable shielding materials include, but are not limited to, “clean” soils/gravel, plywood, geotextile, and/or concrete pavement. After the placement of shielding materials (if used), the area will be resurveyed for radiation to document that radiation levels within the trench are below 2 mrem/hr.

If the General Construction Contractor will install the utilities at a later date, each of the utility trenches will be backfilled with “clean” sand or crushed stone to within 18 inches of the subsurface. The remainder of the excavation will be capped/paved with temporary concrete until the utility contractor can install the utility conduits the General Construction Contractor will be free to a later date to install the utilities as required and backfill the excavation without further environmental oversight.

7.2.3 Installation of Landscaping Planter Areas

Several landscaping planter areas are currently proposed within the ROW. For each of these locations, a qualified Soil Screening Remedial Contractor will remove concrete sidewalks and soils overlying the proposed landscaping planter area and survey the fill materials to a reasonable depth that corresponds to development plans. The concrete and soils will be surveyed, excavated and handled in accordance with Section 6.2. Thorium contamination if encountered will be excavated, removed and disposed of as previously stated.

If no elevated levels are detected, the General Construction Contractor or landscaping contractor can plant the trees as required and backfill the excavation, without further environmental oversight.

7.3 Street Utility Installation

Site development will require the installation of new utilities within the ROW that will extend into the adjacent street area. The excavation of the street trenches and adjacent ROW area will be installed at the same time. Proposed utility line locations have not been determined as of the date of this Workplan. The radiation surveying will be done immediately prior to utility installation in the street areas. For each of these locations, a contractor that is installing the utilities will remove concrete and soils overlying the utility line location to the required depth of utility installation. Soils will be surveyed and handled in accordance with Sections 7.1 and 7.2. Excavated soils will be handled in accordance with sections 8.0 and 12.0, as warranted.

No subsurface work shall be conducted by the General Construction Contractor within these areas until soils within the vicinity of the proposed work have been surveyed under the direction of a certified health physicist.

8.0 RADIOLOGICALLY CONTAMINATED SOIL HANDLING & DISPOSAL

An area confirmed by laboratory analysis to contain radiologically contaminated soils/fill will be excavated. During this work, the soils will be surveyed by a qualified field technician using a Ludlum gamma meter and probe to determine the extent of the contaminated area. After the soils/fill contaminated with thorium is removed from the excavation, a confirmatory/verification soil sample will be collected as described in Section 10.0.

Soils identified as radiologically contaminated in an area where the proposed re-development plan will disturb the subsurface soil shall be removed from the impact area and placed in a Super Sack container (1 cubic yard or larger) for direct shipment, after a sufficient number of Super Sack containers are accumulated for a truck load. The Super Sack containers can be temporarily stored on site in a fenced or taped off staging area with appropriate warning signs placed on the staging area. If required by certain conditions, the Super Sack container(s) may be placed directly into a plastic lined covered steel shipping container suitable for rail shipment and/or trucking to an approved landfill. Before off-site shipment, the containerized thorium-contaminated soils will be placed in a fenced area (located on the subject Site) and the container will be secured with appropriate warning signs placed on the container and the surrounding enclosure. Materials will be stored for as short a period as possible until shipping can be arranged reasonably. It is anticipated that in most cases, a truckload of Super Sack containers can be shipped out within a few days of the landfill approval.

Contractors conducting work on the site during these activities will be required to adhere to Health and Safety stipulations in Appendix G, as well as applicable federal, state and local regulations concerning activities conducted at the Site. Appropriate air monitoring will also be conducted as stipulated in Section 10.0, during most excavation activities. Confirmation and verification sampling will be conducted in accordance with Section 11.0.

The Site Owner will be responsible for supplying Super Sack containers or other approved shipping containers and the transportation and disposal of radiologically contaminated materials removed from the Site. That responsibility includes health physics personnel to survey transport containers, subcontractor transportation and logistics personnel, and documentation of shipping and disposal, according to federal and state regulations. It is anticipated that the Super Sack containers, shipping papers, logistics, monitoring and transportation will be provided by the approved disposal facility. When sufficient material has been accumulated to cost effectively transport for disposal or surveying has been completed, the Super Sack containers or other approved containers will be properly transported off-site for disposal by a qualified contractor to the designated and approved disposal facility.

Work involving the excavation and/or relocation of radiologically contaminated soils shall be conducted by a qualified Soil Screening Remedial Contractor, utilizing workers with appropriate OSHA 40-hr HAZWOPER training.

9.0 HEALTH & SAFETY PLAN

Work involving the excavation, handling, or disposal of potentially radiologically contaminated soils/fill or identified radiologically contaminated soils will be conducted in accordance with the attached Health & Safety Plan (Appendix G). Soil screened with a hand held instrument will not be considered as a final determination of soil concentration, but will provide the necessary information on working conditions and the need for shielding or soil removal. Soil concentrations measured with an appropriate laboratory instrument, such as a sodium iodide counter used with the NUTRANL equipment or with germanium counters used with gamma spectroscopy equipment, will be considered as a final determination.

Potentially radiologically contaminated soils are defined as follows:

- Soils, onsite, in the street, or in the ROW, that have not been surveyed by a field technician, under the direction of a certified health physicist, (or previously by USEPA personnel), using a calibrated hand-held gamma-ray detector.

Identified radiologically contaminated soils are defined as follows:

- Soils onsite, or in the ROW, which have been surveyed by a field technician, under the direction of a certified health physicist, using a calibrated hand-held gamma-ray detector and are found to be above the equivalent threshold limit value correlating 7.1 pCi/g total radium. Soils must also be quantified in a laboratory to contain total thorium above the USEPA Action Level of 7.1 pCi/g.

10.0 AIR MONITORING

Air monitoring will be conducted only during remediation of the thorium contaminated soil. Personnel air monitoring will be conducted during activities involving the excavation or handling of radiologically contaminated soils in accordance with the attached Health and Safety plan and as described below. No air monitoring will be conducted if no suspect or confirmed radiologically impacted soils are encountered or if the contaminated area is small.

The purpose of air monitoring is to measure the concentration of radioactive airborne dust that could be generated and emitted into the air as a result of the excavation of impacted soils. Air monitoring will provide data to identity the levels in the air at and surrounding the Site, in order to mitigate potential exposures to workers or people near the Site. The data collected during air monitoring will be used to document worker or public safety, provide control information and to evaluate work procedures and worker personal protective equipment (PPE). Air monitoring data will be used to evaluate work procedures in order to keep exposures for both workers and the general public as low as reasonably achievable (ALARA).

10.1 Regulatory Requirements

Excavation activities will be conducted in accordance with this work plan and the attached health and safety plan. Air monitoring will be in compliance with air effluent standards as specified in 10 Code of Federal Regulations (CFR) Part 20 (Unless more restrictive in 32 IAC 340), which are applicable to dose limits for individual members of the public. Average airborne concentrations will not exceed the specified limits in Table 2 of Appendix B to 10 CFR Part 20. Both worker exposure and airborne particulates and effluent release limits will be based on the most restrictive radionuclides levels, thorium 232.

10.2 Air Monitoring Activities

Air monitoring activities will be conducted onsite to monitor the exposure of workers to alert Site personnel to a potential release of airborne contaminants that may affect persons or property on the Site. Onsite monitors will be placed on workers or around excavation areas or placed along the perimeter of the Site. Air monitoring activities will be setup maintained and reported by the soil screening contractor with oversight by a certified health physicist. USEPA guidelines will be used whenever feasible in establishing sampling locations, quality control, height of the sampling above the ground and sampling orientation. Hi volume samplers will be used for excavation perimeter monitoring and low volume monitors for personal monitoring.

10.3 Air Monitoring Analysis

After collection of the air samples, the samples will be transported under proper chain of custody procedures for analysis by the RSSI Laboratory in Morton Grove, Illinois or other approved laboratory.

11.0 THORIUM CONFIRMATION AND VERIFICATION SAMPLING

Sampling will be conducted as follows: 1) to confirm suspected radiologically contaminated soils/fill; and 2) for verification that the soils/fill in excess of the Action Level has been removed. Prior to sampling an identified impact area, each area will be roped off as a "Hot Zone" to prevent non-authorized personnel from entering the area during sampling activities. Personnel will be required to complete the sampling activities in the designated impact area utilizing modified Level D PPE. This will include booties, rubber gloves and Tyvek suites. During potential exposure time in the impact area, personnel will be monitored using radiation-monitoring badges. Personnel air monitoring will generally only be needed during longer-term remedial activities. Air monitoring will be conducted and monitored by a trained and qualified contractor.

After fill has been identified as containing thorium above Action Level of 7.1 pCi/g, the USEPA will be notified by telephone that an area with apparent soil impact was encountered. Generally, the USEPA will then be present during the sampling to document that the fill/soils exhibiting the highest level of impact are collected for analysis. Soil sampling will be accomplished by screening for the highest levels and then excavating the contaminated soils with a stainless steel scoop. The soils will then be placed in a large stainless steel bowl, mixed and sifted to remove the larger aggregate and fill materials. Prior to placing the sifted soils in a laboratory jar, the contaminated soils will be checked again with the Ludlum meter to document that the highest levels were collected for analysis. The soils will then be placed in laboratory supplied containers (Marinelli container), transported under chain of custody procedures and analyzed at RSSI Laboratories in Morton Grove, Illinois. The sample containers will have a USEPA seal placed on the jar.

When sampling has been completed, sampling tools will be wiped clean with towels and checked for residual radiological impact with a Ludlum Model 3 with a pancake probe. Personnel will also be checked with the pancake meter to document that they were decontaminated. The PPE and cleaning towels will be disposed of with the contaminated soil in a Super Sack container for offsite disposal.

Initial confirmation of contaminated soil samples and post remedial confirmatory/verification soil samples will be collected utilizing the same techniques. If collected, confirmatory soil samples provide documentation that the impacted area has been adequately cleaned up; a confirmatory sample release form will be sent to the USEPA for that specific release area so the Agency can designate the remaining soils as below the Action Level and release the area.

It is understood that the USEPA reserves its authority to perform the radiological survey work and sample collection. The samples will undergo initial analysis by GaiaTech's radiological contractor's laboratory. After this initial analysis, the samples will be sent to the USEPA for potential subsequent analysis and confirmation by USEPA's radiological laboratory.

12.0 NON-RADIOLOGICALLY CONTAMINATED SOIL DISPOSAL

Previous results obtained during past sampling activities, indicated that the near surface fill/soils exhibited concentrations of various constituents rather thorium. This included various PNAs and lead at concentrations over IEPA TACO Tier 1 remediation objectives. The excavated soils would most likely be considered non-hazardous special waste or clean construction and demolition debris (CCDD) for disposal purposes. This section outlines sampling protocols for those excavated spoils that 1) do not exhibit evidence of radiological contamination, and 2) are to be disposed offsite.

In accordance with USEPA waste profiling requirements, a series of samples will be collected for required landfill parameter analysis. This includes both a “composite” and a “grab” sample. The “composite sample” will be collected that is representative of the excavated fill materials. In addition, a “grab” sample will also be collected from the fill materials. After collection, the soil samples will be placed in clean laboratory supplied containers. The samples will be secured in a sample cooler and preserved with ice. Under strict sample chain-of-custody procedures, the samples will be delivered to a local qualified and certified analytical laboratory for analysis.

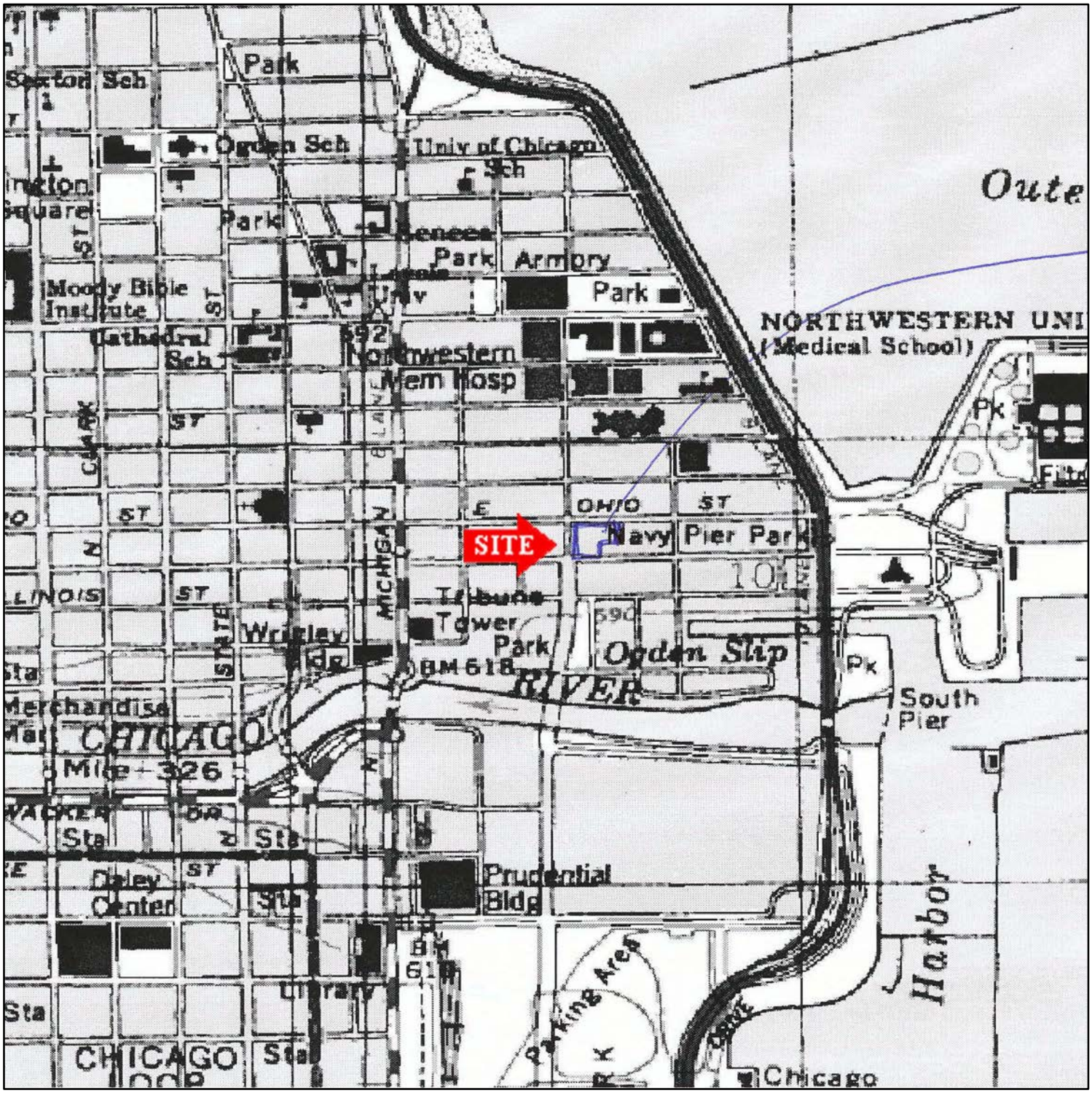
The “composite” sample will be analyzed for the following parameters: SVOCs, Target Analyte List (TAL), reactive sulfide, reactive cyanide, herbicides, pesticides and polychlorinated biphenyls (PCBs). The “grab” sample will be analyzed for VOCs. The analyses will be in accordance with USEPA approved methods.

The analytical results will be used for landfill profiling to provide for the disposal of the excavated soils as Special Waste.

13.0 NEW IMPORTED BACKFILL MATERIALS

Incoming backfill material to be used at the Site or in the ROW/street area will be screened to measure its total radium concentration. Incoming backfill materials will not exceed 3.7 pCi/g and on-site excavated soils can be re-used so long as it is under the Action Level of 7.1 pCi/g, total radium. No testing will be required if CA-6 or CA-1 (or crushed stone) or “clean” virgin sand (utility trenches) is used as backfill.

Figures



Scale 1: 24 000
Contour Interval 5 Feet

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

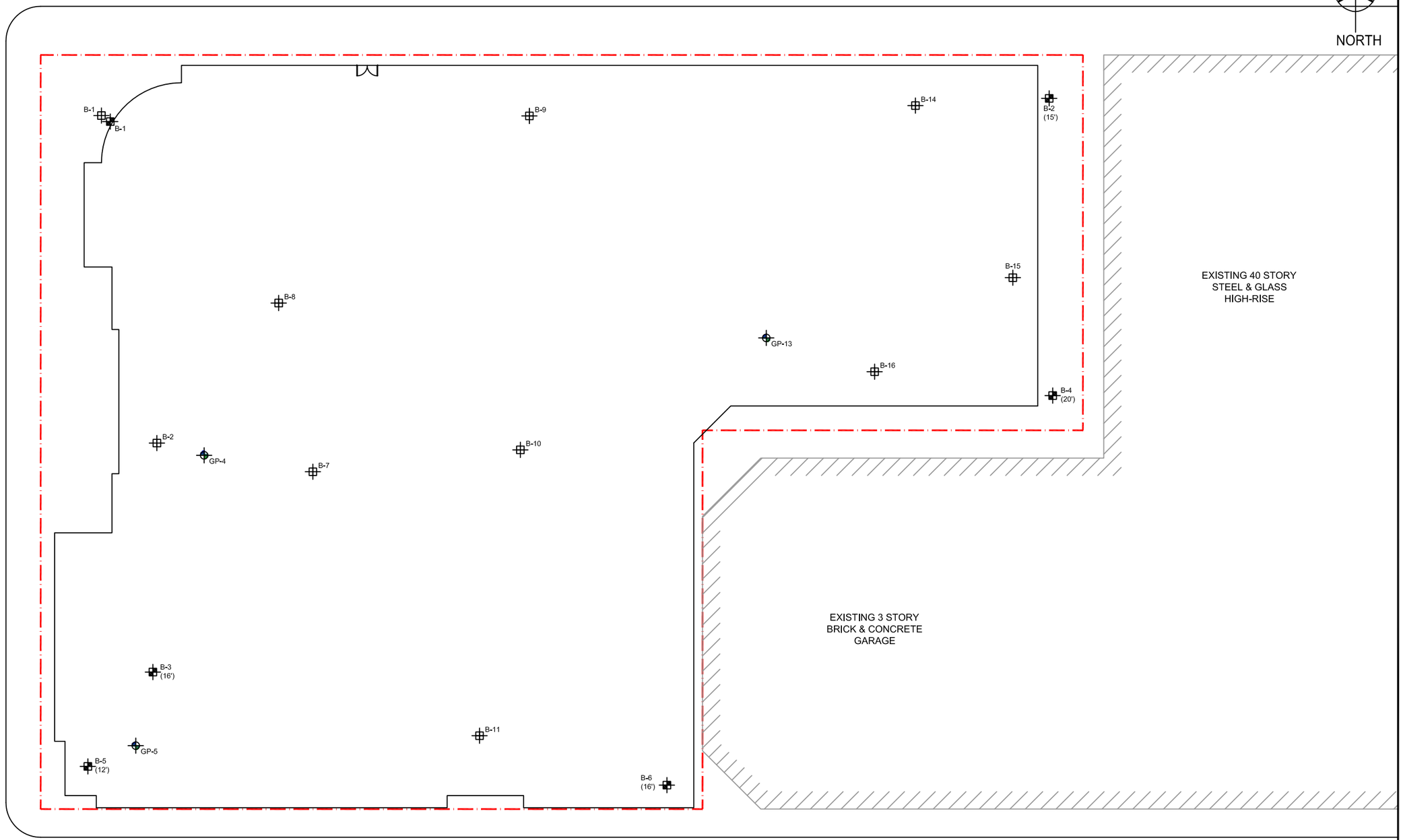
Quadrangle Location

UNITED STATES GEOLOGICAL SURVEY
DEPARTMENT OF THE INTERIOR/USGS
CHICAGO LOOP QUADRANGLE
ILLINOIS
7.5 MINUTE SERIES (TOPOGRAPHIC)
2012

410 East Grand Avenue
Chicago, Illinois
Project No. A9012-400-1

Site Location Map

GaiaTech



0 15 30

LEGEND

SITE BOUNDARY

2009 PHASE II BORINGS

2012 GEOTECHNICAL BORINGS
(12') - APPROX. FILL THICKNESS

DESCRIPTION:	DRAWN:	FILE:	FIGURE: 2
GHB 630, LLC. 401 EAST GRAND AVENUE CHICAGO, IL	CS	A9012-400-1	FORMER BORING LOCATIONS & FILL DEPTHS
	SCALE: GRAPHIC		GaiaTech
	DATE: 5/8/12		

EAST OHIO STREET

NORTH

NORTH McCLURG COURT

DEMO GATES/BOOTH

CAISSON LOCATION

ELEVATOR PIT

ELEVATOR PIT

UTILITY TRENCH

4' DEEP X 2' TRENCH

1' X 4' FROST WALL (TYP.)

EXISTING 40 STORY
STEEL & GLASS
HIGH-RISE

ELEVATOR PIT

ELEVATOR PIT

GRADE BEAMS
6' DEEP X 5' WIDE

EXISTING 3 STORY
BRICK & CONCRETE
GARAGE

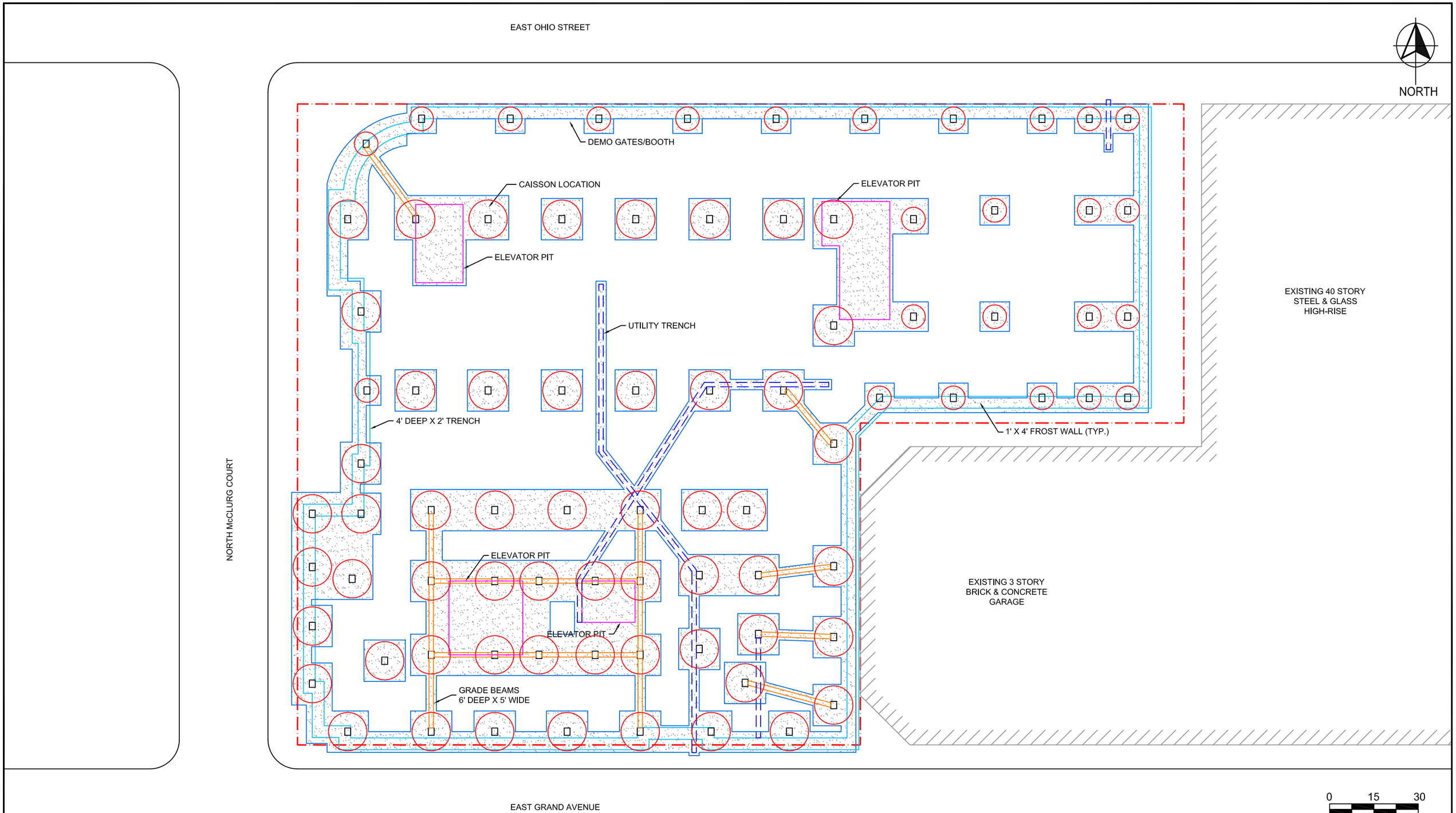
EAST GRAND AVENUE

0 15 30

LEGEND

SITE BOUNDARY

DESCRIPTION:	DRAWN:	FILE:	FIGURE: 3 SITE PLAN WITH PROPOSED FOUNDATION STRUCTURES & NEW UTILITES
GHB 630, LLC. 401 EAST GRAND AVENUE CHICAGO, IL	CS	A9012-400-1	GaiaTech
	SCALE: GRAPHIC		
	DATE: 5/8/12		



LEGEND

SITE BOUNDARY

DESCRIPTION:	DRAWN:	FILE:	FIGURE: 4 PROPOSED SCREENING EXCAVATION AREAS
GHB 630, LLC. 401 EAST GRAND AVENUE CHICAGO, IL	CS	A9012-400-1	GaiaTech
	SCALE: GRAPHIC		
	DATE: 5/8/12		

Appendices

Appendix A

2008 Surface Survey Results – STS/AECOM

STS | AECOM

STS
750 Corporate Woods Parkway, Vernon Hills, IL 60061
T 847.279.2500 F 847.279.2510 www.sts.aecom.com

July 7, 2008
Revised September 3, 2008

Ms. Nancy Ardell
Associate General Counsel
Rehabilitation Institute of Chicago
345 East Superior Street, O-853
Chicago, Illinois 60611

Privileged and Confidential - Attorney Work Product

RE: Preliminary Findings for Surface Gamma Radiation Survey at 401 E. Ohio St. Rehabilitation Institute of Chicago Parking Lot, Chicago, Illinois - STS Project No. 200802795

Dear Ms. Ardell:

STS is providing our findings from surface radiation survey activities on June 21 and 22, 2008 and later on July 22, 2008 for the above referenced site. The survey is now substantially complete since only two remaining parking stalls were occupied on July 22, 2008..

This letter generally describes our findings where the survey was completed. The survey methods and findings are described below:

1. STS received an ALTA survey from which a survey methodology was developed which is generally consistent with surface survey practices associated with the Streeterville area. Ahead of the survey date on June 19, a 5 x 5-meter grid spacing was marked on the interior of the parking lot along the north, east, south, and west fencing. The site is approximately 300 feet (east-west) x 109 feet (north-south) on the northern half of the site, and 200 x 109 feet on the south side, resulting in an overall alpha-numeric grid that extends from "A – S" (east-west) and "1 – 14.5" to the south from the McClurg Ct. and Ohio St. intersection (refer to Figure 1).

2. On June 21 the east end of the parking lot was mostly vacated, and on June 22 the west end of the parking lot was mostly vacated to allow surface radiation surveying above the asphalt. About 5% of the parking stalls remained occupied on both screening days. Later on July 22, 2008, the remaining parking stalls except 2 were surveyed and added to Figure 2 & 3. The July 22, 2008 data is highlighted. The two occupied spaces that were never surveyed are noted on the grid with a "C" (Figures 2 and 3).

   Radiation screening was performed using a Ludlum Model #2221. Measurements were generally recorded within each designated 5 x 5-meter grid. Maximum screening measurements were compared to the established unshielded instrument cutoff value of 18,073 counts per minute (cpm) which is correlated with the USEPA cleanup threshold of 7.1 pico-curie/gram (pCi/g) total radium. No values above the USEPA threshold were recorded.

   The maximum value encountered was 10,600 cpm (more than one half the threshold value). Some of the higher readings were observed near adjacent brick structures. Brick is made from clay minerals which are commonly enriched in radioisotopes. Thus, the occurrence of higher gamma readings adjacent to the brick is expected. From our findings, it appears that the soil/fill material below the pavement surface (first 12-inches) is not likely impacted by material with significant radioactivity. Below the initial 12-inch depth, shielding from the pavement and soil prevents accurate measurement of the radiological properties of the subsurface soils 12 inches below the pavement and the determination on whether radiological impacts may or may not be present.

From previous borings at the site, we generally expect that the urban fill depths may range from 8 to 10 feet. The urban fill material is generally the soil matrix where radiologically impacted materials are discovered. The surface survey techniques utilized to check the site conditions essentially surveyed about 10% or less of the probable urban fill volume at the site as described in this report. The two remaining parked car obstructions prevented complete access to all surface areas as illustrated on the figures.

3. Maximum and corner values were recorded for each grid. The maximum grid values and grid corner values are shown on Figures 2 and 3, respectively.

Qualifications

The gamma radiation survey findings for the Rehabilitation Institute of Chicago parking lot were determined at the times and under the conditions described in this letter. The findings are only representative for the shallowest urban fill conditions (less than one foot depth) expected to exist on the property. The deeper urban fills have not been characterized by the surface survey method. No warranty is expressed or implied by the findings presented.

It has been a pleasure to serve you. If you have any questions or comments related to this letter and findings, please feel free to call.

Sincerely,

Jaclyn Webb
Assistant Project Scientist

Douglas Hermann
Principal

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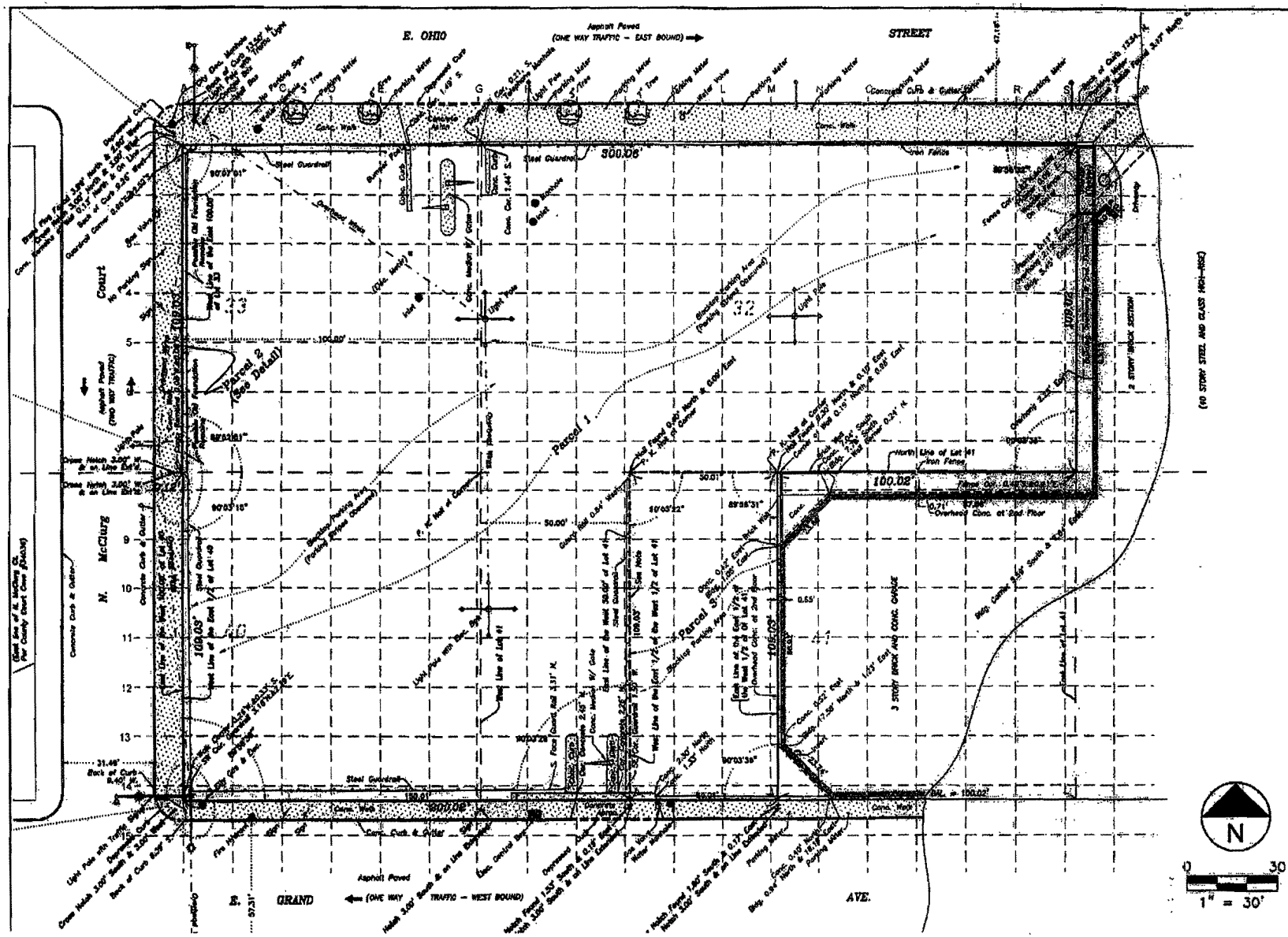
cc: Jennifer Nijman, Nijman and Franzetti, LLP

Attachments: Figure 1 - Site Plan
Figures 2 and 3 - Gamma Radiation Survey Results



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RESEARCH INSTITUTE

Drawn:	JGM	06/20/2008
Checked:	DEF	XX/XX/2007
Approved:	GHI	XX/XX/2007
PROJECT NUMBER	200802795	
FIGURE NUMBER	1	

Figure 2
Surface Maximum Gamma Survey Results
(Counts Per Minute)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	5,000	5,200	5,500	5,900	7,600	6,900	7,200		6,200	7,100	6,800	9,800	7,400	7,300	6,100	6,900	7,500	7,000	
2	8,300	8,000	6,500	6,600	6,000	6,400	6,300	5,800	6,300	7,400	6,300	6,800	7,000	6,800	7,800	7,100	7,100	7,700	
3	6,900	7,800	6,200	6,400	5,800	6,700	7,200	6,100	5,600		6,400	7,600	7,500	7,500	8,000	8,300	8,100	8,400	
4	7,800	6,700	6,200	6,200		6,500	6,500	6,000	5,700		6,800	7,700	7,300		7,700	9,600	8,900	8,000	
5	6,800	5,700	5,900	5,200	5,500	5,000	5,100	6,200	5,800	5,600	6,200	6,600	6,400		7,500	7,300	6,800		
6	5,400	7,200	5,200	6,200	5,300	5,200	4,700	5,000	5,500	5,800	7,100	6,000	8,300	6,300	7,300	7,200	7,400		
7	5,500	6,200	5,900	4,800	5,800	4,900	4,700	4,700	6,300	5,800	5,900	9,500		9,200	8,000	7,100			
8	6,000	5,600	5,800	5,900	5,800	5,300	4,900	5,100		9,500	6,900	9,800							
9	4,100	5,100	4,700	5,900	5,200	5,000	5,100	4,800		6,700	6,700	9,700							
10	5,600	4,800	5,600	5,200	4,700	4,500	5,700	4,900		6,500	6,300	9,500							
11	5,400	4,200	8,900	5,700	4,800	5,500	5,100	5,300	5,700	5,700	6,400								
12	6,000	5,700	4,800	4,600	4,800	5,000	5,100	5,500	5,700	5,500									
13	4,600	5,400	5,300	5,200	4,500	4,500	4,400	4,800	5,200	6,200		9,100							
14	4,700	5,100	5,500	4,800	3,800	3,600	4,100	4,200	5,100	5,400	6,300	6,700							
15																			

Measured with Ludlum 2221
Serial # 172039
Probe # 174469
EPA Threshold Value 18,073 cpm (Unshielded)

Denotes area previously occupied by a vehicle. Radiological survey recently performed.

Property Border

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Figure 3
Surface Corners Gamma Survey Results
(Counts Per Minute)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	6,200	4,900	5,800	5,400	5,800	6,000	6,400	5,900	6,300	6,400	7,000	5,800	8,000	6,400	6,100	7,200	7,200	6,700	5,900
2	6,700	5,800	5,500	5,700	4,400	5,000	5,600	5,100	6,100	5,900	6,400	6,300	6,800	6,600	7,200	6,400	6,200	6,700	6,100
3	5,200	5,200	6,200	6,100	5,000	5,300	5,500	4,600	4,400	5,200	5,900	6,300	6,100	6,200	6,700	7,000	7,000	6,600	7,800
4	5,200	7,100	7,100	6,000	5,100	5,300	5,200	5,500	4,800	6,200	5,600	6,300	6,700	7,300	7,500	7,100	7,700	7,800	7,200
5	6,700	7,100	8,700	5,100	7,300	5,700	5,800	5,000	5,100	4,500	5,100	5,800	6,100	7,000	6,800	7,300	6,700	6,500	7,400
6	4,800	6,400	5,300	6,200	5,000	5,400	5,000	4,300	5,200	5,100	6,300	6,300	5,700	6,300	6,800	7,200	6,400		
7	5,800	6,200	5,400	6,300	5,200	5,200	4,800	4,400	5,000	5,700	5,300	6,000	6,500	6,700	6,600	6,100	6,800		
8	6,500	4,800	5,100	5,400	5,700	4,700	5,200	4,200	5,300	4,800	5,300	5,400	8,500						
9	5,600	5,100	4,700	5,500	5,500	5,400	5,600	5,600	5,200	5,200	5,000	5,800	9,500						
10	5,300	5,100	5,000	6,100	4,600	4,400	5,000	5,300	4,800	6,300	6,100	7,200	9,000						
11	4,900	4,900	4,600	4,500	4,600	5,500	4,500	5,400	5,200	6,000	6,100	5,800	8,800						
12	4,800	5,300	4,700	4,300	4,700	5,500	4,100	5,200	5,800	4,700	5,800	5,900	8,600						
13	4,900	4,800	4,800	4,100	5,000	4,700	5,300	5,500	4,500	5,800	5,700	5,700	8,900						
14	4,500	3,900	4,000	3,700	3,500	3,300	4,000	4,900	4,300	5,500	5,200	6,100	6,700						
15																			

Measured with Ludlum 2221
Serial # 172039
Probe # 174469
EPA Threshold Value 18,073 cpm (Unshielded)

Denotes area previously occupied by a vehicle. Radiological survey recently performed.

Property Border

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Appendix B

2009 Phase II Soil and Groundwater Laboratory Results

Table 2
Summary of Soil Data for SVOCs
401 East Ohio Street
Chicago, Illinois

							Sample ID :	B-1	B-2	GP-4	GP-5	B-6	B-7	B-8	B-9	B-10	B-11	GP-13	B-14	B-15	B-16
							Date Collected :	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009
							Depth:	0-2 ft.	4-6 ft.	12-16 ft.	8-12 ft.	4-8 ft.	4-6 ft.	8-12 ft.	8-12 ft.	4-8 ft.	8-12 ft.	12-16 ft.	4-8 ft.	4-8 ft.	8-12 ft.
		Route Specific Values for Soil				Soil Component of Groundwater Ingestion Exposure Route Values															
		Industrial-Commercial		Construction Worker																	
CAS No.	Analyte	Ingestion	Inhalation	Ingestion	Inhalation	Class I	Class II														
91-57-6	2-Methylnaphthalene	NE	NE	NE	NE	NE	NE	<0.116	**3.99**	**0.18**	**1.31**	**0.124**	<0.116	**1.06**	**0.571**	<0.116	<0.116	**0.831**	**0.149**	**0.476**	**0.352**
95-48-7	2-Methylphenol	100,000	NE	100,000	NE	15	15	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	**19.3**	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66
106-47-8	4-Chloroaniline	8,200	NE	820	NE	0.7	0.7	<0.33	**1.47**	<0.33	**1.7**	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**0.588**	<0.33	<0.33	<0.33
100-02-7	4-Nitrophenol	NE	NE	NE	NE	NE	NE	<3.3	<3.3	<3.3	**22.2**	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
83-32-9	Acenaphthene	120,000	NE	120,000	NE	570	2,900	<0.148	**11.6**	**0.372**	**5.45**	**0.205**	<0.148	**1.28**	**0.665**	<0.148	<0.148	**1.13**	**0.253**	**0.446**	**0.661**
208-96-8	Acenaphthylene	NE	NE	NE	NE	NE	NE	**0.0735**	**1.1**	**0.27**	**2.01**	**0.425**	<0.069	**0.334**	**0.684**	**0.0865**	<0.069	**0.257**	**0.322**	**0.556**	**0.515**
120-12-7	Anthracene	610,000	NE	610,000	NE	12,000	59,000	**0.463**	**25.4**	**1.32**	**8.26**	**1.05**	**0.298**	**3.38**	**2.73**	<0.298	<0.298	**2.38**	**1.15**	**1.48**	**3.18**
56-55-3	Benz(a)anthracene	8	NE	170	NE	2	8	**4.3**	**46.8**	**3.76**	**6.9**	**2.9**	**0.604**	**5.53**	**7.48**	**0.916**	**0.32**	**2.08**	**3.82**	**3.47**	**6.75**
50-32-8	Benzo(a)pyrene	0.8	NE	17	NE	8	82	**3.83**	**42.0**	**3.27**	**6.07**	**2.59**	**0.54**	**5.17**	**8.33**	**0.86**	**0.3**	**1.61**	**3.71**	**3.62**	**7.59**
205-99-2	Benzo(b)fluoranthene	8	NE	170	NE	5	25	**6.07**	**61.9**	**4.34**	**7.15**	**3.47**	**0.756**	**6.66**	**10.8**	**1.1**	**0.402**	**2.02**	**4.58**	**4.62**	**8.96**
191-24-2	Benzo(g,h,i)perylene	NE	NE	NE	NE	NE	NE	**1.65**	**16.0**	**1.5**	**3.32**	**1.62**	**0.505**	**2.09**	**7.15**	**0.714**	**0.268**	**0.601**	**1.52**	**1.8**	**3.33**
207-08-9	Benzo(k)fluoranthene	78	NE	1,700	NE	49	250	**1.83**	**19.8**	**1.26**	**2.98**	**1.09**	**0.286**	**2.09**	**3.4**	**0.447**	<0.122	**0.669**	**1.99**	**1.41**	**2.97**
86-74-8	Carbazole	290	NE	6,200	NE	0.6	2.8	**0.193**	**11.8**	<0.131	**1.36**	**0.25**	<0.131	**0.431**	**0.6**	<0.131	<0.131	**0.651**	**0.181**	**0.546**	<0.131
218-01-9	Chrysene	780	NE	17,000	NE	160	800	**4.18**	**47.1**	**3.35**	**6.2**	**2.81**	**0.606**	**5.48**	**7.8**	**0.91**	**0.286**	**1.65**	**3.64**	**3.55**	**6.61**
53-70-3	Dibenz(a,h)anthracene	0.8	NE	17	NE	2	7.6	<0.11	**5.22**	**0.137**	**0.267**	<0.11	<0.11	**0.201**	**0.189**	<0.11	<0.11	<0.11	<0.11	<0.11	**0.135**
132-64-9	Dibenzofuran	NE	NE	NE	NE	NE	NE	<0.219	**7.39**	**0.319**	**9.03**	**0.226**	<0.219	**1.29**	**0.737**	<0.219	<0.219	<0.219	<0.219	**0.398**	**0.858**
206-44-0	Fluoranthene	82,000	NE	82,000	NE	4,300	21,000	**8.96**	**122.0**	**6.04**	**19.1**	**6.17**	**1.18**	**13.8**	**15.5**	**1.65**	**0.554**	**5.64**	**8.92**	**7.99**	**12.9**
86-73-7	Fluorene	82,000	NE	82,000	NE	560	2,800	<0.136	**14.0**	**0.447**	**3.49**	**0.274**	<0.136	**2.21**	**0.871**	<0.136	<0.136	**1.83**	**0.313**	**0.783**	**1.18**
193-39-5	Indeno(1,2,3-cd)pyrene	8	NE	170	NE	14	69	**1.66**	**15.9**	**1.34**	**2.72**	**1.39**	**0.419**	**1.98**	**5.67**	**0.555**	0.223	**0.558**	**1.54**	**1.59**	**3.1**
91-20-3	Naphthalene	41,000	270	4,100	1.8	12	18	<0.086	**4.07**	**0.413**	**4.65**	**0.248**	<0.086	**1.75**	**0.77**	**0.092**	<0.086	**1.59**	**0.287**	**0.724**	**0.847**
621-64-7	N-Nitrosodi-n-propylamine	0.8	NE	18	NE	0.00005	0.00005	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	**0.0627**	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
85-01-8	Phenanthrene	NE	NE	NE	NE	NE	NE	**1.84**	**97.4**	**3.24**	**14.6**	**3.89**	**0.665**	**8.28**	**11.2**	**1.08**	**0.339**	9.36	**4.31**	**7.77**	**7.29**
129-00-0	Pyrene	61,000	NE	61,000	NE	4,200	21,000	**7.41**	**106.0**	**5.18**	**14.8**	**5.01**	**1.06**	**12.9**	**14.8**	**1.73**	**0.493**	**4.56**	**8.07**	**7.91**	**11.7**

Notes:

< = Not Detected: Concentration less than the indicated laboratory detection limit
NE = Remedial Objective not established
Detected compounds are shown as **bold**
Remediation Objectives (Industrial/Commercial Property) = Tier 1 soil cleanup objective per 35 Illinois Administrative Code 742 Part B (February 2007)
Shaded cells indicate an exceedance of one or more of the soil cleanup objectives.

Table 3

Summary of Soil Data for Metals
401 East Ohio Street
Chicago, Illinois
concentrations in milligrams per kilogram (mg/kg)

Sample ID	B-1	B-2	GP-4	GP-5	B-6	B-7	B-8	B-9	B-10	B-11	GP-13	B-14	B-15	B-16	Remediation Objectives: Commercial Property		Background Concentrations*
Date Collected	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009	10/26/2009			
Depth	0-2 ft.	4-6 ft.	12-16 ft.	8-12 ft.	4-8 ft.	4-6 ft.	8-12 ft.	8-12 ft.	4-8 ft.	8-12 ft.	12-16 ft.	4-8 ft.	4-8 ft.	8-12 ft.	Ingestion	Inhalation	
Arsenic	**1.8**	**4.4**	**7.5**	**5**	**5.9**	**10.6**	**12.1**	**6.4**	**4.9**	**5.4**	**4.5**	**9**	**12.1**	**6.5**	13	1,200	13
Barium	**21.2**	**97.6**	**92.7**	**46.5**	**36.0**	**85.2**	**32.7**	**75.4**	**46.5**	**29.2**	**66.7**	**173.0**	**172.0**	**42.7**	140,000	910,000	110
Cadmium	**0.3**	**1.2**	**0.4**	**0.3**	**0.5**	**2.6**	**1.3**	**0.7**	**0.7**	**0.4**	**0.4**	**0.9**	**0.7**	**0.5**	2,000	2,800	0.60
Chromium	**23.3**	**22.4**	**7.5**	**4.9**	**11.4**	**11.4**	**9.1**	**6.7**	**6.8**	**7.0**	**7.0**	**11.3**	**10.8**	**6.5**	230	270	16.2
Lead	**22.9**	**86.6**	**855.0**	**319.0**	**78.8**	**252.0**	**554.0**	**182.0**	**143.0**	**120.0**	**191.0**	**428.0**	**414.0**	**195.0**	800	NE	36
Mercury	<0.05	**0.08**	**1.02**	**0.71**	**0.36**	**0.37**	**0.67**	**0.33**	**0.29**	**1.53**	**1.62**	**1.43**	**1.71**	**0.2**	610	16	0.06
Selenium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**3.0**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	10,000	NE	0.48
Silver	<0.1	**0.2**	**0.2**	**0.2**	**0.2**	**0.9**	**0.6**	**0.2**	**0.2**	<0.1	**0.3**	**0.4**	**0.7**	**0.3**	10,000	NE	0.55

Notes:
< = Not Detected: concentration less than the indicated laboratory detection limit
Remediation Objectives (Industrial/Commercial Property) = Tier 1 soil cleanup objectives per 35 Illinois Administrative Code 742 Part B (February 2007)
*Background Concentrations = documented naturally occurring concentrations in soil for metropolitan areas per 35 Illinois Administrative Code 742 (February 2007)
Detections are shown as **bold**

GRACE ANALYTICAL LAB, INC.
5300-B McDermott Drive • Berkeley, IL 60163 • Tel. (708) 449-9449

November 02, 2009

Steve Newlin
AECOM
750 Corporate Woods Parkway
Vernon Hills, IL 6001-3153

Project ID: 401 E Ohio Site
Grace Analytical Job ID: 9102601

The above referenced project was analyzed as directed on the enclosed Chain of Custody record.

Analyses were performed in accordance with requirements of 35 IAC 186(Accreditation #100246) and within holding time. Quality control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference.

Request for duplications or reproductions of these analytical reports must be made in writing to GAL and signed by an authorized agent. The analytical results relate only to the samples analyzed.

Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (708) 449-9449 or e-mail sk@gracelabinc.com.

Sincerely,

Steven Kim
Laboratory Director
Grace Analytical Lab, Inc.

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GP-4-GW	9102601-01	Water	26-Oct-09 10:20	26-Oct-09 13:25
GP-13-GW	9102601-02	Water	26-Oct-09 10:50	26-Oct-09 13:25
B-1-(0-2)-S	9102601-03	Soil	25-Oct-09 13:20	26-Oct-09 13:25
B-2-(4-6)-S	9102601-04	Soil	25-Oct-09 09:15	26-Oct-09 13:25
B-9-(8-12)-S	9102601-05	Soil	25-Oct-09 11:10	26-Oct-09 13:25
GP-5-(8-12)-S	9102601-06	Soil	25-Oct-09 12:40	26-Oct-09 13:25
B-6-(4-8)-S	9102601-07	Soil	25-Oct-09 12:55	26-Oct-09 13:25
GP-4-(12-16)-S	9102601-08	Soil	25-Oct-09 13:45	26-Oct-09 13:25
B-7-(4-8)-S	9102601-09	Soil	25-Oct-09 12:20	26-Oct-09 13:25
B-8-(8-12)-S	9102601-10	Soil	25-Oct-09 12:05	26-Oct-09 13:25
B-10-(4-8)-S	9102601-11	Soil	25-Oct-09 11:35	26-Oct-09 13:25
B-11-(8-12)-S	9102601-12	Soil	25-Oct-09 13:10	26-Oct-09 13:25
GP-13-(12-16)-S	9102601-13	Soil	25-Oct-09 09:50	26-Oct-09 13:25
GP-14-(4-8)-S	9102601-14	Soil	25-Oct-09 10:35	26-Oct-09 13:25
B-15-(4-8)-S	9102601-15	Soil	25-Oct-09 10:50	26-Oct-09 13:25
B-16-(8-12)-S	9102601-16	Soil	25-Oct-09 10:20	26-Oct-09 13:25

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-4-GW

Lab Sample ID: 9102601-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	0.2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-13-GW

Lab Sample ID: 9102601-02 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	0.2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/L	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-1-(0-2)-S

Lab Sample ID: 9102601-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-1-(0-2)-S

Lab Sample ID: 9102601-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	ND	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-1-(0-2)-S

Lab Sample ID: 9102601-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	ND	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	**73.5**	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	**463**	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**4300**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**3830**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**6070**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**1650**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**1830**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	**193**	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**4180**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	ND	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	ND	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**8960**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	ND	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**1660**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-1-(0-2)-S

Lab Sample ID: 9102601-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	ND	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**1840**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**7410**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**93.9**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**1.8**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**21.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.3**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**23.3**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**22.9**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	ND	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	ND	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-2-(4-6)-S

Lab Sample ID: 9102601-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-2-(4-6)-S

Lab Sample ID: 9102601-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	**3990**	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-2-(4-6)-S

Lab Sample ID: 9102601-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	**1470**	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	**11600**	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	**1100**	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	**25400**	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**46800**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**42000**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**61900**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**16000**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**19800**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	**11800**	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**47100**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	**5220**	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	**7390**	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**122000**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	**14000**	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**15900**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-2-(4-6)-S

Lab Sample ID: 9102601-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**4070**	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**97400**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**106000**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**91.6**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**4.4**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**97.6**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**1.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**22.4**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**86.6**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**0.08**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-9-(8-12)-S

Lab Sample ID: 9102601-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-9-(8-12)-S

Lab Sample ID: 9102601-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	**571**	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-9-(8-12)-S

Lab Sample ID: 9102601-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	**665**	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	**684**	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	**2730**	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**7480**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**8330**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**10800**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**7150**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**3400**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	**600**	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**7800**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	**189**	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	**737**	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**15500**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	**871**	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**5670**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-9-(8-12)-S

Lab Sample ID: 9102601-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**770**	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**11200**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**14800**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**73.5**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**6.4**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**75.4**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.7**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**6.7**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**182**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	**3.0**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**0.33**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-5-(8-12)-S

Lab Sample ID: 9102601-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-5-(8-12)-S

Lab Sample ID: 9102601-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	**1310**	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-5-(8-12)-S

Lab Sample ID: 9102601-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	**1700**	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	**22200**	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	**5450**	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	**2010**	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	**8260**	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**6900**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**6070**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**7150**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**3320**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**2980**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	**1360**	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**6200**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	**267**	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	**9030**	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**19100**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	**3490**	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**2720**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-5-(8-12)-S

Lab Sample ID: 9102601-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**4650**	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**14600**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**14800**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**76.9**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**5.0**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**46.5**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.3**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**4.9**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**319**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**0.71**	0.05	mg/kg	1		29-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-6-(4-8)-S

Lab Sample ID: 9102601-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-6-(4-8)-S

Lab Sample ID: 9102601-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	**124**	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-6-(4-8)-S

Lab Sample ID: 9102601-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	**205**	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	**425**	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	**1050**	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**2900**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**2590**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**3470**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**1620**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**1090**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	**250**	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**2810**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	ND	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	**226**	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**6170**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	**274**	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**1390**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-6-(4-8)-S

Lab Sample ID: 9102601-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**248**	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**3890**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**5010**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**81.5**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**5.9**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**36.0**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.5**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**11.4**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**78.8**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**0.36**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-4-(12-16)-S

Lab Sample ID: 9102601-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-4-(12-16)-S

Lab Sample ID: 9102601-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	**180**	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-4-(12-16)-S

Lab Sample ID: 9102601-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	**372**	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	**270**	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	**1320**	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**3760**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**3270**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**4340**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**1500**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**1260**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	ND	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**3350**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	**137**	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	**319**	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**6040**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	**447**	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**1340**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-4-(12-16)-S

Lab Sample ID: 9102601-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**413**	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**3240**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**5180**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**81.2**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**7.5**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**92.7**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.4**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**7.5**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**855**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	**0.8**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**1.02**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-7-(4-8)-S

Lab Sample ID: 9102601-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-7-(4-8)-S

Lab Sample ID: 9102601-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	ND	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-7-(4-8)-S

Lab Sample ID: 9102601-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	ND	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	ND	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	ND	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**604**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**540**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**756**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**505**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**286**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	ND	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**606**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	ND	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	ND	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**1180**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	ND	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**419**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-7-(4-8)-S

Lab Sample ID: 9102601-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	ND	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**665**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**1060**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**83.1**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**10.6**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**85.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**2.6**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**11.4**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**252**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.9**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**0.37**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-8-(8-12)-S

Lab Sample ID: 9102601-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-8-(8-12)-S

Lab Sample ID: 9102601-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	**1060**	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	**19300**	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-8-(8-12)-S

Lab Sample ID: 9102601-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	**16800**	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	**1280**	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	**334**	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	**3380**	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**5530**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**5170**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**6660**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**2090**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**2090**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	**431**	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**5480**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	**201**	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	**1290**	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**13800**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	**2210**	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**1980**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-8-(8-12)-S

Lab Sample ID: 9102601-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**1750**	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	**62.7**	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**8280**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	**1310**	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**12900**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**62.2**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**12.1**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**32.7**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**1.3**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**9.1**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**554**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.6**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**0.67**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-10-(4-8)-S

Lab Sample ID: 9102601-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-10-(4-8)-S

Lab Sample ID: 9102601-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	ND	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-10-(4-8)-S

Lab Sample ID: 9102601-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	ND	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	**86.5**	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	ND	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**916**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**860**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**1100**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**714**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**447**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	ND	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**910**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	ND	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	ND	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**1650**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	ND	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**555**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-10-(4-8)-S

Lab Sample ID: 9102601-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**92.0**	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**1080**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**1730**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**91.3**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**4.9**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**46.5**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.7**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**6.8**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**143**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**0.29**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-11-(8-12)-S

Lab Sample ID: 9102601-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-11-(8-12)-S

Lab Sample ID: 9102601-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	27-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylnaphthalene	ND	116	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-11-(8-12)-S

Lab Sample ID: 9102601-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthene	ND	148	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Acenaphthylene	ND	69.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Anthracene	ND	298	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) anthracene	**320**	68.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (a) pyrene	**300**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**402**	57.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**268**	120	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	ND	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Carbazole	ND	131	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Chrysene	**286**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	ND	110	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dibenzofuran	ND	219	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluoranthene	**554**	94.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Fluorene	ND	136	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**223**	130	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-11-(8-12)-S

Lab Sample ID: 9102601-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	ND	86.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenanthrene	**339**	122	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Pyrene	**493**	66.0	ug/kg dry	1	29-Oct-09	29-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**84.0**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**5.4**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**29.2**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.4**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**7.0**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**120**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	ND	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**1.53**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-13-(12-16)-S

Lab Sample ID: 9102601-13 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-13-(12-16)-S

Lab Sample ID: 9102601-13 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Methylnaphthalene	**831**	116	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-13-(12-16)-S

Lab Sample ID: 9102601-13 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chloroaniline	**588**	330	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Acenaphthene	**1130**	148	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Acenaphthylene	**257**	69.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Anthracene	**2380**	298	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (a) anthracene	**2080**	68.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (a) pyrene	**1610**	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**2020**	57.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**601**	120	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**669**	122	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Carbazole	**651**	131	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Chrysene	**1650**	94.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	ND	110	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dibenzofuran	ND	219	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Fluoranthene	**5640**	94.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Fluorene	**1830**	136	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**558**	130	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-13-(12-16)-S

Lab Sample ID: 9102601-13 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**1590**	86.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Phenanthrene	**9360**	122	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Pyrene	**4560**	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**77.0**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**4.5**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**66.7**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.4**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**7.0**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**191**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.3**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**1.62**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-14-(4-8)-S

Lab Sample ID: 9102601-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-14-(4-8)-S

Lab Sample ID: 9102601-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Methylnaphthalene	**149**	116	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-14-(4-8)-S

Lab Sample ID: 9102601-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Acenaphthene	**253**	148	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Acenaphthylene	**322**	69.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Anthracene	**1150**	298	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (a) anthracene	**3820**	68.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (a) pyrene	**3710**	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**4580**	57.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**1520**	120	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**1990**	122	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Carbazole	**181**	131	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Chrysene	**3640**	94.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	ND	110	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dibenzofuran	ND	219	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Fluoranthene	**8920**	94.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Fluorene	**313**	136	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**1540**	130	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: GP-14-(4-8)-S

Lab Sample ID: 9102601-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**287**	86.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Phenanthrene	**4310**	122	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Pyrene	**8070**	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**84.7**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**9.0**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**173**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.9**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**11.3**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**428**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.4**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**1.43**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-15-(4-8)-S

Lab Sample ID: 9102601-15 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
2-Butanone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Acetone	ND	50	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-15-(4-8)-S

Lab Sample ID: 9102601-15 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Methylnaphthalene	**476**	116	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-15-(4-8)-S

Lab Sample ID: 9102601-15 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Acenaphthene	**446**	148	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Acenaphthylene	**556**	69.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Anthracene	**1480**	298	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (a) anthracene	**3470**	68.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (a) pyrene	**3620**	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**4620**	57.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**1800**	120	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**1410**	122	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Carbazole	**546**	131	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Chrysene	**3550**	94.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	ND	110	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dibenzofuran	**398**	219	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Fluoranthene	**7990**	94.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Fluorene	**783**	136	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**1590**	130	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-15-(4-8)-S

Lab Sample ID: 9102601-15 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**724**	86.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Phenanthrene	**7770**	122	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Pyrene	**7910**	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**88.5**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**12.1**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**172**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.7**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**10.8**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**414**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.7**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**1.71**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-16-(8-12)-S

Lab Sample ID: 9102601-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Organochlorine Pesticides by EPA Method 8081A								
4,4´-DDD	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDE	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
4,4´-DDT	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Aldrin	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
alpha-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
beta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Chlordane	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
delta-BHC	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Dieldrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan I	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan II	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endosulfan sulfate	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin aldehyde	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Endrin ketone	ND	16.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
gamma-BHC (Lindane)	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Heptachlor epoxide	ND	8.00	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Methoxychlor	ND	80.0	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Toxaphene	ND	160	ug/kg dry	1	31-Oct-09	31-Oct-09	EPA 8081A	
Volatile Organic Compounds by EPA Method 8260B								
1,1,1-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1,2-Trichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,1-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,2-Dichloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
1,2-Dichloropropane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
2-Butanone	**33**	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
2-Hexanone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Acetone	**164**	50	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Benzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromodichloromethane	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromoform	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Bromomethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Carbon disulfide	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Carbon Tetrachloride	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chlorobenzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-16-(8-12)-S

Lab Sample ID: 9102601-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Volatile Organic Compounds by EPA Method 8260B								
Chloroethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chloroform	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Chloromethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
cis-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
cis-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Dibromochloromethane	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Ethylbenzene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methyl Isobutyl Ketone	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methylene Chloride	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Methyl-tert-Butyl Ether	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Styrene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Tetrachloroethene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Toluene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
trans-1,2-Dichloroethylene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
trans-1,3-Dichloropropylene	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Trichloroethene	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Vinyl chloride	ND	2	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Xylenes, total	ND	5	ug/kg dry	1	27-Oct-09	28-Oct-09	EPA 8260B	
Semivolatile Organic Compounds by EPA Method 8270C								
1,2,4-Trichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,2-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,3-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
1,4-Dichlorobenzene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4,5-Trichlorophenol	ND	215	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4,6-Trichlorophenol	ND	63.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dichlorophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dimethylphenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dinitrophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,4-Dinitrotoluene	ND	212	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2,6-Dinitrotoluene	ND	99.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Chloronaphthalene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Chlorophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Methylnaphthalene	**352**	116	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Methylphenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-16-(8-12)-S

Lab Sample ID: 9102601-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
2-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
2-Nitrophenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3,3´-Dichlorobenzidine	ND	106	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3/4-Methylphenol	ND	830	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
3-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4,6-Dinitro-2-methylphenol	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Bromophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chloro-3-methylphenol	ND	1300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chloroaniline	ND	330	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Nitroaniline	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
4-Nitrophenol	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Acenaphthene	**661**	148	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Acenaphthylene	**515**	69.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Anthracene	**3180**	298	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (a) anthracene	**6750**	68.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (a) pyrene	**7590**	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (b) fluoranthene	**8960**	57.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (g,h,i) perylene	**3330**	120	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzo (k) fluoranthene	**2970**	122	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Benzyl alcohol	ND	1300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroethyl)ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-chloroisopropyl)ether	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Bis(2-ethylhexyl)phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Butyl benzyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Carbazole	ND	131	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Chrysene	**6610**	94.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dibenz (a,h) anthracene	**135**	110	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dibenzofuran	**858**	219	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Diethyl phthalate	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Dimethyl phthalate	ND	3300	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Di-n-butyl phthalate	ND	500	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Di-n-octyl phthalate	ND	860	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Fluoranthene	**12900**	94.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Fluorene	**1180**	136	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorobenzene	ND	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorobutadiene	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachlorocyclopentadiene	ND	173	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Hexachloroethane	ND	132	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Indeno(1,2,3-cd)pyrene	**3100**	130	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Isophorone	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Client Sample ID: B-16-(8-12)-S

Lab Sample ID: 9102601-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Prepared	Analyzed	Method	Qualifiers
Semivolatile Organic Compounds by EPA Method 8270C								
Naphthalene	**847**	86.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Nitrobenzene	ND	236	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
N-Nitrosodi-n-propylamine	ND	15.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
N-Nitrosodiphenylamine	ND	670	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Pentachlorophenol	ND	30.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Phenanthrene	**7290**	122	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Phenol	ND	660	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Pyrene	**11700**	66.0	ug/kg dry	1	29-Oct-09	30-Oct-09	EPA 8270C	
Wet Chemistry								
% Solids	**77.6**		% by Weight	1	27-Oct-09	27-Oct-09	2540B	
Total Metals								
Arsenic	**6.5**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Barium	**42.7**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Cadmium	**0.5**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Chromium	**6.5**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Lead	**195**	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Selenium	ND	0.2	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Silver	**0.3**	0.1	mg/kg	1	27-Oct-09	29-Oct-09	6010B	
Mercury	**0.19**	0.05	mg/kg	1		28-Oct-09	7470A	

AECOM	Project Name: GENERAL	
750 Corporate Woods Parkway	Project Number: 401 E Ohio Site	**Reported:**
Vernon Hills IL, 6001-3153	Project Manager: Steve Newlin	02-Nov-09 12:45

Notes and Definitions

S-BN	Base/Neutral surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two base/neutral surrogates.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

GRACE ANALYTICAL LAB, INC.

PHONE (708) 449-9449 FAX (708) 449-3663
5300-B McDermott Drive Berkeley, IL 60163

CHAIN OF CUSTODY PAGE 1 OF 2

9102601

TURNAROUND STANDARD
Date Required:
Schedule in advance to insure RUSH Processing
Comments / Special Instructions

CLIENT INFORMATION
Project Manager: STEVE NEWLIN
Company: AECOM 750 CORPORATE WOODS PKWY VERNON HILLS, IL
Phone: 847-279-2500 Fax: 847-279-2510
Project Name: OHIO + McCLURG OT.
Project ID#:
Sampler: BRIAN SCHMIDT

SAMPLE RECEIVING RECORDS
Samples Received On Ice ☒ YES ☐ NO
Sample Temperature(If not On Ice) 4 c
Samples Intact/Not Leaking ☒ YES ☐ NO

SAMPLE CHARACTERISTICS
☐ NONHAZARDOUS
☐ Special Handling Required (Please Describe:)

QC Levels: ___ None ___ Level 2 ___ Level 3 ___ Level 4

GAL SAMPLE ID	FIELD ID, LOCATION / DESCRIPTION	DATE	TIME	MATRIX	Number of Containers	PRESERVATIVE	VOC	SVOC	PESTICIDES	RCRA METALS					REMARKS
9102601-01	GP-4-GW	10/26/09	1020	GW	2	HCl	X								
-02	GP-13-GW	10/26/09	1050	GW	2	HCl	X								
-03	B-1-(0-2)-S	10/25/09	1320	SOIL	1		X	X	X	X					
-04	B-2-(4-6)-S	↓	915	↓	↓		↓	↓	↓	↓					
-05	B-9-(8-12)-S		1110												
-06	GP-5-(8-12)-S		1240												
-07	B-6-(4-8)-S		1255												
-08	GP-4-(12-16)-S		1345												
-09	B-7-(4-8)-S		1220												
-10	B-8-(8-12)-S		1205												

MATRIX: Soil (S), Surface Water (SW), Ground Water (GW), Waste Water (WW), Waste/Solid (W/S), Waste/Liquid (W/L), Drinking Water (DW), Air Cassettes (AC); Note if COMPOSITE (C) or GRAB (G)
PRESERVATIVE: Nitric Acid (HNO_3), Hydrochloric Acid (HCl), Sodium Hydroxide (NaOH), Sulfuric Acid (H_2SO_4), Sodium Bisulfate ($NaHSO_4$), Methanol(CH_3OH), None

Relinquished By (Signature):	Date/Time:	Received By (Signature):	Date/Time:	Relinquished By (Signature):	Date/Time:	Received For Lab By (Signature):	Date/Time:
[signature]	10/26/09						
Relinquished By (Signature):	Date/Time	Received By (Signature):	Date/Time	Relinquished By (Signature):	Date/Time	Received For Lab By (Signature): [signature]	Date/Time 10/26/09, 13:25

WHITE - ORIGINAL FILE COPY CANARY - LAB COPY PINK - SAMPLER COPY

GRACE ANALYTICAL LAB, INC.

CHAIN OF CUSTODY PAGE 2 OF 2

PHONE (708) 449-9449 FAX (708) 449-3663
5300-B McDermott Drive Berkeley, IL 60163

9102601

TURNAROUND STANDARD
Date Required:
Schedule in advance to insure RUSH Processing
Comments / Special Instructions

CLIENT INFORMATION
Project Manager: STEVE NEWLIN
Company: AECOM
750 CORPORATE WOODS PKWY VERNON HILLS, IL 60061
Phone: 847-279-2500 Fax: 847-279-2510
Project Name: OHIO & McCLURG CT.
Project ID#:
Sampler: BRIAN SCHMIDT

SAMPLE RECEIVING RECORDS
Samples Received On Ice ☒ YES ☐ NO
Sample Temperature(If not On Ice) 4 c
Samples Intact/Not Leaking ☒ YES ☐ NO

SAMPLE CHARACTERISTICS
☐ NONHAZARDOUS
☐ Special Handling Required (Please Describe:)

QC Levels
___ None
___ Level 2
___ Level 3
___ Level 4

GAL SAMPLE ID	FIELD ID, LOCATION / DESCRIPTION	DATE	TIME	MATRIX	Number of Containers	PRESERVATIVE		ANALYSIS NEEDED: VOC	SVOC	Pesticides	RCRA Metals					REMARKS
9102601-11	B-10-(4-8)-S	10/25/09	1135	Soil	1		a	a	a	a						
-12	B-11-(8-12)-S		1310													
-13	GP-13-(12-16)-S		950													
-14	B-14-(4-8)-S		1035													
-15	B-15-(4-8)-S		1050													
-16	B-16-(8-12)-S		1020													

MATRIX: Soil (S), Surface Water (SW), Ground Water (GW), Waste Water (WW), Waste/Solid (W/S), Waste/Liquid (W/L), Drinking Water (DW), Air Cassettes (AC); Note if COMPOSITE (C) or GRAB (G)
PRESERVATIVE: Nitric Acid (HNO_3), Hydrochloric Acid (HCl), Sodium Hydroxide (NaOH), Sulfuric Acid (H_2SO_4), Sodium Bisulfate ($NaHSO_4$), Methanol(CH_3OH), None

Relinquished By (Signature):	Date/Time:	Received By (Signature):	Date/Time:	Relinquished By (Signature):	Date/Time:	Received For Lab By (Signature):	Date/Time:
	10/25/09						
Relinquished By (Signature):	Date/Time	Received By (Signature):	Date/Time	Relinquished By (Signature):	Date/Time	Received For Lab By (Signature):	Date/Time
							10/26/09 13:15

WHITE - ORIGINAL FILE COPY CANARY - LAB COPY PINK - SAMPLER COPY

Appendix C

2012 Downhole Survey Results – GaiaTech

410 East Grand Ave
Downhole & Spoon Measurements
Downhole Ludlum 2200 S/N 36762, NaI Probe S/N PR159812 (unshielded)
Spoon: Ludlum 193 S/N 149080, NaI Probe S/N PR159705 (shielded)
Hole # :

	BH- 4	BH-2		BH-5		BH-6		BH-3		BH-1	
Depth:	**1 (spoon)**	**2 (downhole)**	**2 (spoon)**	**3 (downhole)**	**3 (spoon)**	**4 (downhole)**	**4 (spoon)**	**5 (downhole)**	**5 (spoon)**	**6 (downhole)**	**6 (spoon)**
0 ft.	2600	3825	3000	2611	2200	3677	2800	2612	2000	2776	2000
1 ft.	2300	8326	2200	6481	2000	3455	2200	3257	1600	5036	1600
2 ft	2300	7074	2000	7772	2100	6979	2300	8527	1600	6137	1700
3 ft.	2200	6711	2000	7826	2100	10606	2800	9328	1700	7212	1600
4 ft.	2300	7000	2300	5753	2100	9492	2600	7682	1700	7380	1600
5 ft.	2000	6808	2300	4475	2000	9529	2600	9115	2000	7221	1400
6 ft.	2000	6630	2000	4973	2000	7421	2600	9961	2000	6695	1400
7 ft.	2000	6554	2300	5043	1900	5958	2300	6956	2000	6807	1300
8 ft.	2000	6084	2300	4649	1700	6656	2300		1600	6042	1000
9 ft.	2000	7064	2300	4921	1800	4906	2200		1600	6229	1600
10 ft.	2200	7878	2200	5227	1900		2200		1600	5305	1600
11 ft.	2300		2200	5513	2000		2300		2000	6186	1400
12 ft.	2600		2300	3915	2000		2300		1700	8378	2000
13 ft.	2600		2300		1600		2400		2000	5666	1700
14 ft.	2600		2600		1700		2300		1700	5628	1800
15 ft.	2100		2600		1700		2200		2000		1700
16 ft.	2200		2300		1700		1600		1600		1600
17 ft.	2300		2200		1600		1600				1600
18 ft.	2200		2200		1700						
19 ft.	2100		2000		1800						
20 ft.	2100		2000		2600						

*The depth for all spoon measurements is approximate

ORTEC g v - i (1215) Env32 G53W4.22 21-MAR-2012 16:05:14
RSSI Spectrum name: G120124.An1

Sample description
G120124 Gaiatech 410 E. Grand Hole 4 (3-5 ft), 666.7g

Spectrum Filename: H:\GammaVision\User\Spectra\G120124.An1

***** S U M M A R Y O F L I B R A R Y P E A K U S A G E *****

- Nuclide - Name	Code	Average Activity uCi/g	Peak Energy keV	Peak Activity uCi/g	Code	MDA Value uCi/g	COMMENTS
PB-214	N	3.50E-07					
			351.93	3.51E-07	*(P	1.88E-08	7.59E+00 G
			295.22	3.40E-07	(P	3.27E-08	9.68E+00 G
			241.99	3.70E-07	(P	9.25E-08	2.37E+01 G
			3 of 3 peaks found				
PB-212	N	2.45E-07					
			238.63	2.45E-07	(P	1.58E-08	7.04E+00 G
			300.09	6.28E-07	& P	2.01E-07	3.51E+01 G
			2 of 2 peaks found				
BI-212	N	6.71E-07					
			727.33	6.71E-07	?(P	1.06E-07	2.15E+01 G
			1 of 4 peaks found				
AC-228	N	4.00E-07					
			911.20	4.00E-07	(P	4.26E-08	1.47E+01 G
			968.97	4.18E-07	?(P	5.90E-08	1.87E+01 G
			338.32	3.58E-07	(P	5.63E-08	2.16E+01 G
			964.77	7.97E-07	+ P	2.33E-07	2.71E+01 G
			463.00	4.38E-07	&(P	1.34E-07	3.55E+01 G
			5 of 5 peaks found				
TL-208	N	8.55E-08					
			583.19	8.55E-08	(P	1.08E-08	1.56E+01 G
			510.77	3.52E-07	+ P	5.21E-08	1.38E+01 G
			860.58	1.47E-07	+ P	6.66E-08	2.98E+01 G
			3 of 5 peaks found				
K-40	N	9.27E-06					
			1460.82	9.27E-06	(P	2.26E-07	3.18E+00 G
			1 of 1 peaks found				
BI-214	N	3.91E-07					
			609.32	3.84E-07	*(P	1.93E-08	7.02E+00 G
			1764.49	5.06E-07	+ P	1.17E-07	1.09E+01 G
			1120.29	4.13E-07	(P	5.90E-08	1.47E+01 G
			1238.12	6.63E-07	+ P	2.62E-07	3.56E+01 G
			768.36	1.18E-06	+ P	2.18E-07	1.50E+01 G
			5 of 5 peaks found				

(- This peak used in the nuclide activity average.

* - Peak is too wide, but only one peak in library.
! - Peak is part of a multiplet and this area went negative during deconvolution.
? - Peak is too narrow.
@ - Peak is too wide at FW25M, but ok at FWHM.
% - Peak fails sensitivity test.
$ - Peak identified, but first peak of this nuclide failed one or more qualification tests.
\+ - Peak activity higher than counting uncertainty range.

```
     ORTEC g v - i (1215) Env32  G53W4.22  21-MAR-2012 16:05:14
RSSI                              Spectrum name: G120124.An1

Sample description
     G120124 Gaiatech 410 E. Grand Hole 4 (3-5 ft), 666.7g


Spectrum Filename: H:\GammaVision\User\Spectra\G120124.An1

  - - Peak activity lower than counting uncertainty range.
  = - Peak outside analysis energy range.
  & - Calculated peak centroid is not close enough to the
      library energy centroid for positive identification.
  P - Peakbackground subtraction
  } - Peak is too close to another for the activity
      to be found directly.

  Nuclide Codes:                      Peak Codes:
  T - Thermal Neutron Activation      G - Gamma Ray
  F - Fast Neutron Activation         X - X-Ray
  I - Fission Product                 P - Positron Decay
  N - Naturally Occurring Isotope     S - Single-Escape
  P - Photon Reaction                 D - Double-Escape
  C - Charged Particle Reaction       K - Key Line
  M - No MDA Calculation              A - Not in Average
  R - Coincidence Corrected           C - Coincidence Peak
  H - Halflife limit exceeded

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
This section based on library: 1001a.Lib
```

ORTEC g v - i (1215) Env32 G53W4.22 21-MAR-2012 16:05:14
RSSI Spectrum name: G120124.An1

Sample description
G120124 Gaiatech 410 E. Grand Hole 4 (3-5 ft), 666.7g

Spectrum Filename: H:\GammaVision\User\Spectra\G120124.An1

***** S U M M A R Y O F N U C L I D E S I N S A M P L E *****

Nuclide	Time of Count Activity uCi/g	Uncertainty Counting	1 Sigma Total
PB-214	3.50E-07	8.72E+00%	9.25E+00%
PB-212	2.45E-07	7.81E+00%	8.50E+00%
BI-212 #	6.71E-07	2.55E+01%	2.56E+01%
AC-228	4.00E-07	1.43E+01%	1.45E+01%
Tl-210 <	5.45E-09		
TL-208	8.55E-08	2.01E+01%	2.02E+01%
K-40	9.27E-06	3.92E+00%	4.51E+00%
BI-214	3.91E-07	8.37E+00%	8.68E+00%

- All peaks for activity calculation had bad shape.
* - Activity omitted from total
& - Activity omitted from total and all peaks had bad shape.
< - MDA value printed.
A - Activity printed, but activity < MDA.
B - Activity < MDA and failed test.
C - Area < Critical level.
F - Failed fraction or key line test.
H - Halflife limit exceeded

---------- S U M M A R Y ----------

Total Activity (277.3 to 1909.2 keV) 1.15E-05 uCi/g

This section based on library: 1001a.Lib

ORTEC g v - i (1215) Env32 G53W4.22 21-MAR-2012 16:05:14
RSSI Spectrum name: G120124.An1

Sample description
G120124 Gaiatech 410 E. Grand Hole 4 (3-5 ft), 666.7g

Spectrum Filename: H:\GammaVision\User\Spectra\G120124.An1

********** U N I D E N T I F I E D P E A K S U M M A R Y **********

Peak Channel	Centroid Energy	Background Counts	Net Area Counts	Intensity Cts/Sec	Uncert 1 Sigma %	FWHM keV	Suspected Nuclide	
140.78	39.15	157.	126.	0.035	20.56	1.083	-	s
293.53	74.73	363.	208.	0.058	14.69	1.135	-	D
302.72	76.87	494.	189.	0.052	18.20	1.136	-	D
402.21	100.23	184.	29.	0.008	73.82	0.543	-	c
500.29	123.14	251.	101.	0.028	28.87	0.374	-	s
524.86	128.88	293.	91.	0.025	33.49	0.497	-	s
547.46	134.16	362.	53.	0.015	66.53	0.436	-	s
706.35	171.28	167.	30.	0.008	67.50	0.509	-	s
769.54	186.04	374.	183.	0.051	26.34	0.506	-	s
983.20	235.93	166.	30.	0.008	62.58	1.187	-	D
2272.33	537.12	27.	9.	0.002	97.18	0.450	-	sc
3727.09	877.02	7.	13.	0.004	40.82	0.403	-	sM

s - Peak fails shape tests.
D - Peak area deconvoluted.
L - Peak written from unknown list.
C - Area < Critical level.
M - Peak is close to a library peak.

This section based on library: 1001a.Lib

```
     ORTEC g v - i (1215) Env32  G53W4.22  21-MAR-2012 16:05:14
RSSI                            Spectrum name: G120124.An1

Sample description
     G120124 Gaiatech 410 E. Grand Hole 4 (3-5 ft), 666.7g


Spectrum Filename: H:\GammaVision\User\Spectra\G120124.An1


Acquisition information
       Start time:                 21-Mar-2012 13:16:44
       Live time:               3600
       Real time:               3603
       Dead time:                  0.09 %
       Detector ID:                    1

Detector system
     USER-802B915354 MCB 9


Calibration
       Filename:                   G120124.An1
     01-24-12 calibration


       Energy Calibration
            Created:               21-Mar-2012 16:00:43
            Zero offset:           6.267 keV
            Gain:                  0.234 keV/channel
            Quadratic:             6.862E-09 keV/channel^2

       Efficiency Calibration
            Created:               24-Jan-2012 10:40:57
            Type:                  Polynomial
            Uncertainty:           0.353 %
            Coefficients:         -0.140148  -4.969891   0.856404
                                  -0.125295   0.007713  -0.000191

Library Files
       Main analysis library:      1001a.Lib
       Library Match Width:        0.500
       Peak stripping:             Library based

Analysis parameters
       Analysis engine:            Env32   G53W4.22
       Start channel:             20 (    10.94keV )
       Stop channel:            8144 (  1909.18keV )
       Peak rejection level:     100.000%
       Peak search sensitivity:    2
       Sample Size:                6.6670E+02
       Activity scaling factor:    1.0000E+00/(  1.0000E+00*  6.6670E+02) =
                                   1.4999E-03
       Detection limit method:     Traditional ORTEC method
       Random error:               1.0000000E+00
       Systematic error:           1.0000000E+00
       Fraction Limit:            10.000%
       Background width:           best method (based on spectrum).
       Half lives decay limit:    12.000
       Activity range factor:      2.000
       Min. step backg. energy     0.000
       Multiplet shift channel     2.000

Corrections                          Status          Comments
       Decay correct to date:         NO
       Decay during acquisition:      NO
```

```
     ORTEC g v - i (1215) Env32  G53W4.22  21-MAR-2012 16:05:14
RSSI                              Spectrum name: G120124.An1

Sample description
     G120124 Gaiatech 410 E. Grand Hole 4 (3-5 ft), 666.7g


Spectrum Filename: H:\GammaVision\User\Spectra\G120124.An1

       Decay during collection:       NO
       True coincidence correction:   NO
       Peaked background correction:  YES       10_12_30 30%.Pbc
                                                30-Dec-2010 10:17:12
       Absorption (Internal):         NO
       Geometry correction:           NO
       Random summing:                NO


total peaks alloc.     16  cutoff   20.00000     %
       Energy Calibration
            Normalized diff:       0.0803


Laboratory:  RSSI
```

Appendix D

2009 Phase II and 2012 Geotechnical Boring Logs

STS Consultants Ltd.

CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**B-1**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50) / STANDARD PENETRATION BLOWS/(FT) (10 20 30 40 50)
		1	GP			Fill sand - little cinder, brick - black	5200	<1	
2.0									
						End of boring			
						Obstruction encountered at 2'			
						* counts per minute (cpm)			

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

WL Dry	BORING STARTED 10/25/09	STS OFFICE Chicago - 01	
WL	BORING COMPLETED 10/25/09	ENTERED BY PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN Terra-Trace Hurricane/Dennis	APP'D BY STN	STS JOB NO. 13231-002

STS Consultants Ltd.

CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**B-2**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1, 2, 3, 4, 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10, 20, 30, 40, 50) / STANDARD PENETRATION BLOWS/(FT) (10, 20, 30, 40, 50)
						SURFACE ELEVATION			
		1	GP			Fill sand - little gravel, brick	550	<1	
5.0		2	GP				5500	<1	
6.0									
						End of boring			
						Obstruction encountered at 6'			
						* counts per minute (cpm)			

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

WL **Dry WS**	BORING STARTED **10/25/09**	STS OFFICE **Chicago - 01**	
WL	BORING COMPLETED **10/25/09**	ENTERED BY **PMB**	SHEET NO. **1** OF **1**
WL	RIG/FOREMAN **Terra-Trace Hurricane/Dennis**	APP'D BY **STN**	STS JOB NO. **13231-002**

STS Consultants Ltd.

CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**GP-4**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50) / STANDARD PENETRATION BLOWS/(FT) (10 20 30 40 50)
						SURFACE ELEVATION			
		1	GP			Fill sand - little cinder, brick - trace gravel - black	6100	<1	
5.0		2					7700	<1	
10.0		3				Fill sand - little clay, brick - black	5800	<1	
		4					7700	<1	
15.0									
16.0									
						End of boring			
						* counts per minute (cpm)			

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

WL 16' ws	BORING STARTED 10/25/09	STS OFFICE Chicago - 01	
WL	BORING COMPLETED 10/25/09	ENTERED BY PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN Terra-Trace Hurricane/Dennis	APP'D BY STN	STS JOB NO. 13231-002

STS Consultants Ltd.

CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**GP-5**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
						SURFACE ELEVATION		
		1	GP			Fill sand - little cinder, brick - brownish gray	5300	<1
5.0		2					7100	<1
10.0		3					8000	<1
						Fill fine to medium sand - little gravel - brown		
13.0		4				Note: Encountered obstruction - installed temporary well at 13'	5400	<1
						End of boring		
						* counts per minute (cpm)		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² 1 2 3 4 5

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % 10 20 30 40 50

STANDARD PENETRATION BLOWS/(FT) 10 20 30 40 50

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

WL 13' WS	BORING STARTED 10/25/09	STS OFFICE Chicago - 01	
WL	BORING COMPLETED 10/25/09	ENTERED BY PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN Terra-Trace Hurricane/Dennis	APP'D BY STN	STS JOB NO. 13231-002

BORING_LOG 13231002.GPJ STS.GDT 11/11/09

STS Consultants Ltd.

CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**B-6**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL SURFACE ELEVATION	UNIT DRY WT. LBS./FT.^{3}	PHOTO-IONIZATION DETECTOR READING (PPM)	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.^{2} (1 2 3 4 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50) / STANDARD PENETRATION BLOWS/(FT) (10 20 30 40 50)
		1	GP			Fill sand - little clay, cinders, brick - black	5700	<1	
5.0		2					6500	<1	
10.0		3					5800	<1	
12.0						End of boring * counts per minute (cpm)			

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

WL **Dry**	BORING STARTED **10/25/09**	STS OFFICE **Chicago - 01**	
WL	BORING COMPLETED **10/25/09**	ENTERED BY **PMB**	SHEET NO. **1** OF **1**
WL	RIG/FOREMAN **Terra-Trace Hurricane/Dennis**	APP'D BY **STN**	STS JOB NO. **13231-002**

STS Consultants Ltd.

CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**B-7**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
						SURFACE ELEVATION		
		1	GP			Fill sand - little gravel, brick, concrete - black	7400	<1
5.0		2					6900	<1
10.0		3					6300	<1
12.0								
						End of boring		
						* counts per minute (cpm)		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² 1 2 3 4 5

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % 10 20 30 40 50

STANDARD PENETRATION BLOWS/(FT) 10 20 30 40 50

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

WL Dry WS	BORING STARTED 10/25/09	STS OFFICE Chicago - 01	
WL	BORING COMPLETED 10/25/09	ENTERED BY PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN Terra-Trace Hurricane/Dennis	APP'D BY STN	STS JOB NO. 13231-002

STS Consultants Ltd.

CLIENT
Rehabiliation Institute of Chicago

LOG OF BORING NUMBER **B-8**

PROJECT NAME
401 E. Ohio Street

ARCHITECT-ENGINEER

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
						SURFACE ELEVATION		
		1	GP			Fill sand - little clay, brick, concrete, wood - brownish gray	7200	0.7
5.0		2					5900	<1
10.0		3					6500	<1
12.0						End of boring		
						* counts per minute (cpm)		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² 1 2 3 4 5

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % 10 20 30 40 50

STANDARD PENETRATION BLOWS/(FT) 10 20 30 40 50

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

WL Dry	BORING STARTED 10/25/09	STS OFFICE Chicago - 01	
WL	BORING COMPLETED 10/25/09	ENTERED BY PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN Terra-Trace Hurricane/Dennis	APP'D BY STN	STS JOB NO. 13231-002

STS Consultants Ltd.

CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**B-9**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
						SURFACE ELEVATION		
		1	GP			Fill sand - little cinders, brick	5800	<1
5.0		2					6300	<1
10.0		3					6500	<1
12.0						End of boring * counts per minute (cpm)		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² 1 2 3 4 5

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % 10 20 30 40 50

STANDARD PENETRATION BLOWS/(FT) 10 20 30 40 50

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

WL **Dry WS**	BORING STARTED **10/25/09**	STS OFFICE **Chicago - 01**	
WL	BORING COMPLETED **10/25/09**	ENTERED BY **PMB**	SHEET NO. **1** OF **1**
WL	RIG/FOREMAN **Terra-Trace Hurricane/Dennis**	APP'D BY **STN**	STS JOB NO. **13231-002**

STS Consultants Ltd.

CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**B-10**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
						SURFACE ELEVATION		
		1	GP			Fill sand - little cinder, wood	5700	<1
5.0		2					6600	<1
10.0		3					5900	<1
12.0								
						End of boring		
						* counts per minute (cpm)		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² 1 2 3 4 5

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % 10 20 30 40 50

STANDARD PENETRATION BLOWS/(FT) 10 20 30 40 50

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

WL **Dry WS**	BORING STARTED **10/25/09**	STS OFFICE **Chicago - 01**	
WL	BORING COMPLETED **10/25/09**	ENTERED BY **PMB**	SHEET NO. **1** OF **1**
WL	RIG/FOREMAN **Terra-Trace Hurricane/Dennis**	APP'D BY **STN**	STS JOB NO. **13231-002**

STS Consultants Ltd.

CLIENT: Rehabiliation Institute of Chicago	LOG OF BORING NUMBER: B-11
PROJECT NAME: 401 E. Ohio Street	ARCHITECT-ENGINEER:
SITE LOCATION: Chicago, IL	

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
		1	GP			Fill sand - little clay, brick - black	6200	<1
5.0		2					7300	<1
10.0		3					6000	<1
12.0						End of boring * counts per minute (cpm)		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² 1 2 3 4 5

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % 10 20 30 40 50

STANDARD PENETRATION BLOWS/(FT) 10 20 30 40 50

The stratification lines represent the approximate boundary lines between soil types: In situ, the transition may be gradual.

WL: Dry WS	BORING STARTED: 10/25/09	STS OFFICE: Chicago - 01	
WL	BORING COMPLETED: 10/25/09	ENTERED BY: PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN: Terra-Trace Hurricane/Dennis	APP'D BY: STN	STS JOB NO. 13231-002

STS Consultants Ltd.

CLIENT: **Rehabiliation Institute of Chicago**

LOG OF BORING NUMBER: **GP-13**

PROJECT NAME: **401 E. Ohio Street**

ARCHITECT-ENGINEER:

SITE LOCATION: **Chicago, IL**

DEPTH(FT) / ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
5.0	1				Fill sand - little cinders, concrete - black	5800	<1
10.0	2				Fill clay - little gravel, sand, wood, brick - black Note: installed temporary well	6700	<1
15.0	3					5100	<1
16.0					End of boring * counts per minute (cpm)		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1, 2, 3, 4, 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10, 20, 30, 40, 50)

STANDARD PENETRATION BLOWS/(FT) (10, 20, 30, 40, 50)

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

WL 15' WS	BORING STARTED 10/25/09	STS OFFICE Chicago - 01	
WL	BORING COMPLETED 10/25/09	ENTERED BY PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN Terra-Trace Hurricane/Dennis	APP'D BY STN	STS JOB NO. 13231-002

STS Consultants Ltd.

CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**B-14**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
						SURFACE ELEVATION		
		1	GP			Fill sand - little cinders, concrete, wood - brownish-black	5500	<1
5.0		2					6300	<1
10.0		3				Fill sand - black	5600	<1
12.0						End of boring		
						* counts per minute (cpm)		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1, 2, 3, 4, 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10, 20, 30, 40, 50)

STANDARD PENETRATION BLOWS/(FT) (10, 20, 30, 40, 50)

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

WL 10" WS	BORING STARTED 10/25/09	STS OFFICE Chicago - 01	
WL	BORING COMPLETED 10/25/09	ENTERED BY PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN Terra-Trace Hurricane/Dennis	APP'D BY STN	STS JOB NO. 13231-002

STS Consultants Ltd.

CLIENT: Rehabiliation Institute of Chicago	LOG OF BORING NUMBER: B-15
PROJECT NAME: 401 E. Ohio Street	ARCHITECT-ENGINEER:
SITE LOCATION: Chicago, IL	

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50) / STANDARD PENETRATION BLOWS/(FT) (10 20 30 40 50)
		1	GP			Fill sand - little gravel, cinders, brick, wood	6200	<1	
5.0		2					6100	<1	
10.0		3					5400	<1	
12.0						End of boring			
						* counts per minute (cpm)			

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

WL: Dry WS	BORING STARTED: 10/25/09	STS OFFICE: Chicago - 01	
WL	BORING COMPLETED: 10/25/09	ENTERED BY: PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN: Terra-Trace Hurricane/Dennis	APP'D BY: STN	STS JOB NO. 13231-002

STS Consultants Ltd.

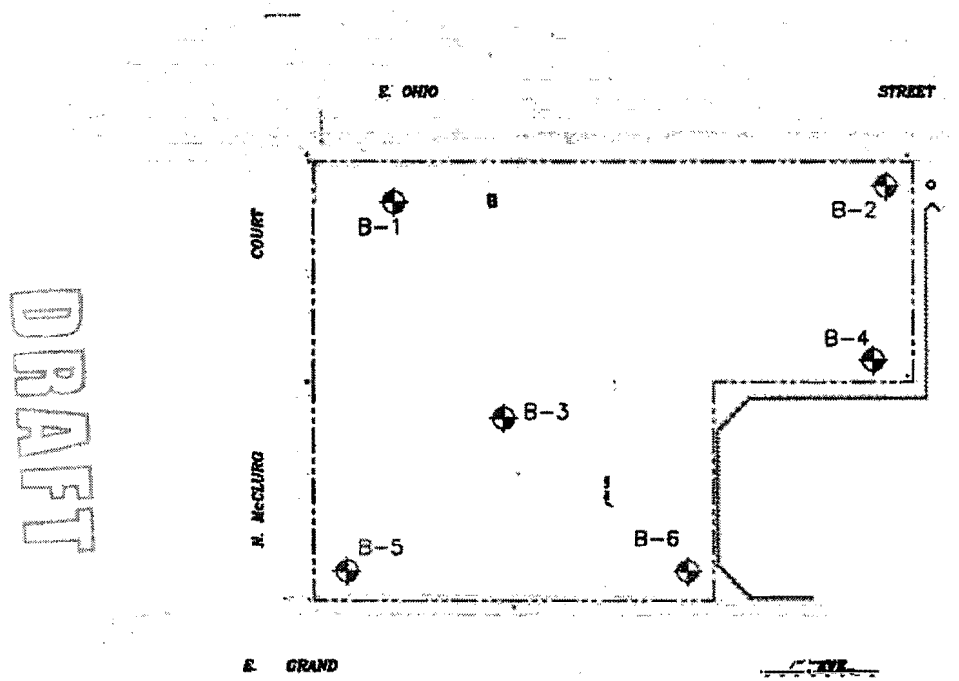
CLIENT	LOG OF BORING NUMBER
Rehabiliation Institute of Chicago	**B-16**
PROJECT NAME	ARCHITECT-ENGINEER
401 E. Ohio Street	

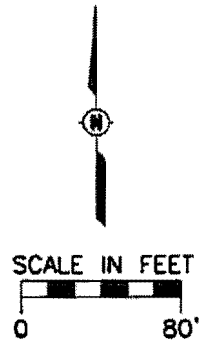
SITE LOCATION
Chicago, IL

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL SURFACE ELEVATION	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50) / STANDARD PENETRATION BLOWS/(FT) (10 20 30 40 50)
		1	GP			Fill sand - little cinders - black	5900	<1	
						Fill clay - little gravel, sand - black			
5.0		2					6700	<1	
10.0		3					6700	<1	
12.0									
						End of boring			
						* counts per minute (cpm)			

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

WL Dry	BORING STARTED 10/25/09	STS OFFICE Chicago - 01	
WL	BORING COMPLETED 10/25/09	ENTERED BY PMB	SHEET NO. 1 OF 1
WL	RIG/FOREMAN Terra-Trace Hurricane/Dennis	APP'D BY STN	STS JOB NO. 13231-002





LEGEND

B-1 SOIL BORING DRILLED BY GEI CONSULTANTS IN MARCH 2012

DRAFT

410 East Grand Avenue Chicago, IL	GEI Consultants	SOIL BORING LOCATION PLAN
Golub & Company, LLC Chicago, IL	Project 120740	April 2012 Fig. 1

J:\2012\120740 - Golub & Co\120740 SBLD FIG

BORING LOGS

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-1
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER: CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.9 ft. CCD

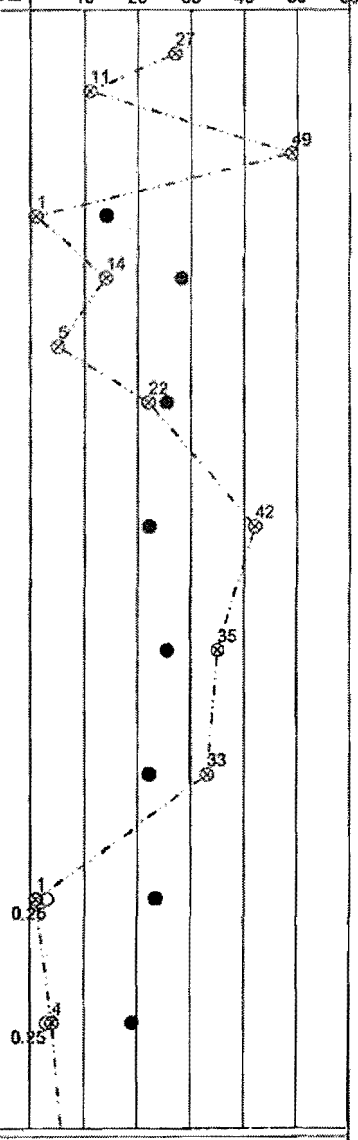
DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
					Bituminous concrete (Driller's observation)
	1	SS			0.2 Limestone base course
	2	SS			0.3 Urban Fill: Sand, gravel, bricks, cinders, clay - broken concrete fragments between 5.0 and 6.5 feet - moist
5	3	SS			
	4	SS			7.5 Fill: Silty sandy clay - trace gravel and brick - pieces of wood - fragments between 10.0 and 14.0 feet - brown and black - loose - moist
10	5	SS			
	6	SS			
15	7	SS			15.0 Fill: Clayey gravelly sand - trace glass and brick fragments
20	8	SS			20.0 Fine to medium sand - trace gravel - gray - dense - wet to saturated (SP)
25	9	SS			
30	10	SS			
35	11	SS			33.0 Silty clay - trace sand and gravel - gray - medium - moist (CL)
40	12	SS			Vane Shear Test with vane tip at 40.0 feet Peak S_u = 825 psf -- Remolded S_u = 600 psf

UNIT DRY WT. LBS/FT³

UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)

PLASTIC LIMIT (%) / WATER CONTENT (%) / LIQUID LIMIT (%) (10, 20, 30, 40, 50)

⊗ STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50, 60)



DRAFT

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

WATER LEVEL: 15.5 ft. WS; 21.0 ft. BCR & ACR	BORING STARTED 3/21/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/22/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN B-61 / Mark	GEI PROJECT NO. 120740	PAGE NO. 1 OF 3

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-1
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.9 ft. CCD

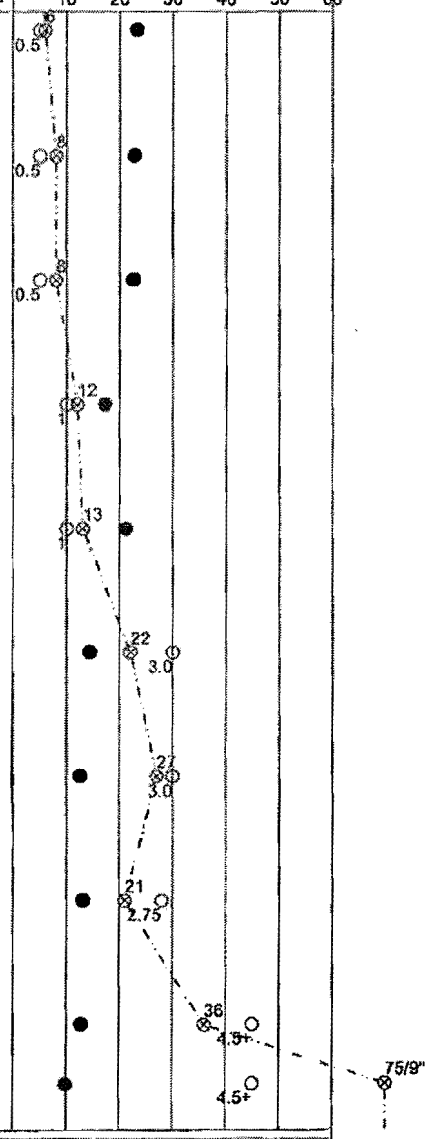
DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
	13	SS			Silty clay - trace sand and gravel - gray - medium - moist (CL)
					Vane Shear Test with vane tip at 45.0 feet Peak S_u = 1,000 psf -- Remolded S_u = 625 psf
-50	14	SS			**Vane Shear Test with vane tip at 50.0 feet Peak S_u = 1,100 psf -- Remolded S_u = 650 psf**
-55	15	SS			
-60	16	SS			60.0 Silty clay - trace sand and gravel - gray - medium to stiff - moist (CL)
-65	17	SS			
-70	18	SS			70.0 Silty clay - trace sand and gravel - gray - very stiff - moist (CL)
-75	19	SS			
-80	20	SS			
-85	21	SS			85.0 Silty clay - trace sand and gravel - gray - very hard - moist to wet (CL)
	22	SS			**Pressuremeter Test from 87.5 to 90.0 feet P_o = 5.6 tsf, P_f = 22.0 tsf, E_p = 500 tsf**

UNIT DRY WT. LBS/FT³

○ UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)

PLASTIC LIMIT (%) ✕ — WATER CONTENT (%) ● — LIQUID LIMIT (%) △ (10, 20, 30, 40, 50)

⊗ STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50, 60)



DRAFT

The stratification lines represent the approximate boundary lines between soil types; in situ, the transition may be gradual.

WATER LEVEL: 15.5 ft. WS; 21.0 ft. BCR & ACR	BORING STARTED 3/21/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/22/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN B-61 / Mark	GEI PROJECT NO. 120740	PAGE NO. 2 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-1
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.9 ft. CCD

DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5)	PLASTIC LIMIT (%) / WATER CONTENT (%) / LIQUID LIMIT (%) (10 20 30 40 50)	STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 60)
	23	SS						4.5+	37/6"
	24	SS			**Pressuremeter Test from 92.5 to 95.0 feet** P_o = 7.0 tsf, P_f = 30.0 tsf, E_d = 591 tsf			4.5+	60/6"
95	25	SS						4.5+	64/6"
	26	SS			**Pressuremeter Test from 97.5 to 100.0 feet** P_o = 7.0 tsf, P_f = 22.0 tsf, E_d = 615 tsf			4.5+	51/6"
100	27	SS			100.0 Clayey silt - trace sand - gray - hard - moist to wet (ML)			4.5+	42/6"
	28	SS			102.5 Silty clay - trace sand and gravel - gray - hard - moist (CL) Note: Seams of fine to coarse sand and shale			4.5+	32/6"
105	29	SS			105.0 Silty clay - trace sand and gravel - gray - hard - moist (CL)			4.5+	40/6"
110	30	SS			110.0 Refusal - Possible boulder (Driller's observation)				65/6"
	31	SS			110.8 Sandy fine silt - trace gravel - gray - extremely dense - moist (ML)				110/6"
	32	SS			113.5 Silty clay - little gravel - trace sand and shale - gray - hard - moist to wet (CL)			4.5+	
	33	SS						4.5+	105/6"
120					119.5 End of Boring Boring advanced to 20.0 feet with solid-stem auger Boring advanced from 20.0 to 119.5 feet with rock bit and drilling fluid HW casing driven to 40.0 feet Boring grouted upon completion				
125									
130									

DRAFT

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

WATER LEVEL: 15.5 ft. WS; 21.0 ft. BCR & ACR	BORING STARTED 3/21/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/22/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING / EASTING	RIG/FOREMAN B-61 / Mark	GEI PROJECT NO. 120740	PAGE NO. 3 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/2/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-2
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.5 ft. CCD

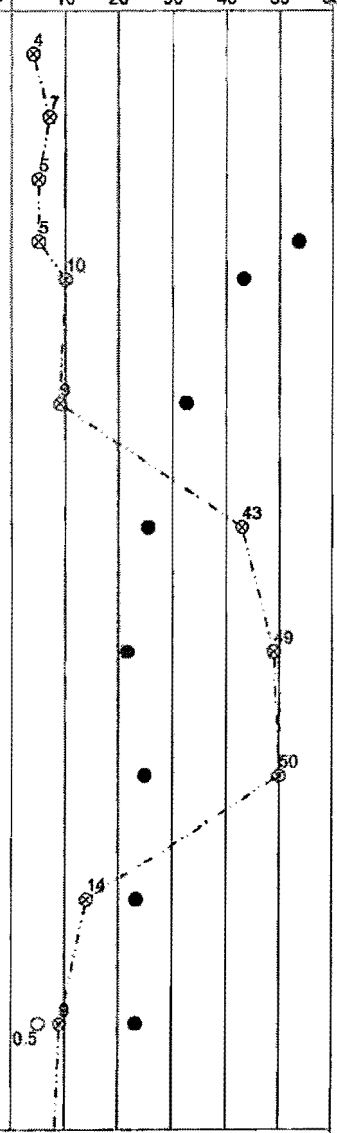
DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
					4" bituminous concrete (Driller's observation)
	1	SS			0.3 Urban Fill: Sand, gravel and brick fragments - loose - moist
	2	SS			
5	3	SS			
	4	SS			7.5 Fill: Silty clay - trace sand, gravel, and glass - black - loose - wet
10	5	SS			10.5 Fill: Sandy clay and sandy silt - trace sand - gray - loose - moist
15	6	SS			15.0 Fill: Sandy silt - trace gravel, sand and shale - trace of organics - black and gray - loose - moist to wet
20	7	SS			21.5 Fine to medium sand - trace gravel - gray - dense - moist (SP)
25	8	SS			
30	9	SS			
35	10	SS			33.5 Silty clay - trace sand and gravel - gray - soft to medium - moist (CL)
40	11	SS			

UNIT DRY WT. LBS/FT³

○ UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)

PLASTIC LIMIT (%) ✕ — WATER CONTENT (%) ● — LIQUID LIMIT (%) △ (10, 20, 30, 40, 50)

⊗ STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50, 60)



DRAFT

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

WATER LEVEL: 9.5 ft. WS; 24.0 ft. BCR; 17.5 ft. ACR	BORING STARTED 3/16/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/20/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Dan	GEI PROJECT NO. 120740	PAGE NO. 1 OF 3

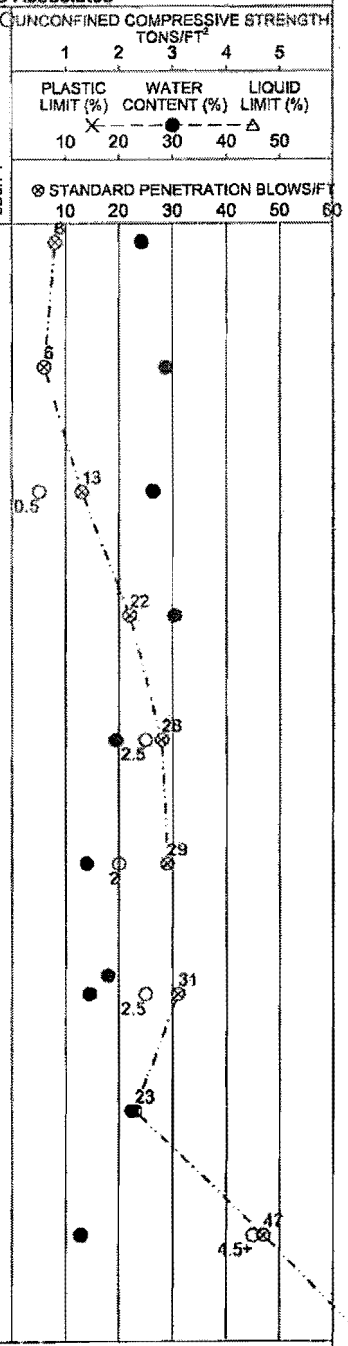
MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-2
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.5 ft. CCD

DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
	12	SS			Silty clay - trace sand and gravel - gray - soft to medium - moist (CL)
50	13	SS			
55	14	SS			
60	15	SS			60.0 Silty clay - trace sand and gravel - gray - very stiff - moist (CL)
65	16	SS			
70	17	SS			
75	18A	SS			Clay sand seams at 75.0 feet
	18B	SS			
80	19	SS			
85	20	SS			85.0 Silty clay - trace sand and gravel - gray - hard - moist (CL)



DRAFT

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

WATER LEVEL: 9.5 ft. WS; 24.0 ft. BCR; 17.5 ft. ACR	BORING STARTED 3/16/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/20/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Dan	GEI PROJECT NO. 120740	PAGE NO. 2 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER **B-2**
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER: CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.5 ft. CCD

DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5) / PLASTIC LIMIT (%) WATER CONTENT (%) LIQUID LIMIT (%) (10 20 30 40 50) / STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 60)
	21	SS			**Pressuremeter Test from 90.0 to 92.5 feet P_o = 7.0 tsf, P_f = 15.0 tsf, E_d = 239 tsf**		4.5+ / 84/11"
	22	SS					4.5+ / 94/9"
95	23	SS					4.5+ / 50/5"
	24	SS					4.5+ / 100/4"
100	25	SS			100.0 Silty clay - little gravel - with trace weathered limestone - gray - wet (CL)		91
	26	SS			**Pressuremeter Test from 100.0 to 102.5 feet P_o = 11.0 tsf, P_f = 23.0 tsf, E_d = 304 tsf**		4.5+ / 91
105	27	SS			102.0 Silty clay - trace sand and gravel - gray - very hard - moist (CL)		4.5+ / 100/2"
	28	SS			Sample 28 had no recovery		
110	29	SS					4.5+ / 50/3"
115	30	SS			**Pressuremeter Test from 115.0 to 117.5 feet P_o = 10.0 tsf, P_f = >35.0 tsf, E_d = 395 tsf**		4.5+ / 100/5"
120	31	SS			120.2 End of Boring Boring advanced to 20.0 feet with solid-stem auger Boring advanced from 20.0 to 120.2 feet with rock bit and drilling fluid HW casing driven to 40.0 feet Boring grouted upon completion		100/2"
125							
130							

DRAFT

The stratification lines represent the approximate boundary lines between soil types: In situ, the transition may be gradual.

WATER LEVEL: 9.5 ft. WS; 24.0 ft. BCR; 17.5 ft. ACR	BORING STARTED 3/16/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/20/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Dan	GEI PROJECT NO. 120740	PAGE NO. 3 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants

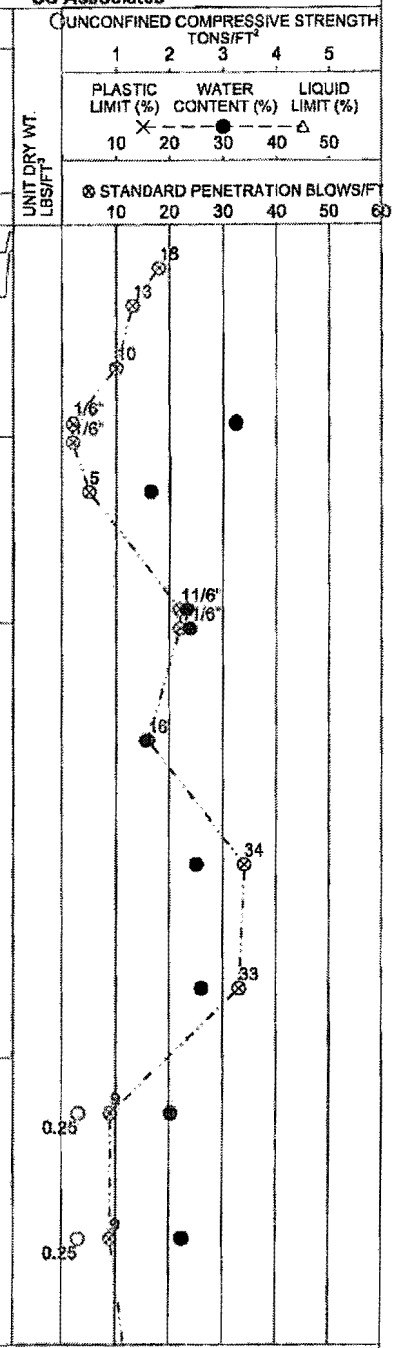
CLIENT: Golub & Company	LOG OF BORING NUMBER B-3
PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.9 ft. CCD

DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
					3" bituminous concrete (Driller's observation)
	1	SS			0.3 Crushed limestone base (Driller's observation)
	2	SS			1.0 Urban Fill: Cinders, bricks, clay, gravel - loose - moist
5	3	SS			
	4A	SS			
	4B	SS			8.5 Fill: Sandy clay - trace topsoil and gravel - black and brown - soft - moist
10	5	SS			Note: Large piece of brick fragment in Sample 5
15	6A	SS			
	6B	SS			16.0 Fine to coarse sand - trace gravel - gray to brownish gray - medium dense to dense - moist (SP)
20	7	SS			
25	8	SS			
30	9	SS			
35	10	SS			33.5 Silty clay - trace sand and gravel - gray - soft to medium - moist (CL)
40	11	SS			

DRAFT



The stratification lines represent the approximate boundary lines between soil types: In situ, the transition may be gradual.

WATER LEVEL: 8.5 ft. WS; 20.0 ft. BCR	BORING STARTED 3/20/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/28/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Dan	GEI PROJECT NO. 120740	PAGE NO. 1 OF 3

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-3
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.9 ft. CCD

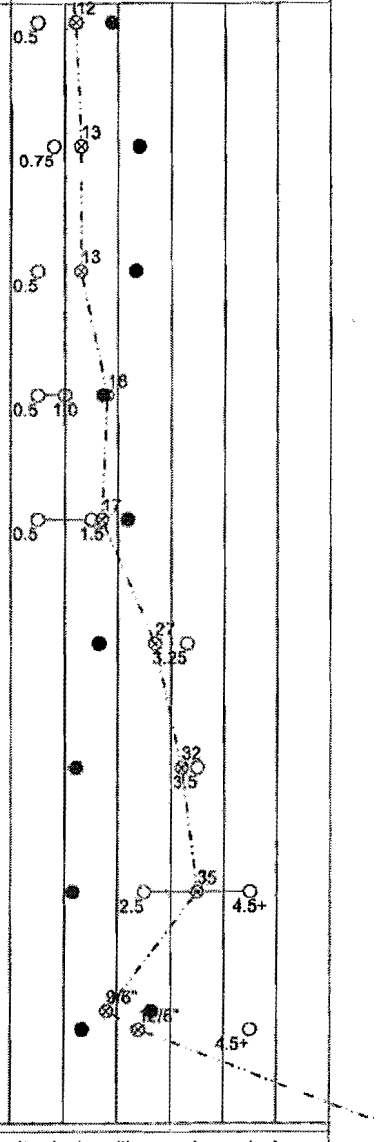
DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
	12	SS			Silty clay - trace sand and gravel - gray - soft to medium - moist (CL)
50	13	SS			
55	14	SS			
60	15	SS			60.0 Silty clay - trace sand and gravel - gray - medium to stiff - moist (CL)
65	16	SS			
70	17	SS			70.0 Silty clay - trace sand and gravel - gray - very stiff - moist (CL)
75	18	SS			
80	19	SS			
85	20	SS			84.0 Clayey silt - trace sand and gravel - gray - medium dense - saturated (ML-CL)
	20A	SS			86.0 Silty clay - trace sand and gravel - gray - very stiff to hard - moist (CL)

UNIT DRY WT. LBS/FT³

UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5)

PLASTIC LIMIT (%) — WATER CONTENT (%) — LIQUID LIMIT (%) (10 20 30 40 50)

⊗ STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 60)



DRAFT

The stratification lines represent the approximate boundary lines between soil types; in situ, the transition may be gradual.

WATER LEVEL: 8.5 ft. WS; 20.0 ft. BCR	BORING STARTED 3/20/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/28/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Dan	GEI PROJECT NO. 120740	PAGE NO. 2 OF 3

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-3
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.9 ft. CCD

DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5) / PLASTIC LIMIT (%) WATER CONTENT (%) LIQUID LIMIT (%) (10 20 30 40 50) / STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 60)	
	21	SS			88.5 Silty clay - trace sand and gravel - dark gray - hard - moist (CL)		4.5+	87
	22	SS					4.5+	79
95	23	SS			95.0 Clayey silt - trace sand and gravel - gray - extremely dense - moist (ML)		4.5+	58/6"
	24	SS			97.5 Silty clay - trace sand and gravel - gray - hard - moist (CL)		4.5+	71/6"
100	25	SS			100.0 Silty clay - trace sand and gravel - gray - trace limestone fragment (CL)		4.5+	105/4"
	26	SS			102.3 Silty clay - trace sand and gravel - with sand seams - gray - hard - moist (CL)		4.5+	61/6"
105	27	SS					4.5+	58/6"
	28	SS			107.5 Silty clay - trace sand and gravel - trace limestone fragment - cobble at 114.0 to 114.5 feet - gray - very hard - moist (CL)		4.5+	70
110	29	SS					4.5+	88/6"
115	30	SS			115.0 Silty clay - trace sand and gravel - gray - hard - moist (CL) Note: Gravel and limestone fragment at 117.0 to 117.5 feet		4.5+	64/6"
120	31	SS					4.5+	155/6"
125					120.5 End of Boring Boring advanced to 20.0 feet with solid-stem auger Boring advanced from 20.0 to 120.5 feet with rock bit and drilling fluid HW casing driven to 40.0 feet Boring grouted upon completion			
130								

DRAFT

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

WATER LEVEL: 8.5 ft. WS; 20.0 ft. BCR	BORING STARTED 3/20/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/28/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Dan	GEI PROJECT NO. 120740	PAGE NO. 3 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants

CLIENT: Golub & Company	LOG OF BORING NUMBER **B-4**
PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER: CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +14.2 ft. CCD

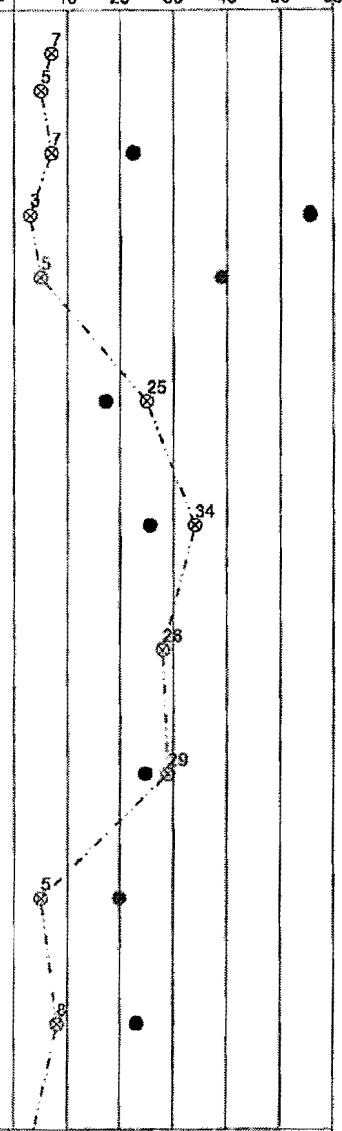
DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
					3" bituminous concrete (Driller's observation)
	1	SS			0.3 Urban Fill: Cinders, bricks, clay - loose
	2	SS			
5	3	SS			4.5 Fill: Clayey silt - trace sand and gravel - brown to black - loose to very loose - moist
	4	SS			
10	5	SS			9.5 Fill: Silty sand - bricks and roots - black and brown - loose - moist
15	6	SS			14.5 Silty sand - trace gravel - dark gray to gray - medium dense - moist to saturated (SP-SM)
20	7	SS			
25	8	SS			
30	9	SS			
35	10	SS			34.0 Silty clay - trace sand and gravel - gray - stiff to medium - moist (CL)
					Vane Shear Test with vane tip at 40.0 feet Peak S_u = 1,650 psf -- Remolded S = 1,025 psf
40	11	SS			**Vane Shear Test with vane tip at 45.0 feet Peak S_u = 1,025 psf -- Remolded S = 700 psf**
					Vane Shear Test with vane tip at 50.0 feet Peak S_u = 900 psf -- Remolded S = 450 psf

UNIT DRY WT LBS/FT³

○ UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)

PLASTIC LIMIT (%) ✕ — WATER CONTENT (%) ● — LIQUID LIMIT (%) △ (10, 20, 30, 40, 50)

⊗ STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50, 60)



DRAFT

The stratification lines represent the approximate boundary lines between soil types; in situ, the transition may be gradual.

WATER LEVEL: 7.5 ft. WS; 21.0 ft. BCR; 12.0 ft. ACR	BORING STARTED 3/13/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/14/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Scott	GEI PROJECT NO. 120740	PAGE NO. 1 OF 3

GEI Consultants

CLIENT: Golub & Company	LOG OF BORING NUMBER B-4
PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +14.2 ft. CCD

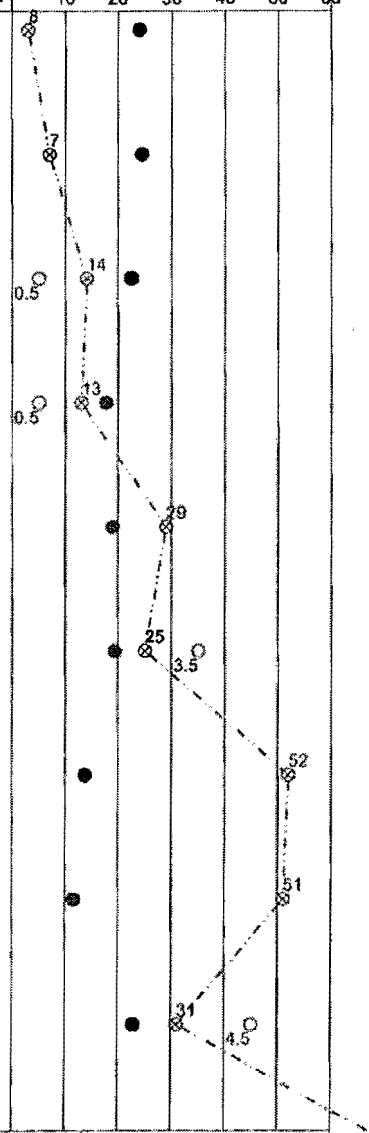
DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
	12	SS			Silty clay - trace sand and gravel - gray - stiff to medium - moist (CL)
50	13	SS			
55	14	SS			54.5 Silty clay - trace gravel and sand - gray - medium to stiff - moist (CL)
60	15	SS			
65	16	SS			64.5 Silty sand - trace gravel and clay - dark gray - medium dense - moist (SM)
70	17	SS			69.5 Silty clay - trace sand and gravel - gray - very stiff - moist (CL)
75	18	SS			74.5 Silty sand with gravel - trace clay - dark gray - very dense - moist (SM)
80	19	SS			
85	20	SS			84.5 Silty clay - trace sand and gravel - gray - very stiff - moist (CL)

UNIT DRY WT. LBS/FT³

UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)

PLASTIC LIMIT (%) X — WATER CONTENT (%) ● — LIQUID LIMIT (%) △ (10, 20, 30, 40, 50)

⊗ STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50, 60)



DRAFT

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

WATER LEVEL: 7.5 ft. WS; 21.0 ft. BCR; 12.0 ft. ACR	BORING STARTED 3/13/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/14/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Scott	GEI PROJECT NO. 120740	PAGE NO. 2 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-4
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +14.2 ft. CCD

DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5) / PLASTIC LIMIT (%) WATER CONTENT (%) LIQUID LIMIT (%) (10 20 30 40 50) / STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 60)	
	21	SS			89.5 Silty clay - trace sand and gravel - dark gray - hard - moist (CL)		4.5+	73
	22	SS					4.5+	77
95	23	SS					4.5+	50/6"
	24	SS					4.5+	56/6"
100	25	SS					4.5+	54/6"
	26	SS					4.5+	56/6"
105	27	SS					4.5+	50/6"
	28	SS					4.5+	85
110					109.5 End of Boring Boring advanced to 20.0 feet with solid-stem auger Boring advanced from 20.0 to 109.5 feet with rock bit and drilling fluid HW casing driven to 40.0 feet Boring grouted upon completion			
115								
120								
125								
130								

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

WATER LEVEL: 7.5 ft. WS; 21.0 ft. BCR; 12.0 ft. ACR	BORING STARTED 3/13/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/14/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Scott	GEI PROJECT NO. 120740	PAGE NO. 3 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

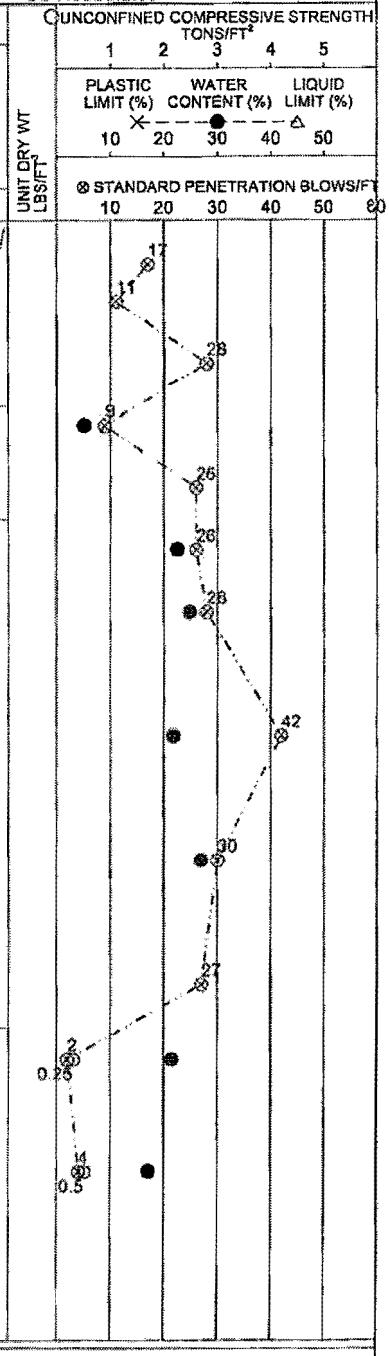
GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-5
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +12.8 ft. CCD

DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
					Bituminous concrete (Driller's observation)
	1	SS			0.3 Urban Fill: Sand, gravel, clay, brick fragments - brown - loose - moist
	2	SS			
5	3	SS			
	4	SS			7.5 Fill: Fine to coarse sand - trace gravel, brick fragments, and cinders - brown - loose to medium dense - moist
10	5	SS			
	6	SS			12.0 Fine to medium sand - brown - medium dense to dense - moist to saturated (SP)
15	7	SS			
20	8	SS			
25	9	SS			
30	10	SS			
	11	SS			32.5 Silty clay - trace sand and gravel - gray - medium - moist (CL)
35					**Vane Shear Test with vane tip at 37.5 feet Peak S_u = 875 psf -- Remolded S_r = Not Performed**
	12	SS			
40					**Vane Shear Test with vane tip at 42.5 feet Peak S_u = 925 psf -- Remolded S_r = Not Performed**
					Vane Shear Test with vane tip at 44.0 feet Peak S_u = 1,225 psf -- Remolded S_r = 650 psf

DRAFT



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

WATER LEVEL: 12.0 ft. WD	BORING STARTED 3/19/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN B-61 / Mark	GEI PROJECT NO. 120740	PAGE NO. 1 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-5
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +12.8 ft. CCD

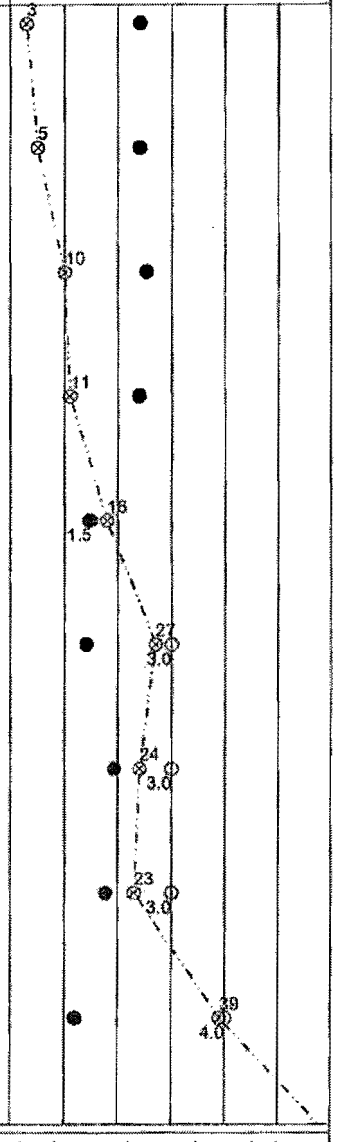
DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
	13	SS			**45.0** Silty clay - trace sand and gravel - gray - medium - moist (CL) **Vane Shear Test with vane tip at 50.0 feet Peak S_u = 1,200 psf -- Remolded S_u = 650 psf**
50	14	SS			
55	15	SS			
60	16	SS			**60.0** Silty clay - trace sand and gravel - gray - stiff to very stiff - moist (CL)
65	17	SS			
70	18	SS			
75	19	SS			
80	20	SS			
85	21	SS			**85.0** Silty clay - trace sand and gravel - gray - very stiff to hard - moist (CL) **Pressuremeter Test from 85.0 to 87.5 feet P_o = 5.0 tsf, P_f = 10.5 tsf, E_o = 152 tsf**

UNIT DRY WT LBS/FT³

UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5)

PLASTIC LIMIT (%) — WATER CONTENT (%) — LIQUID LIMIT (%) (10 20 30 40 50)

⊗ STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 60)



DRAFT

The stratification lines represent the approximate boundary lines between soil types; in situ, the transition may be gradual.

WATER LEVEL: 12.0 ft. WD	BORING STARTED 3/19/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN B-61 / Mark	GEI PROJECT NO. 120740	PAGE NO. 2 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-5
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +12.8 ft. CCD

DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5) / PLASTIC LIMIT (%) WATER CONTENT (%) LIQUID LIMIT (%) (10 20 30 40 50) / STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 60)	
	22	SS			90.0 Silty clay - trace sand and gravel with occasional silt seams - dark gray - hard - moist (CL) **Pressuremeter Test from 90.0 to 92.5 feet** **P_o = 5.5 tsf, P_f = 25.0 tsf, E_d = 348 tsf** **Pressuremeter Test from 97.5 to 100.0 feet** **P_o = 6.9 tsf, P_f = >32.0 tsf, E_d = 656 tsf**		4.5+	80/6"
	23	SS					4.5+	55/6"
95	24	SS					4.5+	52/6"
	25	SS						48/6"
100	26	SS						85/3"
	27	SS						55/6"
105	28	SS			105.0 Silty clay - trace sand and gravel with occasional limestone fragments - gray - hard - moist (CL) **Pressuremeter Test from 105.0 to 107.5 feet** **P_o = 7.3 tsf, P_f = 23.0 tsf, E_d = 389 tsf**		4.5+	74/6"
	29	SS					4.5+	36/6"
110	30	SS						72/6"
115	31	SS			115.0 Silty clay - trace sand and gravel with cobble between 118.0 and 118.5 feet - gray - very hard - moist to wet (CL) Refusal at 120.25 feet		4.5+	100/5"
120	32	SS			120.3 End of Boring Boring advanced to 12.5 feet with solid-stem auger Boring advanced from 12.5 to 120.25 feet with rock bit and drilling fluid HW casing driven to 40.0 feet Boring grouted upon completion			130/3"
125								
130								

DRAFT

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

WATER LEVEL: 12.0 ft. WD	BORING STARTED 3/19/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN B-61 / Mark	GEI PROJECT NO. 120740	PAGE NO. 3 OF 3

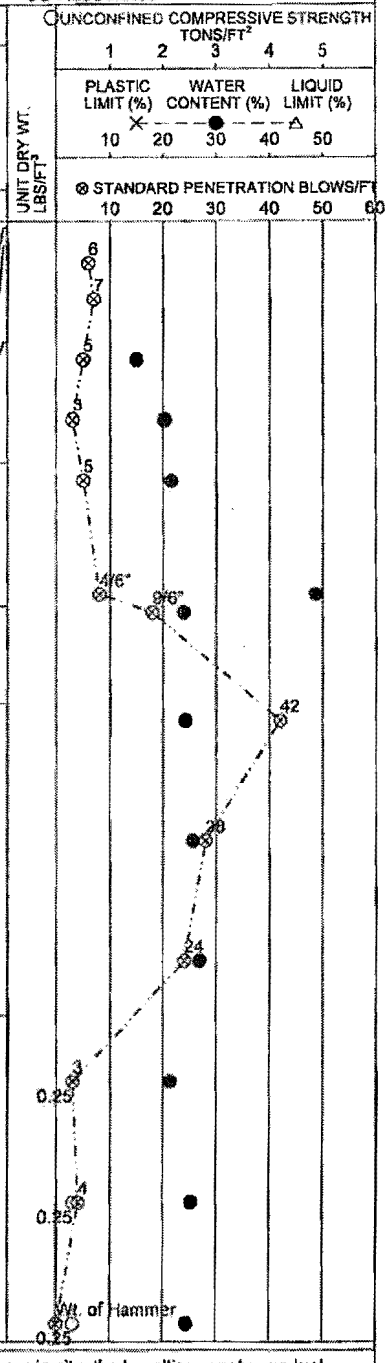
MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-6
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.2 ft. CCD

DEPTH (FT) / ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
					0.0 Bituminous concrete (Driller's observation)
	1	SS			0.3 Concrete (Driller's observation)
	2	SS			1.0 Urban Fill: Clay, sand, gravel, topsoil, brick fragments - loose
5	3	SS			5.0 Fill: Clayey sand - trace gravel, brick fragments, and cinders - brown - loose - moist
	4	SS			
10	5	SS			10.0 Fill: Sandy clay - black and brown - soft - moist to wet
15	6A	SS			
	6B	SS			16.0 Possible Fill: Silty sand - trace gravel - gray - loose - moist to saturated
20	7	SS			20.0 Fine to medium sand - trace gravel - gray - medium dense to dense - moist to saturated (SP)
25	8	SS			
30	9	SS			
35	10	SS			33.0 Silty clay - trace sand and gravel - gray - medium - moist (CL)
40	11	SS			Vane Shear Test with vane tip at 38.5 feet Peak S_u = 900 psf -- Remolded S_u = 625 psf
45	12	SS			Vane Shear Test with vane tip at 43.5 feet Peak S_u = 650 psf -- Remolded S_u = 375 psf



DRAFT

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

WATER LEVEL: 11.0 ft. WS	BORING STARTED 3/20/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/26/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Dan	GEI PROJECT NO. 120740	PAGE NO. 1 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-6
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.2 ft. CCD

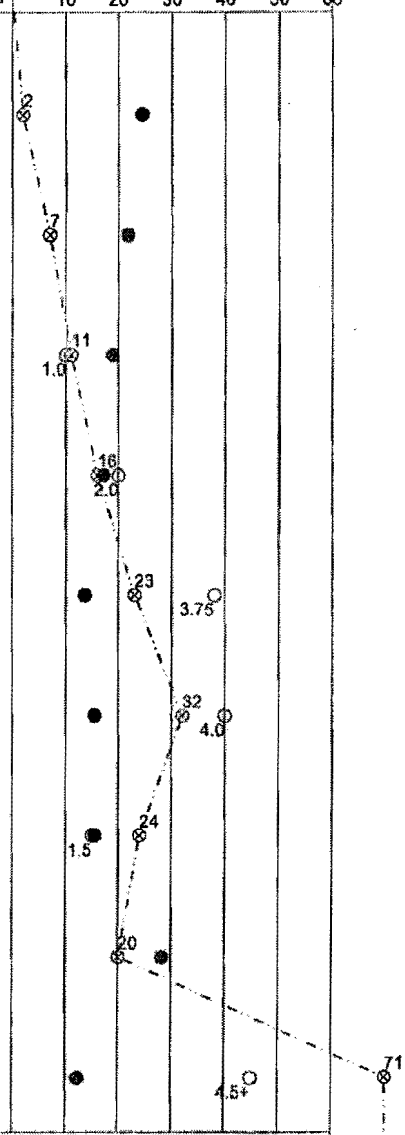
DEPTH (FT)	ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
50		13	SS			Silty clay - trace sand and gravel - gray - medium - moist (CL) **Vane Shear Test with vane tip at 48.5 feet Peak S_u = 875 -- Remolded S_u = 375 psf**
55		14	SS			
60		15	SS			60.0 Silty clay - trace sand and gravel - gray - with fine to medium sand seams between 75.0 and 76.0 feet - stiff to very stiff - moist (CL)
65		16	SS			
70		17	SS			
75		18	SS			
80		19	SS			
85		20	SS			85.0 Clayey silt - trace sand - clay at tip - gray - medium dense - moist to wet (ML)
90		21	SS			88.5 Silty clay - trace sand and gravel - gray - hard - moist (CL) **Pressuremeter Test from 90.0 to 92.5 feet P_o = 7.0 tsf, P_l = 20.0 tsf, E_d = 277 tsf**

UNIT DRY WT LBS/FT³

UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5)

PLASTIC LIMIT (%) ✕ — WATER CONTENT (%) ● — LIQUID LIMIT (%) △ (10 20 30 40 50)

⊗ STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 60)



DRAFT

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

WATER LEVEL: 11.0 ft. WS	BORING STARTED 3/20/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/20/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Dan	GEI PROJECT NO. 120740	PAGE NO. 2 OF 3

MIDWEST BORING LOG 120740 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

GEI Consultants	CLIENT: Golub & Company	LOG OF BORING NUMBER B-6
	PROJECT NAME: 410 E. Grand Avenue	ARCHITECT-ENGINEER CS Associates

LOCATION: Chicago, Illinois

SURFACE ELEVATION (ft.) +13.2 ft. CCD

DEPTH (FT)	ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5)	PLASTIC LIMIT (%) / WATER CONTENT (%) / LIQUID LIMIT (%) (10 20 30 40 50)	STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 60)
		22	SS			Silty clay - trace sand and gravel - gray - hard - moist (CL)		4.5+		80
95		23	SS			**Pressuremeter Test from 95.0 to 97.5 feet** **P_o = 6.5 tsf, P_f = >34.0 tsf, E_d = 514 tsf**		4.5+		50/3"
		24	SS			97.5 Silty gravelly clay - trace sand - large gravel - gray - hard - moist to wet (CL)		4.5+		66/6"
100		25	SS					4.5+		64/6"
		26	SS					4.5+		58/6"
105		27	SS			105.0 Silty clay - trace sand and gravel - occasional large gravel - gray - hard - moist (CL)		4.5+		66/6"
		28	SS					4.5+		84
110		29	SS			110.0 Silty clay - little gravel - trace sand - limestone fragments - gray - very hard - wet (CL) **Pressuremeter Test from 110.0 to 112.5 feet** **P_o = 7.5 tsf, P_f = >35.0 tsf, E_d = 916 tsf**		4.5+		130/6"
115		30	SS					4.5+		96/6"
120		31	SS					4.5+		125/6"
125						120.5 End of Boring Boring advanced to 15.0 feet with solid-stem auger Boring advanced from 15.0 to 120.5 feet with rock bit and drilling fluid HW casing driven to 40.0 feet Boring grouted upon completion				
130										
135										

DRAFT

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

WATER LEVEL: 11.0 ft. WS	BORING STARTED 3/20/2012	GEI OFFICE Chicago Area	
	BORING COMPLETED 3/26/2012	ENTERED BY BJV	APPROVED BY CKT
NORTHING EASTING	RIG/FOREMAN D-50 / Dan	GEI PROJECT NO. 120740	PAGE NO. 3 OF 3

MIDWEST BORING LOG 120745 410 E. GRAND.GPJ GEI DATA TEMPLATE.GDT 4/24/12

Appendix E

SOP for Calibrating Field Instruments

CERTIFICATE OF CALIBRATION

RSSI

6312 West Oakton Street
Morton Grove, IL 60053-2723
Telephone: 847-965-1999
Fax: 847-965-1991
www.rssi.us

Certificate No. 046744

RSSI
Attention: Eli A. Port, Rso
6312 West Oakton Street
Morton Grove, IL 60053-2723

Manufacturer: LUDLUM
Model: 2200
Serial No.: 36762
Probe(s): Not Applicable

CALIBRATION DATA

SOURCE*	SCALE	FIELD (cpm)	READING (cpm)	FIELD (cpm)	READING (cpm)
5	x1	100	100	400	400
5	x10	1000	1000	4000	4000
5	x100	10 K	10 K	40 K	40 K
5	x1000	100 K	100 K	400 K	400 K
	SCALER	counts	counts	counts	counts
5	0 - 1000	50	49	500	496
5	0 - 100 K	5 K	4962	50 K	49637
5	0 - 1 M	500 K	496324		

If the accuracy of a scale is not within +/-10% but is within +/-20% a correction factor is supplied.

Check Source: Not Applicable

Temperature: 24 °C **Relative Humidity:** 63 % **Barometric Pressure:** 982 mbar

Comments: All scaler counts taken for one minute periods.
HV DIAL 392
THRESHOLD DIAL 110

Calibrated by: Timothy Hall **Date:** 6/24/11

Calibration Frequency: Annual **Recalibrate by:** 6/24/12

*SOURCE	1. Cs-137	2. Cs-137	3. Am-241	4. Cf-252	5. Electronic	6. Other
Manufacturer	U.S. Nuclear	Eon Corp.	Amersham	Amersham	LUDLUM	
Model	CCs-D-20E	64-764	AMC 13446	100	500	
Serial Number	69036EZ	722	7510 LA	FTC-CF-001	32789	
Activity	15 Ci	100 mCi	100 mCi	1801 µg	NONE	
Date	4/2009	5/2/78	6/3/84	10/8/85	11/18/09	

Calibration authorized by Illinois Department of Nuclear Safety License No. IL-01429-01 and meets the requirements of ANSI 323-1978 and MIL-STD-45662A.
Exposure rate traceable to NIST with MDH model 1015 SN 109 transfer instrument. Radcal Cert. of Conf. 20300.

PREVENTIVE MAINTENANCE PERFORMED

BATTERIES/CONTACTS CHECKED	✓	
HIGH VOLTAGE MEASURED	✓	1010 VOLTS
SENSITIVITY MEASURED	✓	10 mVOLTS
METER ZERO CHECKED	✓	
INSTRUMENT CLEANED	✓	

Lab Reference: 21

CERTIFICATE OF CALIBRATION

RSSI

6312 West Oakton Street
Morton Grove, IL 60053-2723
Telephone: 847-965-1999
Fax: 847-965-1991
www.rssi.us

Certificate No. 046741

RSSI
Attention: Eli A. Port, Rso
6312 West Oakton Street
Morton Grove, IL 60053-2723

Manufacturer: LUDLUM
Model: 193
Serial No.: 149080
Probe(s): LUDLUM 44-10, Sn: PR155592

CALIBRATION DATA

SOURCE*	SCALE	FIELD (cpm)	READING (cpm)	FIELD (cpm)	READING (cpm)
5	x1	200	220	800	800
5	x10	2 K	2.2 K	8 K	8 K
5	x100	20 K	22 K	80 K	80 K
5	x1000	200 K	220 K	800 K	800 K

If the accuracy of a scale is not within +/-10% but is within +/-20% a correction factor is supplied.

Check Source: Not Applicable

Temperature: 25.5 °C **Relative Humidity**: 63 % **Barometric Pressure**: 978 mbar

Calibrated by: Timothy Hall **Date**: 6/22/11

Calibration Frequency: Annual **Recalibrate by**: 6/22/12

***SOURCE**	**1. Cs-137**	**2. Cs-137**	**3. Am-241**	**4. Cf-252**	**5. Electronic**	**6. Other**
Manufacturer	U.S. Nuclear	Eon Corp.	Amersham	Amersham	LUDLUM	
Model	CCs-D-20E	64-764	AMC 13446	100	500	
Serial Number	69036EZ	722	7510 LA	FTC-CF-001	32789	
Activity	15 Ci	100 mCi	100 mCi	1801 µg	NONE	
Date	4/2009	5/2/78	6/3/84	10/8/85	11/18/09	

Calibration authorized by Illinois Department of Nuclear Safety License No. IL-01429-01 and meets the requirements of ANSI 323-1978 and MIL-STD-45662A.
Exposure rate traceable to NIST with MDH model 1015 SN 109 transfer instrument. Radcal Cert. of Conf. 20300.

PREVENTIVE MAINTENANCE PERFORMED

BATTERIES/CONTACTS CHECKED	✓	REPLACED
HIGH VOLTAGE MEASURED	✓	888 VOLTS
SENSITIVITY MEASURED	✓	10 mVOLTS
METER ZERO CHECKED	✓	
INSTRUMENT CLEANED	✓	

REPAIR AND PART INFORMATION

Quantity	Description
2	D Batteries

Lab Reference: 4

Appendix F

Excavation and Backfilling Procedures with Chicago Office of Underground Coordination (Excavation Cross-sections)

TRI THERMAL REMEDIATION INC.

ENVIRONMENTAL REMEDIATION & EARTHWORK CONTRACTORS

Mr. Zenon Stuck
Chicago Department of Transportation
30 North LaSalle Street
3rd Floor
Chicago, Illinois 60603

RE: Excavation and Backfilling Procedures - Soil Screening Activities
GHB 630, LLC
545 North McClurg Court (formerly 410 East Grand Avenue)
Chicago, Illinois 60611

Dear Mr. Stuck:

The excavation process will involve the removal of soils along the perimeter and within the interior of the site. All excavations will be completed within the property boundary and prior to any construction activities at the site. The provisions of these procedures will be consistent with the Chicago Department of Transportation (CDOT) guidance for shallow excavations. Described below are the details of the excavation and backfilling procedures.

Background and Purpose of Screening Excavations

Excavations are proposed for the screening of potentially radioactive soils on the site. This site is part of the US EPA superfund site associated with the former Lindsey Light Company. Lindsay Light Company manufactured incandescent gaslight mantles for home and street lighting at several addresses in Chicago's downtown Streeterville neighborhood until the mid-1930s. The Lindsay Light Company used the radioactive chemical thorium nitrate to manufacture their gaslight mantles. The United States Environmental Protection Agency (US EPA) first discovered thorium contamination at Lindsay Light's Illinois St. location in 1993; further investigations have discovered thorium in the soil at more than a dozen locations, several of which were located adjacent to the current site. In relation to the subject site, nearby properties have found significant quantities of low-level radioactive soils that required excavation, removal and disposal under US EPA direction.

To protect human health and the environment, US EPA and the City of Chicago have developed a system requiring anyone planning to remove hard surfaces and conduct subsurface excavations in the area to test the soil if US EPA suspects that the property has thorium contamination.

In order to complete proposed construction activities at the site, asphalt pavement and potentially impacted soils will be disturbed. To protect construction workers, future site tenants and the general public, soil screening will be conducted as required by US EPA prior to construction activities to identify and remove any soils that would be encountered during planned construction activities.

Permitting and Notifications

GaiaTech will obtain all necessary permits and notifications including, but not limited to the City of Chicago Department of Transportation, US EPA and any other relevant agency.

956 S. Bartlett Rd. ▲ Suite 250 ▲ Bartlett, IL 60103
(630) 830-9323 ▲ FAX (630) 830-9324 ▲ E-Mail: thermalinc@aol.com
Website: www.thermalremediationinc.com

Initial Utility Clearance

Prior to the commencement of any onsite excavation, a public utility locate will be called into Digger, the Chicago Utility Alert Network for the marking of any nearby public utilities adjacent to the site. If necessary, a private utility locating service will also be utilized to mark any onsite utilities not identified by Digger.

Excavations Procedures

Soil screening and excavations will be limited to those areas that are proposed for future construction activities. Screening will be conducted to a minimum depth of 4 feet and to a maximum depth of 21 feet below grade. Screening will be confined to the property boundary, but will cover the entire site. Excavations will be completed along the perimeter, near the Right-of-Way (ROW) and on the interior of the site. All excavations will be conducted by narrow slot trenches. Screening will be conducted in 18-inch lifts, to the base of each excavation. Screening personnel will enter the excavation to a depth not to exceed 4 feet in depth. After this depth is reached, all screening will be accomplished with the meter tied to a rope and lowered into the excavation. Slot trenches along the property line and in the interior will only remain open for one hour during screening and then quickly backfilled to grade, limiting the amount of time for any soils to slump. When the excavation is near the ROW, sidewalks and in some cases the nearest street lane will be blocked off to protect the public from any unanticipated soil collapse.

Interior excavations at least 35 feet from the ROW will utilize slightly large excavations if a 1 to 1.5 slope can be maintained without impacting any adjacent public utilities or offsite structures. For both the ROW and interior slot trenches this procedure will be repeated for each trench until the site is covered.

Once all of the screening has been completed, the excavation will be backfilled within one hour of digging with the same material that was removed from the excavation. The material will be backfilled and machine compacted to the original ground surface. Details of this procedure are explained below.

Excavation Equipment

TRI will utilize a CAT 330 or similar backhoe excavator for all onsite excavations. The bucket will have a capacity of between 2.75 and 3.5 cubic yards. The bucket width on this excavator is approximately 5 feet. A smaller bucket may be utilized around tightly spaced existing structures (caissons, frost walls, ETC.) or when digging below the water table.

Specific Excavation Guidelines

1. Owner will survey all locations prior to beginning any excavation.

2. GaiaTech (project manager) will direct excavator (TRI) to any particular excavation.

3. Excavator/TRI will establish a perimeter for the excavation by installing appropriate barriers and/or exclusion zones to prohibit unauthorized personnel access to the work area. During slot trench excavation activities that are adjacent (within 35 feet) to the sidewalks (ROW), public access to the sidewalk will be restricted by posting CDOT approved signs and barricades to redirect pedestrian traffic away from the area. Additionally, due to the narrow ROW/sidewalk area adjacent to the southern property boundary, the nearest west bound lane of Grand Street will also be barricaded to traffic during excavation. All street closures will adhere to CDOT specifications. All traffic control devices and signage as stipulated by CDOT will be erected by TRI personnel or subcontractors prior to the start of excavation work.

4. All excavations will be within the property boundary and will NOT extend into the ROW/public way.

5. No slot trench excavation shall be started unless sufficient work time exists to screen all lifts, backfill/compact within the required time constraints.

6. Site perimeter excavations adjacent to the ROW will be excavated in an area not to exceed an area of 6 x 18 feet and to the desired depth. Excavations along the perimeter will be narrow and oriented perpendicular to the ROW to maintain trench sidewall stability. All excavations will be backfilled within 1 hour following screening. This will limit the potential for any soil sloughing near the property line or onsite. Slot trenches within 35 feet of the ROW will be excavated in this manner.

7. Interior excavations (beyond 35 feet from the ROW) will be oriented as shown on the plans and will be slightly larger (10 x 18 feet) than the perimeter excavations, with the contractor reserving the right to alter the trench orientation to adjust for field conditions.

8. Excavations will begin by stripping off any surface covering of asphalt or concrete and segregating the materials in a separate stock pile for offsite recycling. All soils removed from the slot trench will be temporarily stockpiled near the trench. GaiaTech (consultant/project manager) shall establish the maximum depth of the trench and its orientation (perimeter trenches nearest ROW will be 6 x 18 feet and interior trenches 10 x 18 feet), based on the approved drawings.

9. Soil screening will occur in benches not to exceed 18-inches in depth. After removing the surface pavement, the surface soils will be screened by the survey technician with the survey instrument.

10. After the surface soil is surveyed, TRI will remove 18-inches of soil from the trench to reach the first survey level. With assistance from the consultant or laborer, the operator shall position the bucket at the farthest point of the trench and slowly advance the bucket downward to a depth of 18 inches while maintaining specific cut slopes as depicted on the drawings. For each lift, draw back the bucket maintaining a uniform 18 inch depth of excavation and remove all soils from the current lift, placing the excavated soils on the ground surface and staged for latter backfilling.

11. Allow the rad-technician free access to the excavation to screen the soils of the trench surface, recording the data as appropriate. (Neither the technician nor any other person shall enter an excavation greater than 4 feet in depth.) Based on the field screening, the underlying 18-inches of soil will be identified as either impacted or non-impacted (see modified procedures below if impact is encountered). If no impact is found, proceed to the next bench and continue in this manner every 18-inches until the desired depth is reached or the fill materials are fully penetrated.

12. When the water-table is reached in any given excavation, surveying will be completed on the ground surface. This will be accomplished by excavating a bucket of soil and bringing this material up to the ground surface, where the survey technician will survey the soils in the bucket. Soils will then be spread out on the ground surface in a thin layer for further surveying. If any soils are suspected to be impacted, this material will be separated for testing and possible offsite disposal. All other soils will be placed in the temporary un-impacted soil stockpile for later backfilling. Surveying will continue to a maximum depth of 21 feet or until native soils are encountered.

13. After finishing excavation and surveying at any given slot trench, the soils will be backfilled within 1 hour as explained in the section below.

14. Upon completion of backfilling procedures, the adjacent slot trench will be started and the procedure listed above will be repeated. Slot trenches shall progress in an orderly fashion and continue in a designated progression around the site. Orientation of the trench may change when moving around site perimeter corners or into the interior of the site.

Modified Procedures if Excavation Encounters Suspect Impacted Soils

If suspect impacted soils are encountered in any particular survey lift, a soil sample will be collected for confirmation of the impact. The potentially impacted area will then be covered in plastic sheeting and backfilled to grade. This area will be bypassed until confirmation is received.. If no impact is confirmed, the excavation will be reopened and continue to the desired depth.

However, if impact is confirmed by the soil sampling results, the impacted soils will be uncovered and excavated until clean soils can be confirmed. If sufficient soils are removed from the excavation, clean virgin backfill will be imported to the site, placed in the excavation and compacted to the original grade. Any impacted soils will be placed in a steel shipping container or super sack for permitted offsite disposal, per the US EPA approved work plan.

Backfilling and Trench Restoration

1. Non-impacted fill materials removed and temporarily stockpiled adjacent to any given excavation will be returned to the same excavation in benches and machine compacted with the excavator bucket.

2. Backfilling will continue until all of the excavated material is returned to the slot trench excavation and filled and compacted to the original ground surface.

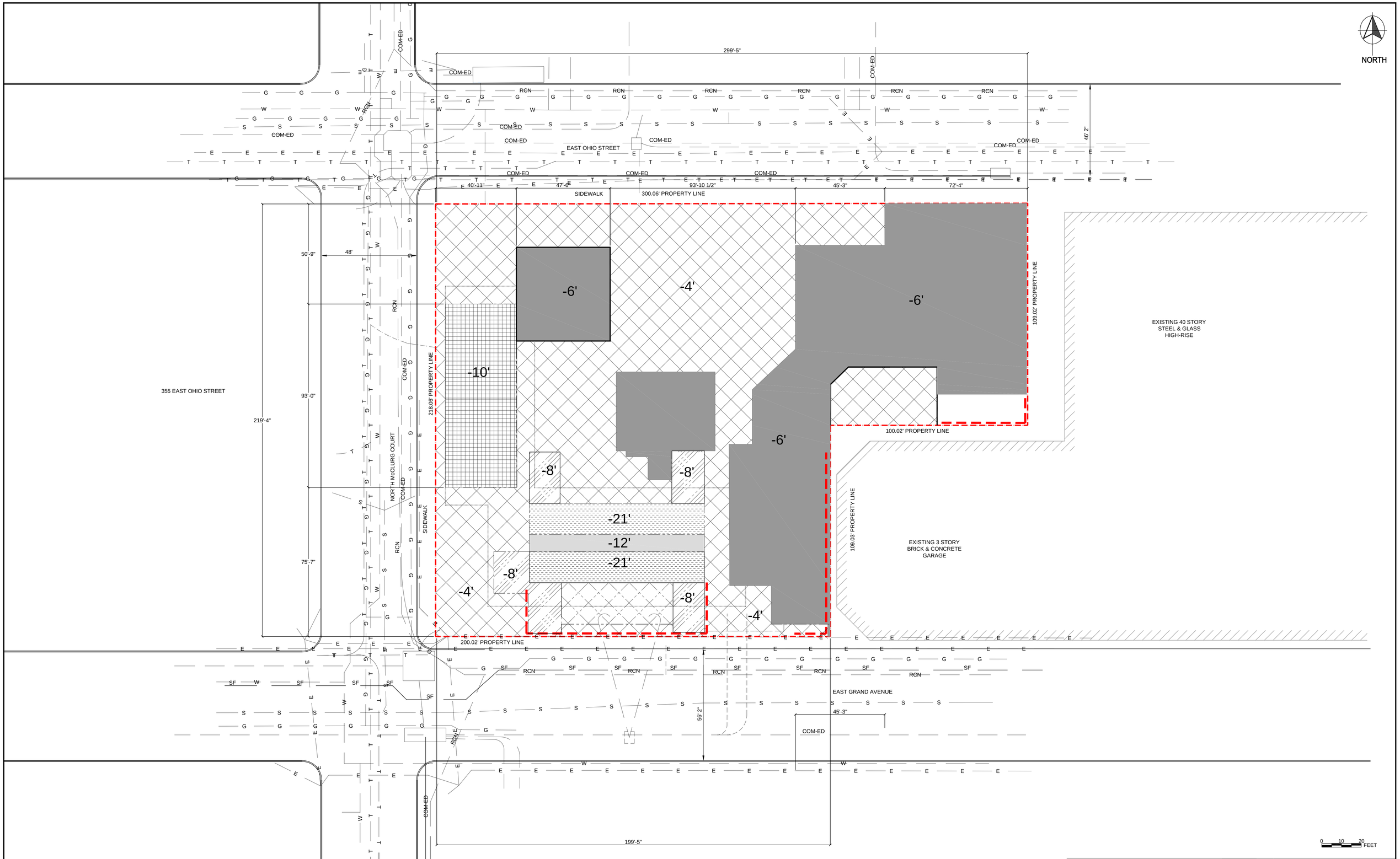
3. If impacted materials were encountered andremoved from the slot trench, clean imported backfill material (such as CA-6) will be used to bring the excavation up to grade. This material will be machine compacted as previously described.

4. Upon completion of backfilling operations, the next adjacent slot trench will be started.

Thank you for your time and consideration in this matter.

Sincerely,

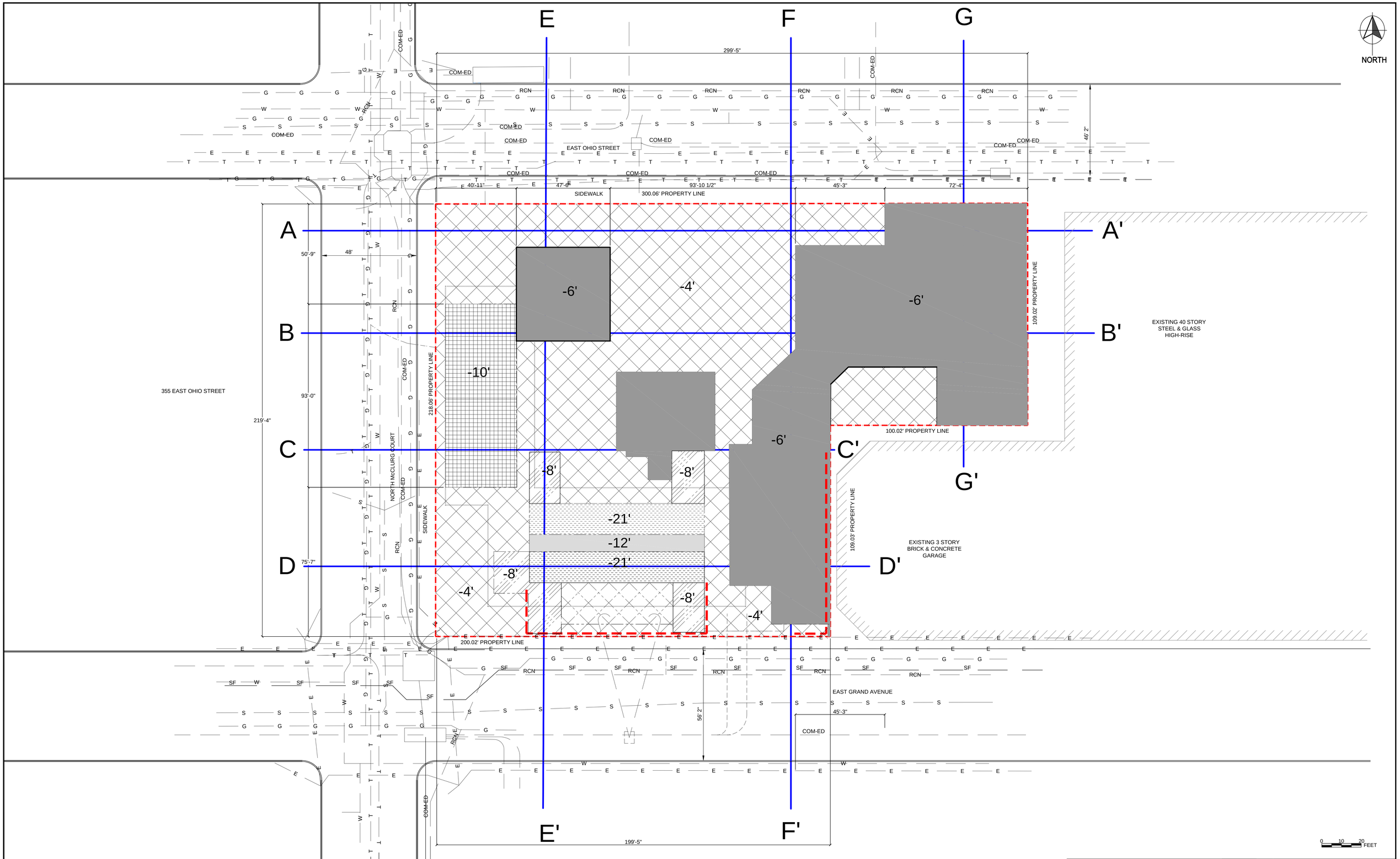
John Sweeney
President



LEGEND

- 4' DEEP EXCAVATION
- 6' DEEP EXCAVATION
- 8' DEEP EXCAVATION
- 10' DEEP EXCAVATION
- 12' DEEP EXCAVATION
- 21' DEEP EXCAVATION
- PROPERTY LINE
- SHEETING AT PROPERTY LINES ONLY
- TRANSITIONAL CUT

DESCRIPTION:	DRAWN: CS	FIGURE: 1 ZONE EXCAVATIONS
GHB 630, LLC. 545 NORTH McCLURG COURT CHICAGO, IL	SCALE: GRAPHIC	GaiaTech
	DATE: 8/17/12	FILE: A9012-400-1

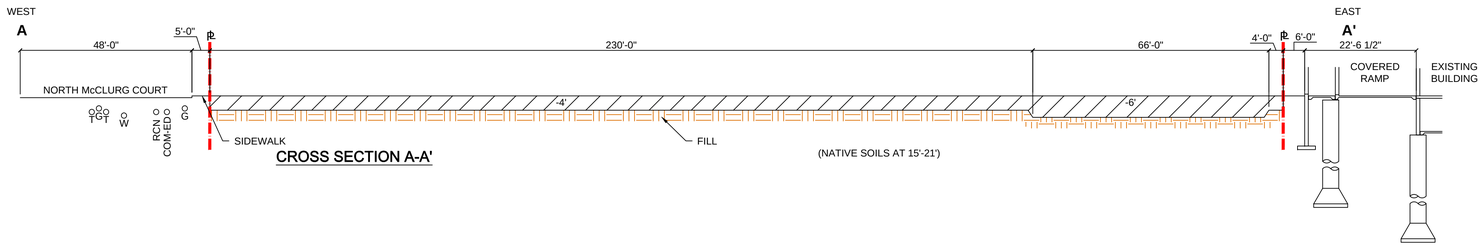


LEGEND

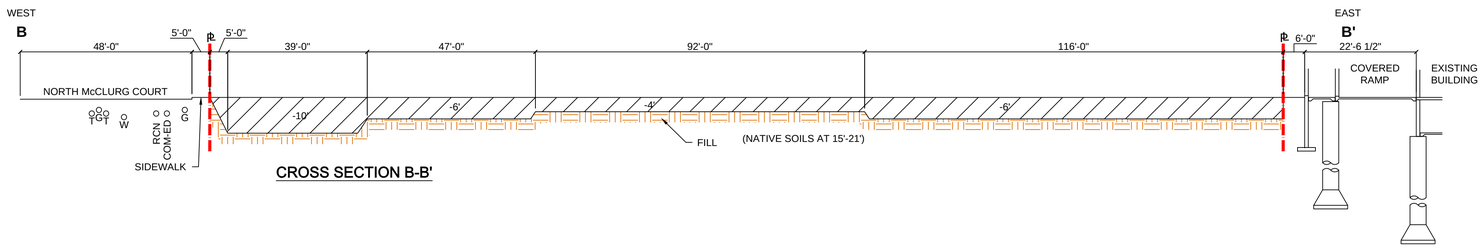
- 4' DEEP EXCAVATION
- 6' DEEP EXCAVATION
- 8' DEEP EXCAVATION
- 10' DEEP EXCAVATION
- 12' DEEP EXCAVATION
- 21' DEEP EXCAVATION
- PROPERTY LINE
- SHEETING AT PROPERTY LINES ONLY
- TRANSITIONAL CUT

DESCRIPTION:	DRAWN:	FIGURE: 2
GHB 630, LLC. 545 NORTH McCLURG COURT CHICAGO, IL	CS	CAISSON CROSS SECTION LOCATIONS
	SCALE: GRAPHIC	
	DATE: 8/17/12	FILE: A9012-400-1

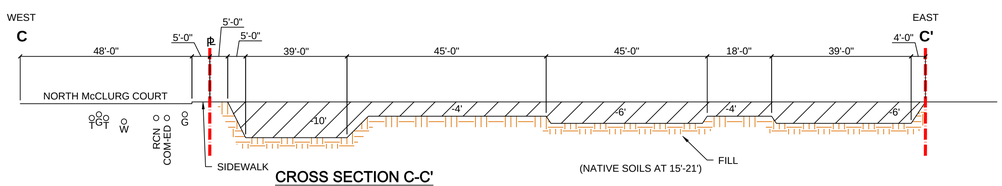
GaiaTech



CROSS SECTION A-A'



CROSS SECTION B-B'



CROSS SECTION C-C'

NOTES:
1. ALL EXCAVATIONS WILL BE WITHIN PROPERTY LINES.
2. ALL EXCAVATIONS ALONG PROPERTY LINE WILL BE COMPLETED BY NARROW SLOT EXCAVATIONS DUG PERPENDICULAR TO PROPERTY LINE 6' MAX WIDTH X 18' MAX. LENGTH.
3. EXCAVATIONS WILL BE SCREENED THEN BACK FILLED IN LESS THAN 1 HOUR.
4. NO PERSON WILL ENTER EXCAVATIONS BELOW 4' IN DEPTH. ALL EXCAVATIONS COMPLETED BY SLOT TRENCHING.

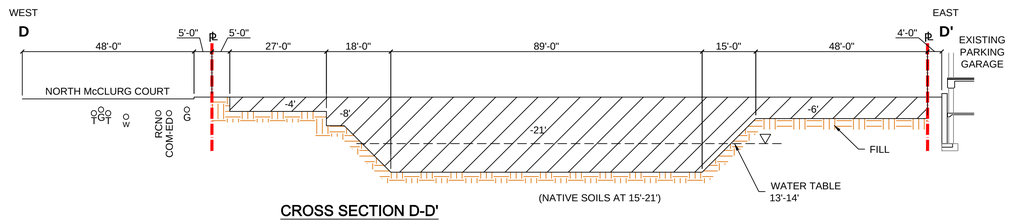
0 10 20 FEET

LEGEND

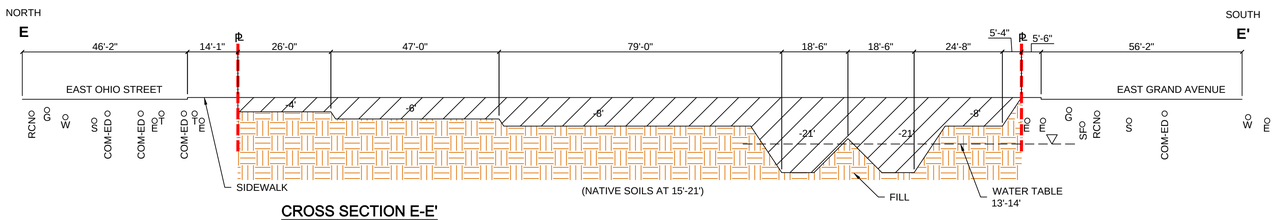
PROPERTY LINE

PROPOSED ZONE (EXCAVATION)

DESCRIPTION:	DRAWN:	FILE:	FIGURE: 3 CROSS SECTIONS
GHB 630, LLC. 545 NORTH McCLURG COURT CHICAGO, IL	CS	A9012-400-1	GaiaTech
	SCALE: GRAPHIC		
	DATE: 8/17/12		



CROSS SECTION D-D'



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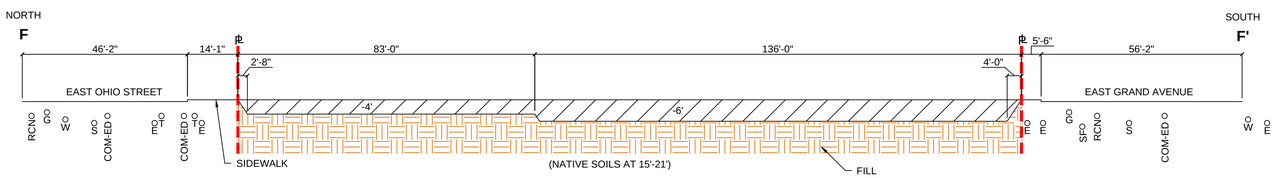

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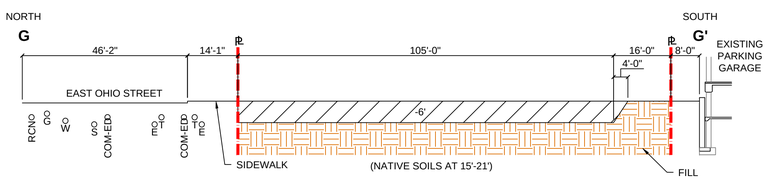


CROSS SECTION G-G'

NOTES:
1. ALL EXCAVATIONS WILL BE WITHIN PROPERTY LINES.
2. ALL EXCAVATIONS ALONG PROPERTY LINE WILL BE COMPLETED BY NARROW SLOT EXCAVATIONS DUG PERPENDICULAR TO PROPERTY LINE 6' MAX WIDTH X 18' MAX. LENGTH.
3. EXCAVATIONS WILL BE SCREENED THEN BACK FILLED IN LESS THAN 1 HOUR.
4. NO PERSON WILL ENTER EXCAVATIONS BELOW 4' IN DEPTH. ALL EXCAVATIONS COMPLETED BY SLOT TRENCHING.

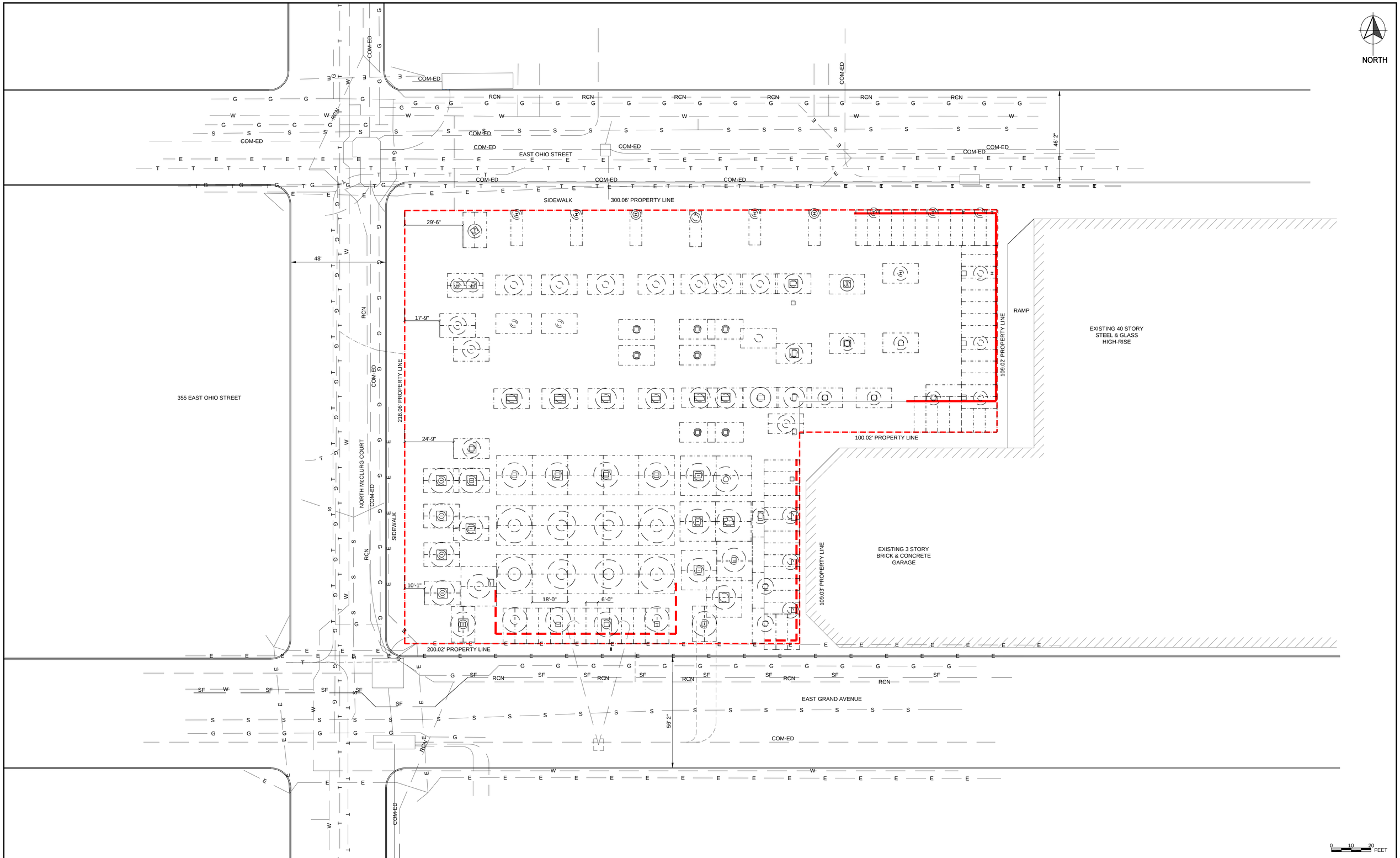
0 10 20 FEET

LEGEND

PROPERTY LINE

PROPOSED ZONE (EXCAVATION)

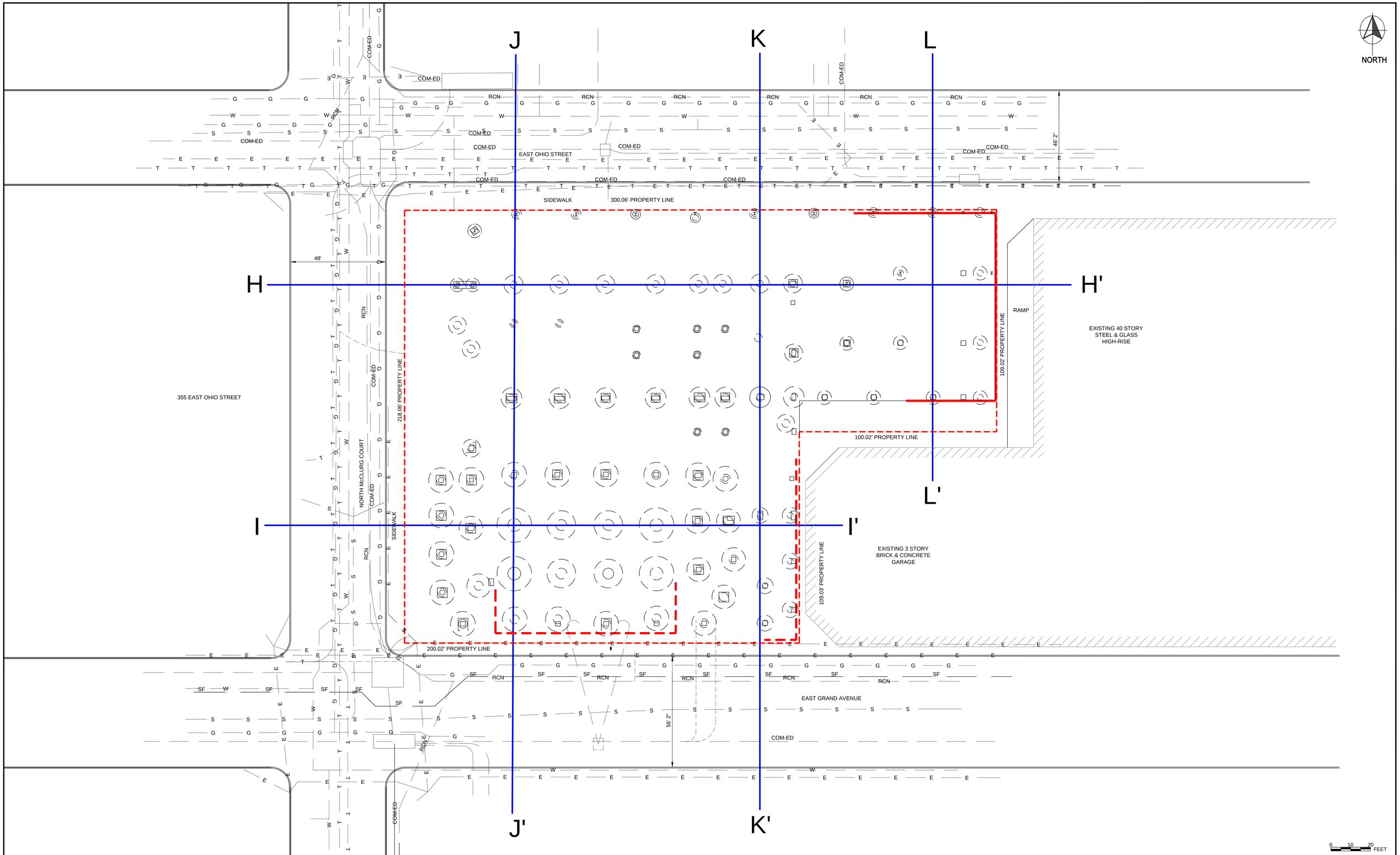
DESCRIPTION:	DRAWN:	FILE:	FIGURE: 4
GHB 630, LLC. 545 NORTH McCLURG COURT CHICAGO, IL	CS	A9012-400-1	CROSS SECTIONS
	SCALE: GRAPHIC		GaiaTech
	DATE: 8/17/12		



LEGEND

- SHEETING
- PERIMETER SLOT TRENCHES (6'X18')
- INTERIOR EXCAVATIONS (10'X18')

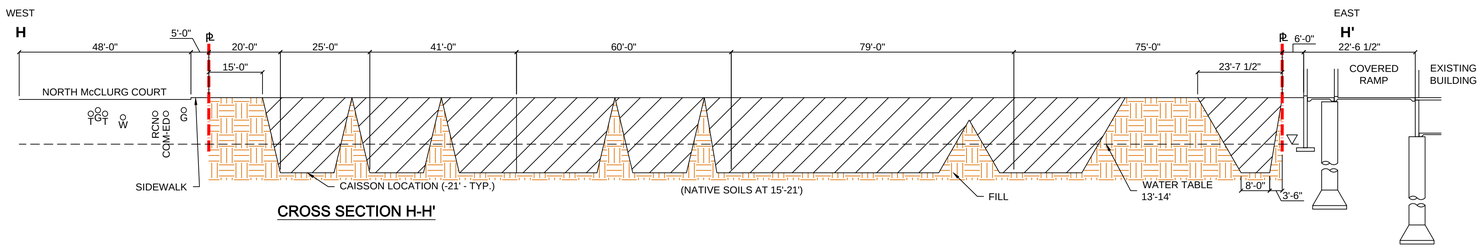
DESCRIPTION:	DRAWN:	FILE:	FIGURE: 6
GHB 630, LLC. 545 NORTH McCLURG COURT CHICAGO, IL	CS	A9012-400-1	CAISSON POTHOLE SLOT EXCAVATION
	SCALE: GRAPHIC		GaiaTech
	DATE: 8/17/12		



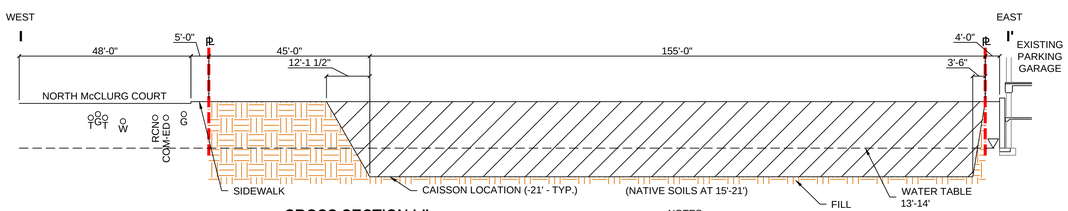
LEGEND

- PROPERTY LINE
- SHEETING AT PROPERTY LINES ONLY
- CAISSON LOCATIONS SURVEYED THROUGH FILL MATERIALS

DESCRIPTION:	DRAWN:	FILE:	FIGURE: 6
GHB 630, LLC. 545 NORTH McCLURG COURT CHICAGO, IL	CS	A9012-400-1	CAISSON CROSS SECTION LOCATIONS
	SCALE: GRAPHIC		GaiaTech
	DATE: 8/17/12		



CROSS SECTION H-H'



CROSS SECTION I-I'

NOTES:
1. ALL EXCAVATIONS WILL BE WITHIN PROPERTY LINES.
2. ALL EXCAVATIONS ALONG PROPERTY LINE WILL BE COMPLETED BY NARROW SLOT EXCAVATIONS DUG PERPENDICULAR TO PROPERTY LINE 6' MAX WIDTH X 18' MAX. LENGTH.
3. EXCAVATIONS WILL BE SCREENED THEN BACK FILLED IN LESS THAN 1 HOUR.
4. NO PERSON WILL ENTER EXCAVATIONS BELOW 4' IN DEPTH. ALL EXCAVATIONS COMPLETED BY SLOT TRENCHING.

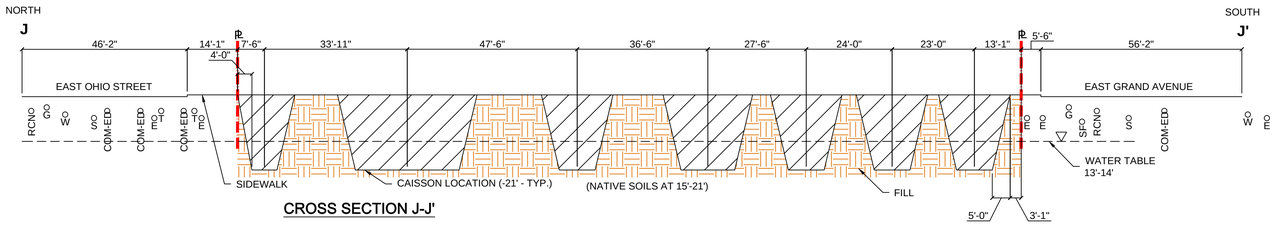
0 10 20 FEET

LEGEND

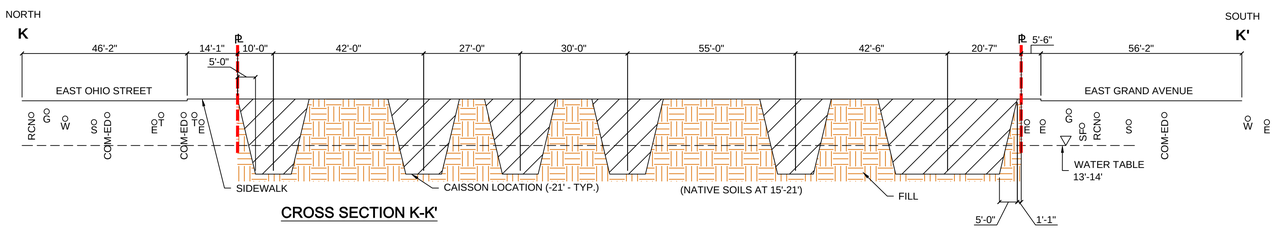
PROPERTY LINE

PROPOSED CAISSON EXCAVATION/POTHOLE

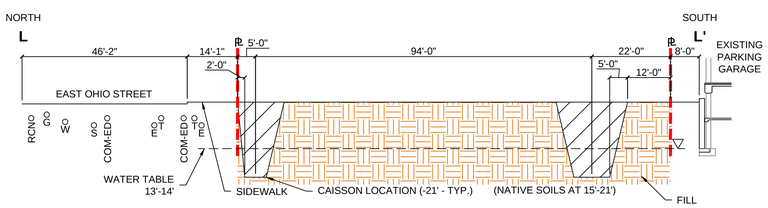
DESCRIPTION:	DRAWN:	FIGURE: 7
GHB 630, LLC. 545 NORTH McCLURG COURT CHICAGO, IL	CS	CROSS SECTIONS
	SCALE: GRAPHIC	GaiaTech
	DATE: 8/17/12	FILE: A9012-400-1



CROSS SECTION J-J'



CROSS SECTION K-K'



CROSS SECTION L-L'

NOTES:
1. ALL EXCAVATIONS WILL BE WITHIN PROPERTY LINES.
2. ALL EXCAVATIONS ALONG PROPERTY LINE WILL BE COMPLETED BY NARROW SLOT EXCAVATIONS DUG PERPENDICULAR TO PROPERTY LINE 6' MAX WIDTH X 18' MAX. LENGTH.
3. EXCAVATIONS WILL BE SCREENED THEN BACK FILLED IN LESS THAN 1 HOUR.
4. NO PERSON WILL ENTER EXCAVATIONS BELOW 4' IN DEPTH. ALL EXCAVATIONS COMPLETED BY SLOT TRENCHING.

0 10 20 FEET

LEGEND

PROPERTY LINE

PROPOSED CAISSON EXCAVATION/POTHOLE

DESCRIPTION:	DRAWN:	FIGURE: 8
GHB 630, LLC. 545 NORTH McCLURG COURT CHICAGO, IL	CS	CROSS SECTIONS
	SCALE: GRAPHIC	GaiaTech
	DATE: 8/17/12	FILE: A9012-400-1

NORTH

EAST OHIO STREET

SIDEWALK

300.06' PROPERTY LINE

46' 2"

48'

355 EAST OHIO STREET

NORTH McCLURG COURT

218.08' PROPERTY LINE

200.02' PROPERTY LINE

100.02' PROPERTY LINE

109.02' PROPERTY LINE

109.03' PROPERTY LINE

RAMP

EXISTING 40 STORY
STEEL & GLASS
HIGH-RISE

EXISTING 3 STORY
BRICK & CONCRETE
GARAGE

EAST GRAND AVENUE

56' 2"

COM-ED

RCN

SF

0 10 20 FEET

LEGEND

- PROPERTY LINE
- SHEETING AT PROPERTY LINES ONLY
- CAISSON LOCATIONS SURVEYED THROUGH FILL MATERIALS
- AREA OF ROW STREET CLOSED DURING SITE EXCAVATION ACTIVITIES

DESCRIPTION:	DRAWN:	FILE:	FIGURE: 9 LOGISTICS PLAN PROPOSED ROW/SIDEWALK AND STREET AREA CLOSURES
GHB 630, LLC. 545 NORTH McCLURG COURT CHICAGO, IL	CS	A9012-400-1	GaiaTech
	SCALE: GRAPHIC		
	DATE: 8/17/12		

Appendix G

Health and Safety Plan

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EMERGENCY PHONE NUMBERS

IN THE EVENT OF AN EMERGENCY DIAL 911

AMBULANCE SERVICE	911
FIRE DEPARTMENT	911
EMERGENCY RESCUE SERVICE	911
POLICE DEPARTMENT	911
NATIONAL RESPONSE CENTER	1-800-424-8802
POISON CONTROL CENTER	1-800-732-2200
NORTHWESTERN MEMORIAL HOSPITAL	(312) 908-2000
ILLINOIS DEPARTMENT OF NUCLEAR SAFETY (IDNS) EMERGENCY NUMBER	(217) 785-0600
PROJECT COORDINATOR (STEVE KLINE)	(312) 541-4200
ILLINOIS EMERGENCY MANAGEMENT	(217) 782-7860
USEPA REGION 5 - 24-HOUR EMERGENCY NUMBER	(312) 353-2318

1.0 SCOPE OF PLAN

The following Health and Safety Plan (HASP) will be utilized and modified as necessary in order to minimize and prevent exposures to hazardous substances and conditions related to all excavation and remediation activities within the site boundaries, Right-of-Way (ROW) and street areas at or adjacent to 410 East Grand Avenue, Chicago, Illinois (the Site). The Site and designated areas including the ROW and street are the areas covered by this HASP during the implementation of the Soil Management Plan. All personnel assigned to this project will be required to review thoroughly the contents of the HASP and to strictly adhere to the policies and procedures listed herein. This HASP is for use only by the Site owner and their designated contractors and consultants, and approved Site visitors. USEPA, and other agencies, are not considered visitors and will be required to conform to their own Health and Safety Plans. This HASP is not applicable to trade people who will follow their own construction health and safety plan prepared by the Prime contractor.

This plan meets the requirements of OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, and applicable subparts of OSHA 29 CFR 1926,1910 and 10 CFI- Visitors will be required to review the health and safety plan and read and sign the visitor information sheet (Figure 1.1).

2.0 SAFETY MANAGEMENT

The following safety management structure will be utilized for the implementation, administration, and monitoring of the HASP.

2.1 HEALTH AND SAFETY COORDINATOR

The Health and Safety Coordinator (HSC) shall assume overall responsibility for the HASP. The HSC or designee shall monitor and maintain quality assurance of the HASP until project completion. Principal duties of the HSC include:

- Review project background data (located in this Soil Management Plan),
- Approve all HASP modifications,
- Administer and enforce the HASP,
- Evaluate the adequacy of personal protective equipment (PPE) to be used by Site personnel,
- Conduct required on-site training except tailgate safety meetings that will be conducted by the Field Team Leader,
- Brief visitors on work Site conditions, and
- Administer personnel and ambient air monitoring procedures.

The HSC or designee has the authority to stop work in the event conditions develop which pose an unreasonable risk to Site personnel or persons in the vicinity.

3.0 PERSONNEL RESPONSIBILITIES

The HSC or designee will administer and supervise the HASP at the work-site level. He will monitor all operations and will be the primary on-site contact for health and safety issues, and will have full authority to stop operations if conditions are judged to be hazardous to on-site personnel or the public.

The HSC will brief all Site personnel on the contents of the HASP. Personnel will be required to review the HASP, and have the opportunity to ask questions about the planned work or hazards. The Field Team Leader will conduct tailgate safety meetings to familiarize the Site personnel with Site conditions, boundaries, and physical hazards. Site personnel will conduct their assigned tasks in accordance with the HASP at all times.

If at any time Site personnel observe unsafe conditions, faulty equipment or other conditions which could jeopardize personnel health and safety, they are required to immediately report their observations to the HSC or Field Team Leader.

Work zones will be established at the Site. These zones include clean/support zones, decontamination zones, and exclusion zones with markings of “caution” tapes. Exclusion zones will be established as necessary within the RAC and the ROW during subsurface excavation activities. Although the clean/support zones are anticipated to remain fixed, other zones will move about the Site as excavation work progresses.

4.0 HAZARD ASSESSMENT

The following represents potential hazards associated with this project.

4.1 PRINCIPAL CONTAMINANTS (KNOWN OR SUSPECTED)

- Thorium
- Uranium
- Radium
- Radon
- Polynuclear Aromatic Hydrocarbons (PNAs)
- Lead

The contaminants are present in the soil at relatively low concentrations. These primary routes of entry to the body will be considered:

ROUTE	ENTRY MADE VIA:
Inhalation	Airborne dust containing heavy metal radionuclides.
Ingestion	Airborne dust containing heavy metal radionuclides/contaminants
	Improper or poor personal hygiene practices.
Eye and Skin	Direct contact with contaminants.
	Improper or poor personal hygiene practices.
	Airborne dust containing heavy metal/radionuclides.
	Cuts and abrasions.
Direct Exposure	Penetrating gamma radiation in air and soil.

4.2 PHYSICAL HAZARDS

Before field activities begin, the HSC will conduct a Site reconnaissance to identify any real or potential hazards created from Site activities. Physical hazards inherent to construction activities and power-operated equipment may exist.

4.2.1 Heat Stress

Field activities in hot weather create a potential for heat stress. The warning symptoms of heat stress include fatigue; loss of strength· reduced accuracy, comprehension and retention; and reduced alertness and mental capacity. To prevent heat stress, personnel shall receive adequate water supplies and electrolyte replacement fluids, and maintain scheduled work/ rest periods.

The Field Team Leader or designee shall continuously visually monitor personnel to note for signs of heat stress. In addition, field personnel will be instructed to observe for symptoms of heat stress and methods on how to control it. One or more of the following control measures can be used to help control heat stress:

- Provision of adequate liquids to replace lost body fluids. Employees must replace' body fluids lost from sweating. Employees must be encouraged to drink more than the amount required to satisfy thirst, 12 to 16 ounces every half-hour is recommended. Thirst satisfaction is not an accurate indicator of adequate salt and fluid replacement. Replacement fluids can be commercial mixes such as Gatorade.
- Establishment of a work regimen that will provide adequate rest periods for cooling down. This may require additional shifts of workers.
- Breaks should be taken in a cool and shaded rest area (77 degrees is best).
- Employees shall remove impermeable protective garments during rest periods.
- Employees shall not be assigned other tasks during rest periods.
- All employees shall be informed of the importance of adequate rest, acclimation, and proper diet in the prevention of heat stress.

4.2.2 Cold Stress

Persons working outdoors in temperatures of 40 degrees and below may suffer from cold exposure. During prolonged outdoor periods with inadequate clothing, effects of cold exposure may even occur at temperatures well above freezing. Cold exposure may cause severe injury by freezing exposed body surfaces (frostbite) or result in profound generalized cooling, possibly causing death. Areas of the body which have high surface area-to-volume ratios such as fingers, toes and ears are the most susceptible to frostbite.

Two factors influence the development of a cold injury: ambient temperature and the velocity of the wind. Wind chill is used to describe the chilling effect of moving air in combination with low temperature. For instance, 10' F with a wind of 15 miles per hour (mph) is equivalent in-chilling effect to still air at -18°F.

As a general rule, the greatest incremental increase in wind chill occurs when a wind of 5 mph increases to 10 mph. Additionally, water conducts heat 240 times faster than air. Thus, the body cools suddenly when external chemical-protective equipment is removed if the clothing underneath is perspiration-soaked.

Local injury resulting from cold is included in the generic term "frostbite". There are several degrees of damage. Frostbite of the extremities can be categorized into:

- Frost nip or incipient frostbite: Characterized by sudden blanching or whitening of skin.
- Superficial frostbite: Skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient.
- Deep frostbite: Tissues are cold, pale, and solid; extremely serious injury.

Prevention of frostbite is vital. Keep the extremities warm. Wear insulated clothing as part of one's protective gear during extremely cold conditions. Check for symptoms of frostbite at every break. The onset is painless and gradual - you might not know you have been injured until it is too late.

To administer first aid for frostbite, bring the victim indoors and re-warm the areas quickly in water 95° to 100°F. Give individual a warm drink - not coffee, tea, or alcohol. The victim should not smoke. Keep the frozen parts in warm water or covered with warm clothes for 30 minutes, even though the tissue will be very painful as it thaws; then elevate the injured area and protect it from injury. Do not allow blisters to be broken. Use sterile, soft, dry material to cover the injured areas. Keep victim warm and get immediate medical care.

4.2.3 Electrical Hazards

Overhead power lines, downed electrical wires, buried cables and improper use of electrical extension cords can pose a danger of shock or electrocution. All Site personnel should immediately report to the Field Team Leader any condition that could result in a potential electrical hazard.

The Field Team Leader will notify Site personnel during the safety meetings of the locations of known underground cables and utilities.

4.2.4 Noise Hazard

Operation of equipment may present a noise hazard to workers. Site personnel will utilize hearing protection when noise levels are determined to be in excess of 29 CFR 1910.95 requirements. Noise monitoring will be performed to determine noise levels by the Field Team Leader.

4.2.5 Overt Chemical Exposure

Typical response procedures include:

SKIN CONTACT:
Use copious amounts of soap and water. Wash/rinse affected area thoroughly, then provide appropriate medical attention. Eye wash will be provided on-site by contractor at the work zone and support zone as appropriate. If affected, eyes should be continuously flushed for a minimum of 15 minutes.

INHALATION:
Move to fresh air and transport to hospital. Decontaminate as other actions permit.

INGESTION:
Transport to emergency medical facility. Decontaminate as permitted by other requirements.

PUNCTURE WOUND OR LACERATIONS:
Transport to emergency medical facility. Field Team Leader will provide Material Safety Data Sheets (MSDS) to medical personnel as requested. Decontaminate as permitted by other requirements.

4.2.6 Adverse Weather Conditions

In the event of adverse weather conditions, the Field Team Leader will determine if work can continue without endangering the health and safety of field workers. Some items to be considered before determining if work should continue are:

- Potential for heat stress and heat-related injuries.
- Potential for cold stress and cold-related injuries.
- Treacherous weather-related working conditions.
- Limited visibility.
- Potential for electrical storms or high winds.

4.3 MEDICAL EVALUATION AND SURVEILLANCE PROGRAM

All field project personnel shall receive a medical evaluation in accordance with 29 CFR 1910.120. Personnel who receive a medical evaluation will be notified by the medical contractor as to the outcome of their evaluation. This will be in the form of a confidential report addressed to the individual and will contain a breakdown of the clinical findings. In addition, it will indicate any areas of concern which would justify further medical consultation by the individual's personal physician. In the event that the areas of concern are of a severe nature, a follow-up notification will be made to the individual by the medical consultant to answer any questions the employee may have.

4.3.1 Dosimetry/Personnel Monitoring

All project personnel shall participate in a dosimetry program administered by the Project Health Physics Personnel. The dosimetry program shall comply with 32 IAC 340 (i.e. dosimeters shall be processed by a dosimetry processor accredited by the National Voluntary Laboratory Accreditation Program). The Project Health Physics Personnel shall maintain records of all radiation exposures incurred by field personnel including all contractors. These records will be maintained in an up-to-date manner to comply with the requirements of 321AC 340.4010. The HSC shall review the results of personal exposure monitoring to determine compliance with exposure limit requirements.

4.3.2 Requirement for Dosimetry

Personal dosimetry is required for anyone who enters a work area within the Site in which he/she may receive in one calendar year a dose in excess of 10% of the limits in 32 IAC 340. Any person who works in a radiation area will be required to have a personal dosimeter. As a matter of policy, all individuals shall be required to use a dosimeter (either self-reading type, film badge or Thermoluminescence Detector (TLD)) whenever they enter the Exclusion Zone.

4.3.3 Bioassay

Bioassay is the determination of the types and amounts of radioactive materials, which are inside the body. By analyzing the rate of deposition, the rate of excretion, and any other available information regarding placement in the body, internal exposures from radioactive materials can be estimated.

Bioassays are not anticipated to be required for the excavation and removal activities proposed, based on levels documented as present. The determination of the need for bioassay will be based on dosimetry monitoring and review and recommendations from the Project Health Physics personnel.

4.3.4 Emergency Medical Treatment

Emergency first aid should be administered on-site as appropriate. An emergency first-aid station will be established and will include a first-aid kit for onsite emergency first aid. The individual should be decontaminated if possible, depending on the severity of the injury, and transported to the nearest medical facility, if needed.

Treatment of the injury is of primary concern and decontamination a secondary concern. Levels of radioactive contamination at the Site could be acutely hazardous if decontamination is not undertaken during an emergency situation. The Field Team Leader will complete the appropriate incident report, if warranted. See Section 4.4, Accident and Incident Reporting.

Provisions for emergency medical treatment shall be integrated with the following guidelines:

- At least one individual qualified to render first aid and Cardiopulmonary Resuscitation (CPR) will be assigned to each shift.
- Emergency first aid stations in the immediate work vicinity.
- Conspicuously posted phone numbers and procedures for contacting ambulance services, fire department, police, and medical facilities.
- Maps and directions to medical facilities.
- Conspicuously posted evacuation routes and gathering area locations shall be posted around the Site.

4.4 ACCIDENT AND INCIDENT REPORTING

All accidents, injuries, or incidents will be reported to the HSC. This accident/ incident will be reported as soon as possible to the employee's supervisor. An Accident/Incident Form will be completed by the Field Team Leader, and a copy will be forwarded to the Project Manager. A copy of the form is shown as Figure 4.1.

5.0 TRAINING

All Site personnel shall be trained and certified in accordance with 29 CFR 1910.120.

5.1 PROJECT- AND SITE-SPECIFIC TRAINING

Prior to project start-up, all assigned personnel shall receive an initial project- and site-specific training session This training shall include, but not be limited to, the following areas:

- Review of the Health and Safety Plan;
- Review of applicable radiological and physical hazards;
- PPE levels to be used by Site personnel;
- Site security control;
- Emergency response and evacuation procedures;
- Project communication;
- Required decontamination procedures;
- Prohibited on-site activities;
- Instructions to workers in accordance with 10 CFR 1912; and
- U.S. NRC Regulatory Guide 8.13 and Declared Pregnant Woman Policies (Females).

5.2 VISITOR ORIENTATION

All non-essential personnel and visitors who plan to enter the exclusion zone will be briefed on the HASP requirements and 10 CFR 1912 requirements prior to entry with a trained Site escort. In addition, female visitors will be instructed regarding U.S. NRC Regulatory Guide 8.13 and Declared Pregnant Woman Policies.

5.3 SAFETY TAILGATE MEETINGS

Before the start of the workweek, on Monday morning, the Field Team Leader will assemble the Site personnel for a brief safety meeting. The purpose of these meetings will be to discuss project status, problem areas, conditions, safety concerns, PPE levels and to reiterate HASP requirements. The Field Team Leader will complete a Safety Meeting Report (Figure 5.1) to indicate the contents of the meeting and the attendees.

5.4 FIRST AID

At least one (1) individual, trained and qualified to administer first aid and CPR in accordance with American Red Cross requirements, will be present at the Site.

5.5 SAFE WORK PERMIT

Site workers in special work conditions such as confined space, hot work, trenching, or other physical hazards, must be skilled at such work and trained to recognize these as special work conditions. Confined space is defined by OSHA 1910.146. Section 13 of this HASP contains further information on the confined space program to be followed. Site workers will be provided with work permit by the HSC.

6.0 COMMUNICATIONS

6.1 GENERAL COMMUNICATIONS

The Field Team Leader will have available at the Site the means for telephone communications, or an equivalent means of communication, for summoning emergency assistance from the fire/ambulance and police departments in the event they are required. The telephone will also act as a direct link to technical personnel for information pertaining to all phases of the project.

6.2 RADIO/TELEPHONES

Short-range walkie-talkies or cellular telephones will be made available to designated personnel working at the Site.

6.3 EMERGENCY WARNING

In the event of an emergency condition, the Field Team Leader will notify project personnel verbally if all are within immediate hearing and via a bullhorn if the Site area is large. The Field Team Leader will also notify visitors present within the area. Site personnel will immediately proceed to a pre-designated assembly area as designated by the Field Team Leader during the daily safety meeting. Personnel will remain in the designated area until further instructions are received by the Field Team Leader.

All communication equipment will be tested at the beginning of each day to verify operational integrity.

6.4 HAND SIGNALS

Hand signals will be used by field teams in conjunction with the buddy system. Hand signals shall be familiar to the entire field team before operations commence and should be reviewed during site-specific training.

Signal	Meaning
Hand gripping throat	Out of air; can't breathe
Grip partner's wrist	Leave area immediately; no debate
Hands on top of head	Need assistance
Thumbs up	OK; I'm all right; I understand
Thumbs down	No; negative

6.5 SITE SECURITY

Visitors and other non-essential personnel may enter the Site only upon authorization by the Field Team Leader. This restricted access will ensure that the Field Team Leader can communicate with each person authorized to enter the work area.

7.0 PERSONNEL EXPOSURE AND AIR QUALITY MONITORING

7.1 AIR QUALITY (DUST)

Due to the nature of the principal contaminants associated with the project, dust suppression will be important as a means of minimizing exposure levels and off-site migration of contaminants. The Field Team Leader will routinely monitor the Site. The OSHA personal exposure limit (PEL) for nuisance dust is 15 mg/m3.

7.2 AIRBORNE RADIOACTIVITY MONITORING

Monitoring for airborne radioactivity exposure is as important as monitoring for external radiation exposure. Monitoring for airborne radioactivity exposure requires the following elements:

- Air sampling for radioactive particulates,
- Recordkeeping regarding personnel work locations and time in location, and
- Respiratory protective equipment records regarding devices used by workers in airborne radioactivity areas.

By closely monitoring these three elements, a continuous record of personnel exposure to airborne radioactivity is maintained.

Lapel samplers worn for personal air monitoring can be utilized for airborne radioactivity monitoring. Air filters shall be analyzed by an independent lab on a daily basis to determine potential contributions to dose from radionuclides. It is expected that naturally occurring radon and thorium daughters will interfere with analyses. Additional evaluation of samples shall be performed when determined necessary based upon elevated results. Such analyses shall be performed after allowing time for decay of some interfering radionuclides.

Downwind monitoring of the excavation areas for radioactive particulate activity also will be performed if necessary. If required, high volume air samplers shall run continuously during operations and be evaluated on a daily basis for gross alpha activity. Comparisons will be made to 32 IAC 340 Appendix A to ensure that adequate radiological controls are in place for workers and the general public. As low as reasonably achievable (ALARA) concepts will be utilized when considering protective measures to ensure that internal exposures are minimized, while also considering the effects of such protective measures with respect to external exposures. Controls on the Site, such as wetting of soils and procedural changes, will be employed prior to the prescription of respiratory protective equipment.

Time decay of interfering nuclides generally refers to radon-222 decay and daughters but may also include thorium decay. The specific times for decay of samples is best addressed in procedures rather than in the health and safety plan. Air samples will be decayed a minimum of 5 hours to allow for counting without interference from radon222 and its daughters. Thorium (Rn-220), if present in significant amounts, will require decay for up to 4 days to allow for decay of it is Pb-212 daughter (10.6 hour half life).

After filters have been collected and decayed overnight, there will be a morning count by the lab of the filter that will serve to identify high gross counts for the previous day. This will alert health and safety staff of a potential problem which they can investigate more promptly. The count, after 4 days decay, will serve to be the official measurement of Th-Alpha.

7.3 INTERNAL MONITORING

Internal monitoring to determine intakes of radioactive material will be performed as needed based upon the results of the air sampling program. Bioassay methods to be considered should include in-vivo, as well as invitro, assessments. Routine bioassay of workers is not anticipated based upon the low concentrations of radioactivity in soils to be excavated.

7.4 EXTERNAL RADIATION MONITORING

External radiation monitoring of workers will be performed using film badges or thermoluminescent dosimeters. Dosimetry will be provided and processed by a service holding National Voluntary Laboratory Accreditation Program (NVLAP) certification. Pocket dosimeters may also be utilized for visitors and other infrequent personnel requiring access to the Site.

7.5 RADIOLOGICAL SURVEYS

Radiological surveys will be performed to ensure that radiation levels and contamination levels are within regulatory limits for workers and the general public. Radiation surveys will consist of ambient gamma surveys using micro-R meter or Geiger detectors, as appropriate.

7.6 CONTAMINATION MONITORING

Samples shall be obtained periodically in the Site to ensure that radioactivity is present at acceptable levels and is prevented from leaving the Site. Decontamination of elevated areas will be performed to maintain contamination at levels that are ALARA.

Before leaving the exclusion zone, Site personnel shall be checked through use of a hand-held frisker to ensure that contamination is not present on skin or clothes. The Field Team Leader will be immediately informed regarding any contamination on individuals and will initiate appropriate decontamination techniques. Proper disposition of contaminated personal effects and clothing also will be the responsibility of the Field Team Leader.

7.7 ACTION LEVELS

7.7.1 Radiological Action Levels

Radiological action levels for on-site workers will be determined by smear/swipe measurements as well as airborne particulate monitoring for the presence of radioactivity. The Field Team Leader will perform radiological monitoring. The radioactive contamination on the Site is particulate and insoluble in water. Therefore, there will be no fixed contamination on the workers. Action levels as determined by radioactive monitoring can be found in Table 7.1.

To avoid the need for upgrade of personal protection equipment due to airborne contamination, engineering controls such as the use of water to minimize dust levels will be implemented as necessary during excavation and restoration activities.

8.0 PERSONAL PROTECTIVE EQUIPMENT

It is anticipated that most excavation activities in designated exclusion zones can be conducted in Level D personal protective equipment (PPE), with a contingency upgrade to Level C, based on the action levels listed in Section 7. Level C will be used when required by Special Work Permits, or when directed by the Field Team Leader.

Level D or Modified Level D personal protective clothing and equipment for excavation activities includes:

- Coveralls (may include Tyvek suit, if sampling or completing remediation of suspect or confirmed impacted soils)
- Hard hat
- Chemical resistant, OSHA approved safety shoes/boots
- Cotton or leather gloves
- Safety glasses
- Dust mask (optional)

Level C protective clothing and equipment includes:

- Full-face air-purifying respirator (NIOSH/MSHA approved) fitted with radionuclides/ HEPA cartridges and/or organic vapor cartridges, depending on which action levels are exceeded (see Section 7 of s HASP)
- Coveralls
- Tyvek coveralls - required in areas when splashing by contaminated soils or water is a possibility
- Cotton or leather gloves
- Disposable latex inner gloves - required in areas when splashing by contaminated soils or water is a possibility
- Nitrile outer gloves (taped) - required in areas when splashing by contaminated soils or water is a possibility
- Chemical-resistant steel toe boots
- Hard hat

Action levels used to determine the need to upgrade or downgrade the levels of protection are described in Section 7.0 of this HASP

9.0 CONTAMINATION REDUCTION PROCEDURES

9.1 EQUIPMENT

Portable equipment will be decontaminated with soap and water and rinsed with tap water. Heavy equipment will be steam-cleaned with water and, if necessary, a detergent solution. It is not anticipated that chemical cleaning will be necessary for decontamination.

9.2 PERSONNEL

If levels of radioactivity show that individuals can remove coveralls and other personal protective clothing and equipment before leaving the work-site and, thus complete decontamination, the individuals may leave the Site. If, however, levels of radioactivity show that individuals cannot achieve decontamination by the removal of coveralls and showering is required, they will be dressed in clean coveralls, boots and gloves and be transported to Northwestern Memorial Hospital to complete decontamination.

If substantial skin contamination occurs on an individual working with radioactive materials, the following specific procedures should be followed to prevent fixation of the material in the skin or absorption of the radioactivity through the skin.

Immediate Action: Notify the HSC or Field Team Leader, who will supervise the decontamination. If contamination is spotty, the HSC or Field Team Leader will supervise the cleaning of the individual spots with swabs, soap, or water. If the contamination is general, the HSC or Field Team Leader may recommend washing the area gently in warm or cool water (not hot) using hand soap (not detergent) for one minute. Rinse, dry, and monitor for radioactivity. This soap wash step may be repeated three times.

Evaluation: If the above procedure fails to remove all the skin contamination, the treatment should cease. An evaluation of the skin contamination should be performed by the HSC or Field Team Leader including an estimate of the dose commitment to the skin, and the quantity and identity of the nuclides contaminating the skin. If additional decontamination steps are necessary, they are performed and documented by the HSC. The guidelines for Personnel Decontamination in the Radiological Health `Handbook, HEW 1970, beginning on page 194, can be used as applicable. CAUTION: Do not use chemicals for personnel decontamination until full evaluation of the contamination is made by the HSC or Field Team Leader.

9.3 CONTAMINATION PREVENTION

Work practices that minimize the spread of contamination will reduce worker exposure and help ensure valid sample results by precluding cross-contamination. Procedures for contamination avoidance include:

- knowing the limitations of all personal protective equipment being used
- avoiding walking through areas of obvious or known contamination
- refraining from handling or touching contaminated materials directly. Do not sit or lean on potentially contaminated surfaces
- ensuring personal protective equipment has no cuts or tears prior to donning
- fastening all closures on suits, covering with tape if necessary
- taking steps to protect against any skin injuries
- staying upwind of airborne contaminants
- When working in contaminated areas, refraining from eating, chewing gum, smoking, or engaging in any activity from which contaminated materials may be ingested

9.4 DISPOSAL PROCEDURES

All discarded materials, waste materials, or other field equipment and supplies should be handled in such a way as to preclude the spread of contamination, creating a sanitary hazard, or causing litter to be left on-site. All potentially contaminated waste materials (e.g., clothing, gloves) shall be monitored, and segregated in accordance with monitoring results into either radioactive or non-radioactive waste. Appropriate labels shall be affixed to all containers of radioactive materials.

10.0 GENERAL WORK PRECAUTIONS

10.1 GENERAL WORK PRECAUTIONS

The following general work precautions apply to all Site personnel.

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in the work area.
- Hands and face must be thoroughly washed upon leaving the work area. Wash water will be provided at the Site for this purpose.
- Whenever levels of radioactivity warrant, the entire body should be thoroughly washed, as soon as possible, after the protective coveralls and other clothing are removed as part of the decontamination process.
- No facial hair that interferes with a satisfactory fit of the mask-to-face-seal is allowed on personnel required to wear respirators.
- Contact with contaminated or suspected contaminated surfaces should be avoided. Whenever possible, do not walk through puddles, leachate, discolored surfaces, kneel on ground, lean, sit, or place equipment on drums, containers, or the ground.
- Medicine, drugs and alcohol may interfere with or impair judgment and reaction times. Therefore, usage of prescribed drugs must be specifically approved by a qualified physician and made known to the Field Team Leader prior to an individuals' presence on the work-site. Alcoholic beverage intake is strictly prohibited at the Site and prior to work.
- All personnel must be familiar with standard operating procedures and any additional instructions and information contained in the HASP.
- All personnel must adhere to the requirements of the HASP.
- Contact lenses are not permitted when respiratory protection is required or where the possibility - of a splash exists.
- Personnel must be cognizant of symptoms for heat stress and cold stress, and knowledgeable regarding emergency measures contained in the Emergency Plan.
- Respirators shall be inspected, cleaned and disinfected after each day's use or more often, if necessary.
- Each employee shall be familiar with his/her company's Respiratory Protection Program.

10.2 OPERATIONAL PRECAUTIONS

The following operational precautions must be observed at all times.

- All Site personnel shall be adequately trained and thoroughly briefed on anticipated hazards, equipment to be worn, safety practices to be followed, emergency procedures, and communications.
- All required respiratory protective devices and clothing shall be worn by all personnel going into areas designated for wearing protective equipment.
- All Site personnel shall use the buddy system when wearing respiratory protective equipment. At a minimum, a third person, suitably equipped as a safety backup, is required .
- During continual operations, on-site workers act as a safety backup to each other. Off-site personnel provide emergency assistance.
- Personnel should practice any unfamiliar operations prior:-to undertaking the actual procedure.
- Entrance and exit locations shall be designated and emergency escape routes delineated. Warning signals for Site evacuation must be established.
- Personnel and equipment in the Site should be minimized, consistent with effective Site operations.
- Work areas for various operational activities shall be established.
- Procedures for leaving a contaminated area shall be planned and implemented prior to going on-site. Work areas and decontamination procedures shall be established based on expected Site conditions.
- Frequent and regular inspection of Site operations will be conducted by the HSC to ensure compliance with the HASP. If any changes in operation occur, the HASP will be modified to reflect those changes.

11.0 SANITARY FACILITIES

11.1 POTABLE WATER

a. An adequate supply of potable drinking water shall be maintained at all times immediately outside the Site. Drinking water shall meet all federal, state and local health requirements.
b. Drinking water shall be supplied to project personnel via approved dispensing sources.
c. Paper cups shall be permitted for the drinking of potable water supplies.
d. Drinking water dispensers shall be clearly marked and shall, in no way, have the potential for contamination from non-potable supplies.
e. Site personnel must be fully decontaminated prior to approaching the drinking water supply.

11.2 TOILET FACILITIES

a. Adequate toilet facilities shall be provided at the Site.
b. These facilities shall be in the form of portable chemical toilets.
c. Routine servicing and cleaning of the toilets should be established with the selected contractor and shall be in accordance with federal, state, and local health regulations.
d. Site personnel must be fully decontaminated prior to approaching the toilet facilities.

11.3 WASHING AREAS

a. Adequate washing areas shall be provided for personal use within the work area.
b. Washing areas shall be maintained in a sanitary condition and will be provided with adequate supplies of soap towels for drying, and covered waste receptacles.
c. Washing areas shall be maintained and sanitized daily.
d. No eating, drinking or smoking shall be permitted in the work area. This policy will be strictly enforced by the Field Team Leader.

12.0 FIRE CONTROL EQUIPMENT

An adequate number of approved portable fire extinguishers (class rated A, B and C) shall be readily available at the Site at all times.

All Site personnel shall be trained in the use of the extinguishers. Extinguishers shall only be used on outbreak stage fires or fires of minor nature. The local fire department shall be contacted in the event of a larger fire.

13.0 CONFINED SPACE PROGRAM

13.1 PURPOSE

In the event that confined space work is a necessity, a Confined Space Program will be implemented. Training in the recognition of confined spaces is a component of the health and safety training program.

The purpose of the Confined Space Program is to establish procedures to protect personnel from this serious hazard in the course of their work, and at a minimum, to comply with 29 CFR OSHA 1910.146. This document assigns responsibilities and sets standards for personnel engaged in activities where confined spaces may be present.

13.2 RESPONSIBILITIES

13.2.1 Health and Safety Coordinator

The Health and Safety Coordinator (HSC) administers the Confined Space Program. The Health and Safety Coordinator's responsibilities include:

- Review of the HASP for potential confined space hazards and design alternative approaches to accomplish the confined space tasks;
- Coordinating and managing the Confined Space Program in the event one is required;
- Establishing priorities for implementation of the program;
- Assisting with recognition and implementation of the Confined Space Program;
- Advising project management on confined space issues; and
- Communicating the Confined Space Program to personnel by training related to specific Site activities.

13.2.2 Project Manager

The Project Manager (PM) directs the application of the Confined Space Program to project work. The Project Manager is responsible for:

- Working with the Health and Safety Coordinator to prepare information describing activities that might be conducted in a confined space area;
- Assuring that all personnel engaged in project activities are familiar with the definition of a confined space;
- Assuring that personnel are familiar with the Confined Space Program, and that project activities are conducted in compliance with the Confined Space Program;
- Assuming the responsibilities of the Field Team Leader if another person is not assigned these responsibilities.

13.2.3 Field Team Leader

The Field Team Leader (FTL) is responsible for the implementation of the Confined Space Program on-site during field activities. The Field Team Leader is responsible for:

- Overseeing implementation of the Confined Space Program during field operations; and
- Reporting confined space work activity, and any violations of the Confined Space Program, to the Project Manager and the Health and Safety Coordinator.

13.2.4 Personnel

Personnel are responsible for:

- Familiarizing themselves with the Confined Space Program and following it;
- Becoming familiar with the criteria for determining a confined space, and with the monitoring, permitting, and other requirements of the program; and
- Reporting immediately a confined space condition to the Field Team Leader.

13.3 DEFINITION OF A CONFINED SPACE

Confined space means a space that

1. Is large enough and so configured that an employee can bodily enter and perform assigned work
2. Has limited or restricted means for entry or exit (such as pits, storage bins, hoppers, crawl spaces, and storm cellar areas)
3. Is not designed for continuous employee occupancy

Any workspace meeting all of these criteria is a confined space and the Confined Space Program must be followed.

13.4 CONFINED SPACE ENTRY PROCEDURES

13.4.1 Safety Work Permit Required

All spaces shall be considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise. The Confined Space Entry Permit (Figure 13.1) for entry into a confined, space must be completed before work begins; it verifies completion of the items necessary for confined space entry. The Permit will be kept at the Site for the duration of the confined space work If there is an interruption of work, or the alarm conditions change, a new Permit must be obtained before work begins.

A permit is not required when the space can be maintained for safe entry by 100% fresh air mechanical ventilation. This must be documented and approved by the Health and Safety Coordinator. Mechanical ventilation systems, where applicable, shall be set at 100% fresh air.

The Field Team Leader must certify that all hazards have been eliminated on the Entry Permit. If conditions change, a new permit is required.

13.4.2 Pre-entry Testing for Potential Hazards

a. Surveillance

Personnel first will survey the surrounding area to assure the absence of hazards such as contaminated water, soil, sediment, barrels, tanks, or piping where vapors may drift into the confined space.

b. Testing

No personnel will enter a confined space if any one of these conditions exists during pre-entry testing. Determinations will be made for the following conditions:

1. <u>Presence of toxic gases or dusts</u>: Equal to or more than 5 parts per million (ppm) on the organic vapor analyzer with an alarm, above background outside the confined space area; or other action levels for specific gases, vapors, or dusts as specified in the Health and Safety Plan and the Confined Space Permit based on knowledge of Site constituents;

2. Presence of explosive/flammable gases: Equal to or greater than 10% of the Lower Explosive Limit (LEL) as measured with a combustible gas indicator or similar instrument (with an alarm); and ,
3. Oxygen Deficiency: A concentration of oxygen in the atmosphere equal to or less than 19.5% by volume as measured with an oxygen meter.

Pre-entry test results will be recorded and kept at the Site for the duration of the job by the Field Team Leader. Affected personnel can review the test results.

c. Authorization
Only the Field Team Leader and the Health and Safety Coordinator can authorize any personnel to enter into a confined space. This is reflected on the Safe Work Permit for entry into a confined space. The Field Team Leader must assure that conditions in the confined space meet permit requirements before authorizing entry.,

d. Safe Work Permit
A Safe Work Permit for confined space entry must be filled out by the Health and Safety Coordinator or Field Team Leader. A copy of the Safe Work Permit is included as Figure 5.2.

e. Attendants
One worker will stand by outside the confined space ready to give assistance in the case of an emergency. Under no circumstances will the standby worker enter the confined space or leave the standby position. There shall be at least one other worker not in the confined space within sight or call of the standby worker.

f. Observation and Communication
Communications between standby worker and entrant(s) shall be maintained at all times. Methods of communication that may be specified in the Safe Work Permit and the HASP may include. voice, voice by powered radio, tapping or rapping codes, signaling tugs on rope, and standby worker's observations that activity appears normal. . .

13.4.3 Rescue Procedures

Acceptable rescue procedures include entry by a team of rescuers only if the appropriate self-contained breathing apparatus (SCBA) is available; or use of public emergency services.

The standby worker must be trained in first aid, CPR, and respirator use. A first aid kit should be on hand and ready for emergency use. The standby worker must be trained in rescue procedures. Retrieval of an unconscious victim in a confined space will only be conducted by trained rescue personnel. An emergency call to 911 will be initiated to assist the victim.

13.5 TRAINING

Personnel who will engage in field activities will be given annual training on the requirements and responsibilities in the Confined Space Program and on OSHA 1910.146. Only trained personnel can work in confined spaces. Workers should be experienced in the tasks to be performed, instructed in proper use of respirators, lifelines and other equipment, and practice emergency procedures and self-rescue.

Before each Site activity, the determination of confined space work will be part of the Site characterization process. Training in the site-specific confined space activities will be part of the site-specific health and safety training:

13.6 SAFE WORK PRACTICES

- Warning signs should be posted. These include warnings for entry permits, respirator use, prohibition of hot work and emergency procedures and phone numbers.
- Cylinders containing oxygen, acetylene or other fuel such as gasoline must be removed a safe distance from the confined space work area.
- Purging and ventilating is done before work begins to remove hazardous vapors from the space. The space should be monitored to ensure that the gas used to purge the space (e.g., tank) has also been removed. Local exhaust should be used where general exhaust is not practical.
- The buddy system is used at all times. A standby person always must be posted within sight of, or in communication with, the person inside the confined space. The standby should not enter the confined space, but instead will call for help in an emergency and not leave the post. Communication should be maintained at all times with workers inside the confined space.
- Emergency planning in the HASP and a Safe Work Permit must be approved in advance and the proper rescue equipment must be immediately available.

14.0 ELECTRICAL LOCKOUT/TAGOUT

The field Team Leader must approve all work in areas requiring lockout/tagout procedures. Specific procedures and permitting requirements will be specified in the HASP, or in a revised HASP based on the need for a worker to work around electrical equipment.

All systems must be locked out and tagged before the work begins. This includes pipes, air lines, electrical equipment and mechanical devices. The equipment must be start tested and approved for use by a worker by the Health and Safety Coordinator of the Field Team Leader by start-testing to make sure the locked-out equipment does not operate.

Tables

TABLE 7-1

ACTION LEVELS AS DETERMINED BY RADIOACTIVITY

Note: Personnel shall not be exposed to airborne radioactivity such that their weekly intake exceeds 12 Derived Air Concentration (DAC)-hours without prior approval of the Field Team Leader or designee.

Level of protection may be increased to Level C (full-face air purifying respirator) when airborne monitoring indicates that contamination levels have reached 30% of the DAC. All assessments shall incorporate ALARA principles. Engineering controls shall be used prior to assignment of respiratory protective equipment.

Signs shall be posted at entrances to areas where airborne radioactivity levels exceed, or have the potential to exceed, 25% of the DAC.

Radiation Type	Action Level	Level of Respiratory Protection/Action
a. Contamination on smear samples	60 pCi/100 cm^2 gross alpha [a]	Consider modified Level C (full- face APR) based upon ALARA evaluation.
b. Airborne Radioactivity	30% DAC[b]	Consider Level C (full-face APR) based upon ALARA evaluation. Ensure proper posting. Consider internal monitoring
c. Ambient Gamma (work areas)	5 mrem/hr[c]	Consider procedures for shielding of soils. Ensure proper posting.
d. Ambient Gamma (off-site areas)	2 mrem/hr[d]	Implement immediate controls to reduce dose equivalent rate.

Notes

(a) This is approximately 3 times the unrestricted release criteria in the NRC Regulatory Guide 1.86. If any dry-brushing or otherwise abrasive-type decontamination of the sampled equipment is required, the Action Level shown shall require modified Level C (full-face APR).

(b) Potential Airborne Radioactivity Area as defined in 10 CFR 20. Workers with 1000 DAC-hours per year to date must wear modified Level C (full-face APR) until the end of the calendar year.

(c) The ambient gamma dose equivalent rate action level of 5 mrem/hr stems, from the 10 CFR 20 radiation area definition. If the ambient gamma dose equivalent rate reaches 2 mrem/hr, one or more of the following actions will be implemented: The source may be shielded; the working distance from the source may be increased; or the worker's exposure time may be limited.

(d) The ambient gamma action level for off-site is based upon the 10 CFR 20 requirements to maintain dose equivalent rates in unrestricted areas such that they do not exceed 0.002 rem in any one hour.

Figures

Figure 1.1

Visitor Information/Sign in Sheet

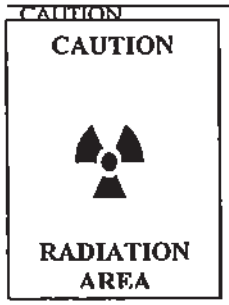
FIGURE 1.1
VISITOR INFORMATION SHEET

VISITOR INFORMATION

NOTICE TO VISITOR: ALL VISITORS MUST BE ESCORTED AT ALL TIMES WHILE ON THIS SITE.

CAUTON. Radioactive materials may be present on this site. Radioactive materials [illegible] throughout the site.

CAUTION



CONTROLLED AREAS: Do not enter areas with these signs unless you have an escort or health physics has given specific approval and you understand access limitations.

You must wear protective clothing in controlled areas. Health physics will provide you with instructions.

You must wear a personal radiation dosimeter if you enter an area which is controlled.

No smoking, eating, drinking or chewing in controlled areas.
NO EXCEPTIONS.

Name_____ Date_____

Figure 2.1

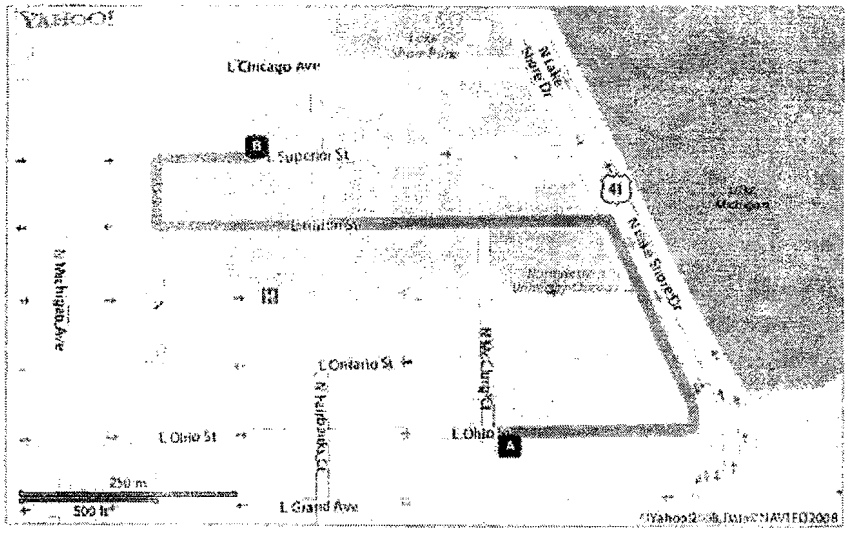
Map and Directions to Nearest Hospital

Hospital Location and Directions

Northwestern Memorial Hospital
250 E. Superior Street
Chicago, IL 60611

Directions to 250 E Superior St, Chicago, IL 60611-2914

Total Time: 3 mins, Total Distance: 0.81 mi



	Distance
A 1. Start at 401 E OHIO ST, CHICAGO going toward N LAKE SHORE DR	go 0.15 mi
2. Turn L on N LAKE SHORE DR	go 0.18 mi
3. Turn L on E HURON ST	go 0.36 mi
4. Turn R on N ST CLAIR ST	go 279 ft
5. Turn R on E SUPERIOR ST	go 417 ft
B 6. Arrive at 250 E SUPERIOR ST, CHICAGO, on the L	

Time: 3 mins, Distance: 0.81 mi

Figure 4.1

Accident/Exposure investigation Report

FIGURE 4.1 (PAGE 1 OF 3)
ACCIDENT/EXPOSURE INVESTIGATION REPORT

COMPANY			DATE
INVESTIGATION TEAM			
EMPLOYEE'S NAME & ID			
SEX	AGE	JOB DESCRIPTION	
DEPARTMENT & LOCATION			
ACCIDENT DATE & TIME			
DATE & TIME ACCIDENT REPORTED TO SUPERVISOR			
NATURE OF INCIDENT			
NATURE OF INJURY			
REFERRED TO MEDICAL FACILITY/DOCTOR ☐ YES ☐ NO			
EMPLOYEE RETURNED TO WORK ☐ YES DATE/TIME _____ ☐ NO			
☐ INJURED EMPLOYEE INTERVIEW/STATEMENT – ATTACHED			
WITNESSES			
☐ WITNESSES INTERVIEWS/STATEMENTS ATTACHED			
☐ PHOTOGRAPHS OF SITE – ATTACHED			
☐ DIAGRAMS OF SITE - ATTACHED			
EQUIPMENT RECORDS - ATTACHED - REVIEWED	☐ YES	☐ NO	
ACCIDENT/EXPOSURE INCIDENT DESCRIPTION			

FIGURE 4.1 (PAGE 2 OF 3)
ACCIDENT/EXPOSURE INVESTIGATION REPORT

Accident Description	
Date & Time	Location
Employees Involved	

Preventive Action Recommendations

Corrective Actions Completed	Manager Responsible	Date Completed

Employee Lost Time - Temporary Help - Cleanup - Repair - Discussion			
Accident Cost Analysis	Investigation	Compliance	Total Cost
Medical			
Production Loss			

Report Prepared By		Date Completed	
Safety Committee Review	☐ Yes		☐ No
Corrective Action		Date Started	
Safety Communication Notice Prepared	Date		
Safety Director Signature			

FIGURE 4.1 (PAGE 3 OF 3)

ACCIDENT/EXPOSURE INVESTIGATION REPORT

ACCIDENT DESCRIPTION	
DATE & TIME	LOCATION
EMPLOYEES INVOLVED	
EMPLOYEE INTERVIEW/STATEMENT - INJURED EMPLOYEE - WITNESS	
EMPLOYEE NAME	
INTERVIEWED BY	

ACCIDENT DIAGRAM/PHOTOGRAPHS

Figure 5.1

Safety Meeting Report

SAFETY MEETING REPORT (PAGE 1 OF 2) (FIGURE 5.1)

Date	Division	Department	Duration of Meeting	
			From: ☐ A.M. ☐ P.M.	To: ☐ A.M. ☐ P.M.
Number Present	Number Absent	Meeting Conducted By	Did Meeting Include Required Training? ☐ Yes (Describe Below)	☐ No

Supervisor's Presentation	Discussion of Safe / Unsafe Work Practices, Materials, Precautions, Hazards, Equipment Familiarization, etc.
Employee Feedback	Comments, Questions, Complaints, etc.
Supervisor's Corrective Action Plan	Known Plans for Correction, Parts on Order, Items to Be Discussed with Dep'art. Head, and correction of Items Previously Submitted
Department Head Comments	Resolution of Questions, Items or Issues Raised in Meeting or With Supervisor

Supervisor	Department Head
Facility Manager	Have Employees Attending Sign on Reverse Side. Forward a Copy to the local Safety Department

Safety Meeting Report (Page 2 of 2)

To Be Signed by All Employees Attending the Meeting			
I have received and understand the information and/or training indicated on the reverse side.			
Signature	Date	Signature	Date

List All Employees Absent from the Meeting	