



REPORT

SUPPLEMENTAL REMEDIAL INVESTIGATION REPORT

SOLID WASTE MANAGEMENT UNIT AB: FORMER B001 TCA RECOVERY UNIT

Former IBM Kingston Facility

Site #356002

Order on Consent Index No. D3-10023-6-11

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1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

Golder Associates Inc. (Golder) prepared this Supplemental Remedial Investigation Report (Report), on behalf of International Business Machines Corporation (IBM), for Solid Waste Management Unit (SWMU) AB: Former Building B001 1,1,1-trichloroethane (TCA) Recovery Unit (SWMU AB) at the former IBM Kingston Facility (site) located at 300 Enterprise Drive, Kingston, Ulster County, New York (see Figure 1).

The SWMU AB investigation described herein was completed using the methods and procedures presented in the *RCRA Facility Investigation Work Plan: Solid Waste Management Unit AB: Former B001 TCA Recovery Unit* (Work Plan) submitted by IBM to the New York State Department of Environmental Conservation (NYSDEC) in March 2009 and the associated *RCRA Facility Investigation Management Plans* (Golder, 2009). NYSDEC approved the Work Plan as submitted on April 28, 2009.

1.2 Site Background

The site is located north of the City of Kingston in the Town of Ulster, Ulster County, New York and is bounded by John M. Clarke Drive and Route 9W to the east, Old Neighborhood Road and Route 209 to the north, Esopus Creek to the west, and Boices Lane to the south (see Figure 2). The approximately 258-acre property was first developed by IBM from farmland during the 1950s. The primary activities included the manufacturing of electric typewriters and the development, manufacture and testing of computer systems and related components and technologies. IBM ceased operations during the early-1990s and the property was subsequently subdivided into multiple parcels. In 1998, IBM sold the site to AG Properties of Kingston, LLC and Ulster Business Complex, LLC. The site is currently managed by TechCity.

The portion of the site located east of Enterprise Drive is referred to as the East Campus and includes the majority of the buildings at the site, many of which are vacant. The portion located west of Enterprise Drive is referred to as the West Campus and includes former IBM Buildings B201, B202 and B203; a large parking area south and west of former Buildings B021, B202, and B203; and generally undeveloped land further to the southwest and north of former Buildings B201, B202, and B203.

The entire site was listed as a Class 4 Site (Site # 356002) in the Registry of Inactive Hazardous Waste Disposal sites in New York State and was managed in compliance with the October 4, 1996 Hazardous Waste Management Permit #3-5154-00067/00090 (6 NYCRR Part 373) (Permit) until the Administrative Order on Consent Index No. D3-10023-6-11 (Order) was signed with NYSDEC by IBM and TechCity on July 8, 2011. The Order, which supersedes and replaces the former Permit, divides the site into ten Operable Units (OUs) as depicted in Figure 2.

Prior to the execution of the Order, IBM completed extensive RCRA Facility Investigations (RFIs) beginning in the 1990s through 2002 to delineate the occurrence and extent of volatile organic compounds (VOCs) in groundwater beneath the site. Corrective Measures implemented by IBM include the operation and maintenance of a perimeter control system that intercepts the groundwater plume. The perimeter control system consists of two stormwater sewer systems, an unsaturated portion of the surficial sand unit that underlies the site, a utility trench barrier wall, and a groundwater collection system (see Figure 2). IBM currently performs groundwater quality monitoring to evaluate the effectiveness of the Corrective Measures.

1.3 SWMU AB Background

SWMU AB consists of a former above-ground TCA recovery unit that was located in the vicinity of column K13A along the western wall of Building B001 (see Figure 2). According to engineering drawings, the former SWMU AB recovery unit comprised a free-standing above-grade evaporator column and associated filter unit and flow gage connected to a 3-inch waste return line located in the overhead utility corridor¹. The TCA recovery unit was associated with a former 4,000-gallon TCA waste underground storage tank (UST) and 1,000-gallon supply UST (i.e., SWMU S)² located to the north of Building B021 along the western exterior of Building B001. Historic IBM documents indicate that recoverable waste solvents from SWMU S were pumped through a filter to the SWMU AB evaporator recovery unit located entirely above ground on the concrete foundation slab. Operations utilizing the former waste TCA tank ceased between 1967 and 1971, presumably ending the use of the evaporator recovery unit.

Potential groundwater impacts were investigated at SWMU AB because previous investigations reported low VOC concentrations (less than 1 microgram per liter [µg/l] to less than 5 µg/l) in soil gas during a fine-grid soil gas survey (GSC, 1996) in the vicinity of SWMU AB. In addition, TCA and associated degradation compounds (i.e., 1,1-dichloroethene [DCE] and 1,2-dichloroethane [DCA]) have been detected at concentrations above groundwater quality standards in samples collected from monitoring well MW-601S, which is located downgradient of SWMU AB and the SWMU S area.

To further investigate the Building B001 area, including SWMU AB, IBM installed five monitoring wells (MW-275S through MW-279S) downgradient of SWMU S and SWMU AB in 1996. Soil samples collected from the borings for these wells were analyzed for VOCs. Analytical results from vadose zone soil samples did not indicate constituent levels above applicable NYSDEC criteria. Analytical results for groundwater samples collected from these wells indicated constituent concentrations greater than groundwater quality standards.

¹ SWMU AB location taken from IBM Kingston, NY Plant Engineering Drawing No. 001-114-M34 for Building B001 dated 25 February 1966 entitled "Solvent Recovery System – Waste Storage and Pumping Circuit".

² SWMU S was investigated concurrently with SWMU AB in accordance with the NYSDEC approved 2011 *Supplemental Investigation Work Plan Solid Waste Management Unit S: Former B001 Waste TCA Tank*. Investigation results and findings for SWMU S were submitted to NYSDEC in a separate report.

The presence of a groundwater plume downgradient of SWMU AB is based on TCA detections above NYSGWQS in monitoring wells MW-275S, MW-276S, MW-277S, MW-278S, MW-605 and MW-204 (GSC, 2010). The source of these detections was previously inferred to be related to SWMU AB based on the lack of an alternative upgradient source. Following the observation of DNAPL, comprising primarily TCA, to the south and east of SWMU S during the Supplemental Remedial Investigation of SWMU S in October 2011 and additional investigation activities conducted in March 2012, the interpreted extent of TCA-impacted groundwater downgradient of SWMU AB is now attributed to an historic release of TCA from SWMU S³.

1.4 Project Objectives

Pursuant to the Order, IBM proposed to implement the Work Plan in the vicinity of SWMU AB following receipt of notification from TechCity that the investigation area was accessible. In February 2012 IBM received notice from TechCity that the remaining infrastructure had been removed from Building B001, thus providing access for IBM to implement the SWMU AB Work Plan activities.

The primary objectives of the SWMU AB investigation include:

- Evaluation of whether soil and/or groundwater conditions in the immediate SWMU AB area represent a continuing source of VOC (primarily TCA) impacts to site groundwater
- Better definition of the nature and extent of VOC-impacted groundwater downgradient of SWMU AB
- Collection of preliminary water quality, geologic, and hydrogeologic information to support an evaluation of potential additional corrective measures, if appropriate

To meet these objectives, IBM implemented a dynamic investigation approach which included the collection and analysis of real-time data to allow for field adjustment of the number, location, and depth of samples based on investigation findings. As such, the scope and extent of the investigation described in the Work Plan was modified as necessary during the implementation of the investigation to achieve the project objectives.

Section 2.0 of this Report presents a summary of the field investigation activities and procedures. Section 3.0 provides an updated geologic conceptual model in the vicinity of SWMU AB and the investigation results. Section 4.0 provides conclusions based on the data collected during the investigation.

³ *Supplemental Remedial Investigation Report: Solid Waste Management Unit S: Former Waste TCA Tanks (SWMU S SRIR); Golder, 2012*

2.0 INVESTIGATION ACTIVITIES AND PROCEDURES

Activities performed during this investigation include the following tasks. Locations are shown on Figure 3.

- Advancement of eight membrane interface probes (MIP) located near, upgradient, and downgradient of the SWMU AB area along the western interior wall of Building B001
- Advancement of three direct-push probes for geologic logging and/or soil sampling at locations adjacent to MIP probes to confirm MIP results and provide soil characterization data
- Collection of nine soil samples for analysis of VOCs from selected depths at three soil boring locations
- Installation of seven temporary groundwater monitoring wells
- Collection of groundwater samples for analysis of VOCs from the seven temporary groundwater monitoring well locations
- Surveying of MIP, soil boring, and temporary monitoring well locations

In addition to the eight MIP borings performed in the SWMU AB area, Golder utilized MIP data collected from MIP borings performed in proximity to SWMU AB in association with the SWMU S investigations and the industrial waste line investigation (Figure 3). Golder implemented the SWMU AB field investigation concurrently with the second mobilization for the supplemental remedial investigation for SWMU S on March 5, 2012 and completed the investigation on April 13, 2012. Environmental Probing Inc. (EPI) was retained to provide direct-push services and Peak Investigations, LLC (Peak) provided MIP services. Brinnier and Larios, P.C., provided New York licensed surveying services. Lancaster Laboratories, Inc. (Lancaster), a New York State Department of Health (NYSDOH) accredited laboratory, performed analytical services.

2.1 Membrane Interface Probe Investigation

IBM conducted the MIP investigation to further define the lithology and distribution of VOCs in the subsurface in the vicinity of SWMU AB. The MIP is a direct-sensing tool that is advanced into the subsurface using direct-push equipment (e.g., GeoProbe®). The MIP used during the field investigation included a halogen specific detector (XSD), a photo-ionization detector (PID), and an electrical conductivity (EC) meter. The XSD detects the presence of total chlorinated VOCs in the vapor, sorbed, and dissolved-phases. The PID detects the presence of total aromatic hydrocarbon VOCs in the vapor, sorbed, and dissolved-phases. The EC measures soil conductivity with depth as the probe is driven into the ground and is used to help identify changes in lithology and/or other subsurface conditions, including soil moisture and grain size, that change subsurface conductivity. In addition, the MIP includes a sensor for downhole temperature measurement.

EPI advanced a total of eight MIPs during the field investigation at the locations shown on Figure 3. Golder evaluated the data daily and modified subsequent probe locations and depths as appropriate based on the findings. Before positioning the direct-push equipment for subsurface advancement, EPI

hand-augured each location to a depth of approximately 5 feet below ground surface (bgs) as an additional precaution to reduce the potential for hitting subsurface obstructions.

Peak conducted the MIP investigation in general accordance with American Society for Testing and Materials (ASTM) *Standard Practice for Direct Push Technology for Volatile Contaminant Logging with the Membrane Interface Probe* (MIP)–D7532-07 (ASTM, 2007) and Standard Operating Procedure (SOP) SOP-9, provided in the Quality Assurance Project Plan (QAPP)⁴. Prior to advancing the MIP, Peak conducted a response test utilizing a 2-part per million (ppm) trichloroethene (TCE) solution to confirm the rate of response and accuracy of the XSD element. Peak then calibrated the MIP to ground surface prior to advancing the probe into the subsurface. Some offset (i.e., less than 0.5 to 1.0 feet) from true ground surface was observed due to variations in positioning the probe during ground-zero calibration. This offset was considered in targeting sample locations and data evaluation and interpretation.

The MIP is equipped with a heating unit capable of maintaining a temperature of 100 degrees Celsius in the subsurface, ensuring volatilization of dissolved and/or sorbed compounds. At each probe location, EPI held the rate of penetration (ROP) constant at one foot per minute until the target terminal depth had been obtained.

Golder observed initial MIP XSD responses during the performance of the October 2011 SWMU S investigation that were higher than responses observed during previous investigations, requiring a ten-fold attenuation of the XSD response scale. As a result of these elevated MIP XSD responses and the proximity of the SWMU AB investigation area to SWMU S, Golder performed the SWMU AB MIP investigation at the ten-time attenuation setting, which increased the recordable instrument response maximum from one-million to ten-million μV .

The boreholes typically collapsed upon removal of the probe to a depth of approximately 4 to 6 feet bgs. EPI grouted portions of the boreholes that did not collapse with cement-bentonite slurry in accordance with QAPP SOP-10. Borings advanced through asphalt or concrete areas were patched with the appropriate surface cover upon completion.

EPI decontaminated the direct-push tools between borings in accordance with QAPP SOP-5. Table 1 presents a summary of the MIP nomenclature and locations. Appendix A includes MIP field forms and data plots.

2.2 Soil Borings and Soil Sampling

Golder used information collected during the MIP investigation to identify locations for the advancement of soil borings for use in correlating EC results to lithology and for the collection of soil samples for laboratory analysis. EPI advanced three soil borings at the locations shown on Figure 3 using a direct-

⁴ The QAPP and associated SOPs are included as part of the *RCRA Facility Investigation Management Plans*.

push rig and a dual-tube continuous macro-core sampler for the collection of soil cores. Golder logged the cores for lithology and screened the soil using a PID. Multiple, depth-discrete soil samples were collected from the three soil boring locations for analysis of VOCs to correlate laboratory results with MIP results.

Golder selected samples for laboratory analysis by targeting zones of high MIP XSD response and specific lithologic horizons (i.e., Surficial Sand Unit, Silty-Sand and Clay Transition Unit, and Varved Clay Unit). Encore[®] samplers were used to collect soil samples for VOC analyses. Lancaster analyzed the samples for VOCs using EPA Method 8260B. Samples were submitted to the laboratory under chain-of-custody procedures in accordance with QAPP SOP-3.

Table 2 presents a summary of the soil samples collected and the analyses performed. Appendix B contains soil boring logs, including soil sample locations and depths. Appendix C contains soil sampling information. Analytical results are presented and discussed in Section 3.3.

2.3 Groundwater Sampling

Golder installed seven temporary wells for the collection of depth-discrete groundwater samples. Groundwater sampling locations and depths were selected based on the results of the MIP investigation and observations made during the soil boring program. Targeted areas included zones of high MIP XSD response and areas of hydrogeologic interest.

The groundwater sampling and analysis program included collection of seven groundwater samples from four temporary well locations (multiple depth-discrete samples were collected at some locations) at the locations shown on Figure 3. Golder collected the depth-discrete samples from temporary monitoring wells co-located with the boreholes advanced to collect lithologic data (i.e., the dual-tube, discrete-depth soil samples as described in Section 2.2). Lancaster analyzed the groundwater samples for VOCs.

Temporary well installation and groundwater sampling were conducted in accordance with QAPP SOP-2. Temporary monitoring well construction information is included in Appendix B and temporary monitoring well locations are shown on Figure 3. A summary of groundwater sample locations, sample type, and analyses performed is presented in Table 3. Groundwater sampling field forms and chain-of-custody information are included in Appendix C. Analytical results are presented and discussed in Section 3.3.

2.4 Data Validation

Golder validated laboratory analytical data following NYSDEC Analytical Services Protocol (ASP) Category B deliverables requirements and the *NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, Appendix B Guidance for the Development of Data Usability Summary Reports* (May, 2010), to identify data quality issues which could affect the use of the data for decision making purposes. A Data Usability Summary Report (DUSR) is included in Appendix D and Laboratory Data Sheets are included as Appendix E.

2.5 Investigation-Derived Waste

IBM managed investigation-derived waste (IDW) in accordance with QAPP SOP-8.

3.0 INVESTIGATION RESULTS

The following sections present an updated interpretation of the site geologic and hydrogeologic conditions and delineation of the nature and extent of VOC-impacted groundwater within and downgradient of SWMU AB.

3.1 Generalized Site Geology and Hydrogeology

The site is located within the Hudson-Mohawk Lowland Physiographic Province. The bedrock underlying the western portion of the site consists of siltstone and shale of the Middle Devonian Age Lower Hamilton Group. The eastern portion of the site is underlain by both the Lower Hamilton Group and the Lower Devonian Age Onondaga Limestone. The exact location and nature of the contact between these units is not known. The Lower Hamilton Group forms a north-northwest trending bedrock high approximately coincident with Enterprise Drive and is described as calcareous shale in boring logs completed during previous site investigations. A top of bedrock contour map, as interpreted by GSC (GSC, 2002) based on work performed in previous investigations, is presented as Figure 4.

Literature on regional geologic conditions indicate that a glacially-derived sand and gravel unit directly overlies the bedrock west of Enterprise Drive and a glacial till unit overlies the bedrock east of Enterprise Drive. These unconsolidated units are overlain by a varved silt and clay unit that is interpreted to be of lacustrine origin, with a thickness of zero feet in an area where it is absent proximate to the bedrock high, to over 180 feet in the central portion of East Campus as determined by previous site borings. The clay portion of the varved silt and clay unit serves as an aquitard throughout most the site, except in the vicinity of the bedrock high where it is not present.

A well sorted, fine to coarse-grained sand of lacustrine origin, with intermittent, thin, silty-clay zones, overlies the varved silt and clay (or bedrock where the varved silt and clay is absent in the vicinity of the bedrock high). This surficial sand unit ranges in thickness across the site from approximately six feet in the area of the bedrock ridge to greater than 30 feet in the central portion of the East Campus.

A discontinuous transition zone of relatively fine-grained materials is present at the base of the surficial sand unit in some areas of the site (GSC, 1997). The transition zone sediments are interpreted to represent the dynamic depositional environments of a glacial-lacustrine system. As such, the transition zone varies in character across the site, reflecting the dynamics of the paleoenvironment. The transition zone has been observed to comprise clay, silt, and sandy silt members where encountered at different portions of the site. Golder has observed that transition zone sediments vary from fine sand with interbedded silt and clay lenses in the western portions of the East Campus to dense very fine sand and silt north of Building B003. The Transition Zone is absent beneath a most of the West Campus. In the SWMU AB area, Golder observed the Transition Zone to comprise relatively dense silt and very fine sand, as discussed in Section 3.2.

Groundwater within the Surficial Sand Unit overlying the Varved Clay Unit is unconfined. Groundwater flow velocities in the Surficial Sand Unit range from approximately 0.8 feet per day (feet/day) to 2.0 feet/day across the site (GSC, 1997). As illustrated on Figure 5, an east-west trending groundwater divide has been identified in previous investigations at the site underlying Buildings B001, B002, B003, B004 and B005S. Groundwater to the north of the divide flows west and northwest. Groundwater to the south of the divide flows west and southwest.

As a component of the March 2012 SWMU S and SWMU AB investigations, Golder installed seven temporary groundwater monitoring wells within the footprint of Building B001 and on the northern and southern extents of Building B021 to refine the interpretation of groundwater flow directions and the location of the groundwater divide in the SWMU S and SWMU AB area. The results of the groundwater flow direction evaluation are presented in the SWMU S SRIR and are presented on Figure 6.

The results support previous groundwater flow interpretations; principally, that a groundwater divide is present at the site beneath Building B001 south of the SWMU AB area and that groundwater in the vicinity of the former TCA recovery unit flows toward the west-northwest toward the groundwater collection system.

3.2 SWMU AB Area Geology and Hydrogeology

Information obtained during this investigation, previous MIP and soil boring investigations, and work completed by others (i.e., GSC, 1997a and 1997b) was used to prepare a more detailed and updated interpretation of the geologic and hydrogeologic conditions in the SWMU AB area. At each MIP location, Golder identified lithologic unit changes based on the relative magnitude of the EC probe response and used information from the confirmatory soil borings to correlate lithologic units between MIP probe locations.

Generalized descriptions of the near-surface lithologic units encountered during this investigation are as follows:

- **Surficial SAND Unit:** Consists of a light brown, fine to medium grained sand containing variable amounts of finer-grained silt and clay. This unit was typically saturated below a depth of approximately 8.0 feet bgs at the time of the investigation.
- **SILTY-SAND and CLAY Transition Unit (Transition Zone):** Consists of variable amounts of reddish-brown to gray silt, sand, and clay. Typical appearance in a soil core is a silty-sand matrix containing thin lenses of silt and sandy clay. Golder observed this unit to consist of particularly dense silt and very fine sand in the SWMU AB area. Golder encountered this finer-grained zone in the soil borings advanced in the SWMU AB area at depths varying from 18 to 22 feet bgs.
- **Varved CLAY Unit:** Consists of red-brown and gray, plastic, cohesive, wet, clay with intermittent silt zones. Typical appearance in a soil core is clay with laminae of silt and sometimes very fine-grained sand. This unit was encountered between 25 and 26 feet bgs in the SWMU AB area.

Generally, the Surficial Sand Unit in the SWMU AB area extends to approximately 20 feet bgs with the base of the Transition Zone extending to approximately 25 to 26 feet bgs. The top of Transition Zone beneath Building B001 exhibits a gradual slope to the east, toward the north-south trending “valley” identified beneath buildings B001 and B003, where the depth to bedrock and Surficial Sand Unit thickness are generally greater than in other areas of the site (see Figures 4 and 6, respectively). Depth to bedrock decreases sharply to the north-northwest of the investigation area toward Enterprise Drive and the Surficial Sand Unit becomes unsaturated to the west and north, in the vicinity of the bedrock ridge. The water table in this area of the site has been encountered at a depth of approximately 8 feet bgs.

Figures 7 and 8 illustrate the interpreted base of Surficial Sand Unit contours (i.e., top of the Transition Zone, when present, or top of Varved Clay Unit) on a site-wide basis and in the vicinity of the SWMU AB Area, respectively. Geologic cross-sections are presented on Figure 9. Of note is the following:

- The shallow silt and/or clay horizon observed in the Surficial Sand Unit in other areas of the site is largely absent from the majority of borings in the SWMU AB area.
- The Transition Zone in the vicinity of SWMU AB is composed of particularly dense silt and very fine sand.
- The base of the Surficial Sand Unit (i.e. the top of the Transition Zone) in the SWMU AB area is relatively flat, in contrast to Golder's observations in the SWMU S area where the localized depression in the base of Surficial Sand/Transition Zone contact strongly controls the distribution of VOCs in the subsurface.

3.3 MIP XSD and Analytical Sampling Results

The MIP data and the soil and groundwater analytical sampling results provide more detailed lateral and vertical delineation of the distribution of VOCs and a better understanding of the subsurface geochemical conditions in the vicinity of SWMU AB. Tables 7a through 7c illustrate the correlation of investigation results with stratigraphic units along cross-sections A-A' through C-C'. The cross-section locations are illustrated on Figure 8. The following sections present investigation results.

3.3.1 MIP XSD Results

MIP XSD results are summarized in Table 4. MIP XSD response values (in μV) are illustrated on cross-sections A-A' through C-C' on Figure 9 and correlated with investigation results and stratigraphy on Tables 7a thru 7c. The maximum XSD values are presented in plan-view for each MIP probe on Figures 10 and 11, for the saturated Surficial Sand and the Transition Zone, respectively.

Key observations from the collected MIP XSD data include:

- The relative magnitude of MIP XSD detections correlate well with soil and groundwater sampling analytical results, confirming the MIP XSD data are a reliable screening tool for qualitatively identifying the relative difference in total VOC concentration in the subsurface. Based on a general comparison of MIP XSD responses to soil and groundwater analytical results from this investigation, MIP XSD responses of approximately 35,000 μV or less are considered low responses and are interpreted to be

representative of low concentrations of total VOCs (i.e., less than 1 mg/kg in soil and less than 100 µg/l in groundwater).

- MIP XSD responses were less than 40,000 µV in the unsaturated and saturated portions of the Surficial Sand Unit. MIP XSD responses gradually increased in the Transition Zone to the maximum observed response of approximately 130,000 µV and then rapidly decreased to 58,000 µV or less in the Varved Clay Unit (see Table 4 and Figures 10 and 11).

Overall, MIP XSD responses are notably elevated within the Transition Zone when compared to the Surficial Sand and Varved Clay Units and indicate that the highest VOC concentrations are limited to the Transition Zone in the vicinity SWMU AB.

3.3.2 Soil Sampling Results

Golder compared soil sample analytical results to applicable standards in NYSDEC 6NYCRR Part 375 Environmental Remediation Programs supplemented by *DEC Policy CP-51/Soil Cleanup Objectives* (SCOs). Soil sample analytical results are presented in Table 5 and summarized on Figures 12 and 13. Key observations include:

- All VOC compounds were reported as non-detect at laboratory reporting limits in the three soil samples collected from the unsaturated Surficial Sand Unit.
- A total VOC concentration greater than 5 mg/kg was detected in one of the three soil samples collected from the within the top two feet of the Transition Zone (approximately 18 to 20 feet bgs) at the soil boring co-located with the MIP probes where the highest XSD responses (i.e., SAB-MIP-172 and SS-MIP-173) were observed (see Table 7c). The single compound detected at a concentration above SCOs was TCE.
- No VOC compounds were detected above NYSDEC SCOs in the three soil samples collected near the base of the Transition Zone (i.e. approximately 24 to 25 feet bgs).
- TCA was not detected at or above laboratory reporting limits in soil samples collected from the SMWU AB area.

The overall absence of TCA in soil analytical samples indicate that the former SWMU AB TCA evaporator unit is not a source of VOC impacts to soil in the SWMU AB area.

3.3.3 Groundwater Sampling Results

Golder compared groundwater sample analytical results to applicable standards in NYSDEC 6NYCRR Part 703 New York State Groundwater Quality Standards (NYSGWQS) supplemented by *Technical and Operational Guidance Series 1.1.1 (TOGS) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*. Groundwater analytical results are presented in Table 6. The distribution of total VOCs is summarized on Figure 14 and 15 for the saturated Surficial Sand Unit and the Transition Zone, respectively. Key observations include:

- VOCs detected in groundwater samples at concentrations below NYSGWQS include chloroform, Freon 113, TCA, tetrachloroethene (PCE), and vinyl chloride.

- VOCs detected in groundwater samples at concentrations at or above NYSGWQS include 1,1,2-trichloroethane (1,1,2,-TCA), 1,1-dichloroethane (1,1-DCA), 1,1-DCE, 1,2-DCA, 1,2-dichloroethene (1,2-DCE), and TCE.
- TCA concentrations in groundwater samples collected within the saturated Surficial Sand Unit and Transition Zone ranged between 1.9 to 2.3 µg/l and non-detect to 2.6 µg/l, respectively. All detected concentrations of TCA were below the NYSGWQS of 5 µg/l.
- The VOC reported at the highest concentration in groundwater samples collected in the SWMU AB area is TCE. Concentrations increase with depth, ranging between 38 and 180 µg/l.
- The highest total VOC concentrations in groundwater (i.e., greater than 250 µg/l) were detected in samples collected within the Transition Zone from temporary groundwater monitoring wells located in the immediate vicinity and downgradient of the former SWMU AB evaporator Unit (Figure 15).

The magnitude and distribution of VOC concentrations reported in groundwater samples collected during this investigation are consistent with concentrations reported during historic investigations at groundwater monitoring locations distributed throughout the Building B005 VOC plume. The absence of TCA and the prevalence of TCE reported in groundwater samples collected within the SWMU AB area further supports the conclusion that dissolved-phase VOC impacts detected within the SWMU AB area are the result of the Building B005 VOC plume.

Moreover, the low level concentrations of TCA in SWMU AB groundwater samples, all of which were reported below NYSGWQS, are at least an order of magnitude less than concentrations reported in groundwater samples collected in the SWMU S area. As reported in the SWMU S SRIR (Golder, 2012) and illustrated on Figures 14 and 15, the source of TCA impacts to groundwater downgradient of SWMU AB and SWMU S is attributed to the DNAPL identified in the SWMU S area. The area impacted by DNAPL was delineated during the SWMU S investigation and is located north of SWMU AB. These data, together with the results of the SWMU S investigation, indicate that SWMU AB is not the source of historic TCA concentrations reported in monitoring wells located downgradient of the SWMU AB area.

4.0 CONCLUSIONS

Lithologic information, MIP XSD data, and soil and groundwater analytical data collected during this investigation provide an improved lateral and vertical definition of the near-surface lithologic units and a better understanding of the nature and extent of VOC impacts in the vicinity of SWMU AB. Key findings from this investigation include:

- Based on the groundwater flow direction evaluation, presented in the SWMU S SRIR (Golder, 2012) and illustrated on Figure 6, groundwater flow in the immediate area of SWMU AB is interpreted to flow west-northwest, and support previous groundwater flow interpretations that a groundwater divide is present at the site beneath Building B001 and that groundwater flows to the west-northwest north of the divide and west-southwest south of the divide.
- The Transition Zone in the vicinity of SWMU AB is composed of relatively dense silt and very fine sand.
- The base of the Surficial Sand Unit (i.e. the top of the Transition Zone) in the SWMU AB area is relatively flat, in contrast to Golder's observations in the SWMU S area where the localized depression in the base of Surficial Sand/Transition Zone contact strongly controls the distribution of contaminants in the subsurface.
- MIP XSD responses gradually increase from low (i.e., less than 40,000) in the unsaturated and saturated portions of the Surficial Sand Unit to the maximum observed responses (i.e., approximately 130,000) in the Transition Zone and then decrease rapidly in the Varved Clay Unit (see Table 4 and Figures 10 and 11).
- The overall absence of TCA detections in soil analytical samples indicate that the former SWMU AB TCA evaporator unit is not a source of VOC impacts to soil in the SWMU AB area.
- Concentrations of VOCs in groundwater increase with depth. The highest groundwater VOC concentrations (i.e., greater than 250 µg/l) were detected in samples collected within the Transition Zone from temporary groundwater monitoring wells located throughout the SWMU AB area.
- Concentrations of TCA reported in groundwater samples collected in the SWMU AB area were below NYSGWQS.
- VOCs reported at the highest concentrations above their respective NYSGWQS include TCE, 1,1-DCA, and 1,1-DCE and are consistent with those compounds comprising the Building B005 plume (GSC, 2011).
- The DNAPL identified during the SWMU S investigation is located north of the SWMU AB investigation area and is not associated with SWMU AB. The presence of DNAPL in the SWMU S area is considered the source of TCA impacts to groundwater historically detected downgradient of the SWMU AB and SWMU S areas.

In summary, this investigation identified that the primary dissolved-phase VOC present in groundwater in the SWMU AB investigation area is TCE and that the highest concentrations of VOCs occur in the Transition Zone. TCA was not detected in soil samples collected in the SWMU AB area and TCA detections in groundwater were reported below NYSGWQS. Overall, the magnitude and distribution of VOC concentrations reported in groundwater samples collected during this investigation are generally consistent with concentrations reported during historic groundwater monitoring events. These data

indicate the concentrations reported in groundwater samples collected from locations in proximity to the former SWMU AB evaporator unit are associated with the broader Building B005 VOC plume and not a discrete continuing source in the SWMU AB area.

As presented in the SWMU S SRIR (Golder, 2012), the southern extent of observed DNAPL is limited to an area located approximately 55 feet north of the SWMU AB investigation area and TCA detected above NYSGWQS in groundwater downgradient of SWMU AB is attributed to the DNAPL identified in the SWMU S area.

The results of the SWMU S investigation, together with the results of the SWMU AB investigation presented herein, support the conclusion that soils in the vicinity of SWMU AB are not a continuing source of VOC impacts to groundwater. As such, the investigation of SWMU AB is considered complete and no further action is recommended for SWMU AB.

5.0 REFERENCES

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TABLES

Table 1: Membrane Interface Probe and Soil Boring Summary

MIP Boring ID	Co-located Soil Boring	Survey Northing	Survey Easting	Elevation (feet)
SAB-MIP-172	SAB-SB-03	717935.1510	591222.6967	178.9066
SAB-MIP-173		717935.3211	591235.1791	178.8960
SAB-MIP-174		717936.1774	591248.8270	178.9079
SAB-MIP-175	SAB-SB-02	717956.7313	591238.0282	178.9099
SAB-MIP-176	SAB-SB-01	717993.1097	591218.8716	178.9046
SAB-MIP-177		717992.4985	591242.7542	178.9105
SAB-MIP-178		717991.9026	591257.9966	178.9075
SAB-MIP-204		717929.1076	591226.0285	178.9065
IWB1-MIP-206		717863.0018	591286.1730	178.9302
IWB1-MIP-207		717932.0422	591277.0844	178.8181
IWB1-MIP-208		718008.9533	591291.8933	178.7976

Notes:

- 1) Surveyed coordinates listed are for the MIP location.
- 2) Survey coordinates for select Industrial Waste Line locations included for delineation are presented herein. Survey coordinates for SWMU S locations included in this report are presented in the SWMU S SRIR (Golder, 2012).

Table 2: Soil Sample Summary

Soil Boring ID	Co-located MIP Point ID	Sampled	Sample Date	Sample ID	Depth Interval (ft bgs)	Analysis
SAB-SB-01	SAB-MIP-176	YES	3/19/2012	SAB-SB-01-4.0-4.5	4.0 - 4.5	VOCs
				SAB-SB-01-20.0-20.5	20.0 - 20.5	
				SAB-SB-01-24.5-25.0	24.5 - 25.0	
SAB-SB-02	SAB-MIP-175	YES	3/19/2012	SAB-SB-02-4.0-4.5	4.0 - 4.5	VOCs
				SAB-SB-02-19.0-19.5	19.0 - 19.5	
				SAB-SB-02-24.0-24.5	24.0 - 24.5	
SAB-SB-03	SAB-MIP-172	YES	3/19/2012	SAB-SB-03-4.0-4.5	4.0 - 4.5	VOCs
				SAB-SB-03-19.0-19.5	19.0 - 19.5	
				SAB-SB-03-24.0-24.5	24.0 - 24.5	

Notes:

- 1) ft bgs - feet below ground surface
- 2) VOCs - Volatile Organic Compounds
- 3) Soil boring information for SWMU S locations included in this report are presented in the SWMU S SRIR (Golder, 2012).

Table 3: Groundwater Sample Summary

Soil Boring ID	Co-located MIP Point ID	Co-located Temp. Well ID	Sampled	Sample Date	Sample ID	Screened Interval (ft bgs)	Analysis
SAB-SB-01	SAB-MIP-176	SAB-TW-05	YES	4/9/2012	SAB-TW-05-12	10.0 - 12.0	VOCs
		SAB-TW-06			SAB-TW-06-21	19.0 - 21.0	VOCs
SAB-SB-02	SAB-MIP-175	SAB-TW-03	YES	3/29/2012	SAB-TW-03-12	10.0 - 12.0	VOCs
		SAB-TW-04			SAB-TW-04-22	20.0 - 22.0	VOCs
SAB-SB-03	SAB-MIP-172	SAB-TW-01	YES	3/22/2012	SAB-TW-01-12	10.0 - 12.0	VOCs
		SAB-TW-02			SAB-TW-02-22	20.0 - 22.0	VOCs
N/A	N/A	SAB-TW-07	YES	4/9/2012	SAB-TW-07-21	19.0 - 21.0	VOCs

Notes:

- 1) Groundwater grab samples collected from temporary monitoring well locations.
- 2) VOCs - Volatile Organic Compounds
- 3) Groundwater sample information for SWMU S locations included in this report are presented in the SWMU S SRIR (Golder, 2012).

Table 4: MIP Maximum XSD⁽¹⁾ Results

MIP ID	Interpreted Depth to Transition Zone ⁽²⁾ (ft-bgs)	Interpreted Depth to Varved Clay Unit ⁽²⁾ (ft-bgs)	Maximum XSD							
			Unsaturated Surficial Sand Unit		Saturated Surficial Sand Unit		Transition Zone		Varved Clay Unit	
			Response (μV)	Depth of response (ft-bgs)	Response (μV)	Depth of response (ft-bgs)	Response (μV)	Depth of response (ft-bgs)	Response (μV)	Depth of response (ft-bgs)
SAB-MIP-172	18.7	24.2	38,148	0.05	39,754	15.65	126,652	19.60	54,170	24.25
SAB-MIP-173	19.3	24.5	29,756	0.10	38,148	17.70	128,941	20.65	51,119	24.55
SAB-MIP-174	20.2	24.9	23,652	1.60	32,807	17.00	61,037	23.05	50,356	24.90
SAB-MIP-175	21.6	24.7	24,415	4.35	36,622	19.60	64,852	21.70	36,622	24.75
SAB-MIP-176	18.5	24.4	20,600	1.60	37,385	11.00	95,370	21.75	47,304	24.45
SAB-MIP-177	19.8	25.2	22,126	4.10	30,519	17.65	58,748	21.75	22,126	25.50
SAB-MIP-178	20.4	25.6	19,074	4.05	33,570	19.90	38,911	21.10	19,074	25.75
SAB-MIP-204	18.7	24.3	28,993	3.85	31,281	17.70	103,763	20.05	43,489	24.35
IWB1-MIP-206	21.2	26.0	23,652	5.80	51,119	16.65	82,400	25.50	61,800	26.40
IWB1-MIP-207	20.8	24.9	22,889	1.15	42,726	11.00	50,356	21.80	26,704	25.00
IWB1-MIP-208	20.5	25.7	21,363	3.75	121,311	17.80	137,333	21.70	88,504	25.75

Notes:

- 1) XSD = Halogen Specific Detector, response measured in microvolts (μV).
- 2) Interpreted depth to lithologic units based on EVS interpretation of MIP electrical conductance data and confirmatory soil borings.
- 3) MIP response data from select Industrial Waste Line locations included for delineation purposes. MIP response data for SWMU S locations included in this report are presented in the SWMU S SRIR (Golder, 2012).
- 4) Color indicative of relative degree of MIP XSD response observed at each location.

<	99,999
>	100,000
>	500,000
>	1,000,000
>	3,000,000
>	5,000,000

Table 5: Soil Analytical Results

Sample ID Sample Date N=Normal, FD=Field Duplicate Start Depth End Depth			SAB-SB-01-4.0-4.5			SAB-SB-01-20.0-20.5			SAB-SB-01-20.0-20.5D			SAB-SB-01-24.5-25.0			SAB-SB-02-4.0-4.5			SAB-SB-02-19.0-19.5			SAB-SB-02-24.0-24.5			SAB-SB-03-4.0-4.5			SAB-SB-03-19.0-19.5			SAB-SB-03-24.0-24.5		
			3/19/2012			3/19/2012			3/19/2012			3/19/2012			3/19/2012			3/19/2012			3/19/2012			3/19/2012			3/19/2012					
			N			N			FD			N			N			N			N			N			N			N		
			4			20			20			24.5			4			19			24			4			19			24		
4.5			20.5			20.5			25			4.5			19.5			24.5			4.5			19.5			24.5					
Parameter	Std	Unit	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
VOCs by EPA Method 8260B																																
1,1,1,2-Tetrachloroethane	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
1,1,1-Trichloroethane	0.68	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
1,1,2,2-Tetrachloroethane	35	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
1,1,2-Trichloroethane	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
1,1-Dichloroethane	0.27	mg/kg	0.001	U	0.001	0.002	J	0.001	0.003	J	0.001	0.005	J	0.001	0.001	U	0.001	0.007		0.001	0.001	U	0.001	0.001	U	0.001	0.021		0.001	0.004	J	0.001
1,1-Dichloroethene	0.33	mg/kg	0.001	U	0.001	0.007		0.001	0.011		0.001	0.007		0.001	0.001	U	0.001	0.01		0.001	0.001	U	0.001	0.001	U	0.001	0.024		0.001	0.001	U	0.001
1,2,3-Trichloropropane	80	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
1,2-Dichloro-1,1,2-trifluoroethane	NS	mg/kg	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
1,2-Dichlorobenzene	1.1	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
1,2-Dichloroethane	0.02	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	J	0.001	0.001	U	0.001
1,2-Dichloroethene, Total	NS	mg/kg	0.001	U	0.001	0.001	J	0.001	0.003	J	0.001	0.006		0.001	0.001	U	0.001	0.002	J	0.001	0.001	U	0.001	0.001	U	0.001	0.04		0.001	0.001	U	0.001
1,2-Dichloropropane	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
1,3-Dichlorobenzene	2.4	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
1,4-Dichlorobenzene	1.8	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
2-Chlorotoluene	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
4-Chlorotoluene	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Benzene	0.06	mg/kg	0.0006	U	0.0006	0.0006	U	0.0006	0.0006	U	0.0006	0.0006	U	0.0006	0.0006	U	0.0006	0.0006	U	0.0006	0.0006	U	0.0006	0.0006	U	0.0006	0.0005	U	0.0005	0.0006	U	0.0006
Benzyl Chloride	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Bromobenzene	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Bromodichloromethane	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Bromoform	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Bromomethane	NS	mg/kg	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
Carbon Tetrachloride	0.76	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Chlorobenzene	1.1	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Chloroethane	NS	mg/kg	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
Chloroform	0.37	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Chloromethane	NS	mg/kg	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
cis-1,3-Dichloropropene	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Dibromochloromethane	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Dibromomethane	NS	mg/kg	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001	0.001	U	0.001
Dichlorodifluoromethane	NS	mg/kg	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002	0.002	U	0.002
Ethylbenzene	1	mg/kg	0.001	U	0.001	0.001	U>																									

Table 6: Groundwater Analytical Results

Sample ID Sample Date N=Normal, FD=Field Duplicate			SAB-TW-01-12 3/22/2012 N			SAB-TW-02-22 3/22/2012 N			SAB-TW-02-22D 3/22/2012 FD			SAB-TW-03-12 3/29/2012 N			SAB-TW-04-22 3/29/2012 N			SAB-TW-05-12 4/9/2012 N			SAB-TW-06-21 4/9/2012 N			SAB-TW-07-21 4/9/2012 N		
Parameter	Std	Unit	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
VOCs by EPA Method 8260B																										
1,1,1,2-Tetrachloroethane	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
1,1,1-Trichloroethane	5	ug/l	1.9		0.1	0.2	U	0.2	0.2	U	0.2	2.3		0.1	0.1	U	0.1	2		0.1	2.6		0.2	0.4	J	0.2
1,1,2,2-Tetrachloroethane	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
1,1,2-Trichloroethane	1	ug/l	0.7		0.1	0.3	J	0.2	0.3	J	0.2	0.6		0.1	0.1	J	0.1	0.5	J	0.1	1	J	0.2	0.4	J	0.2
1,1-Dichloroethane	5	ug/l	6.1		0.1	34		0.2	36		0.2	4.2		0.1	20		0.5	2.8		0.1	32		0.2	50		2
1,1-Dichloroethene	5	ug/l	18		0.1	38		0.2	38		0.2	10		0.1	21		0.5	9.8		0.1	36		0.2	50		2
1,2,3-Trichloropropane	0.04	ug/l	0.3	U	0.3	0.6	U	0.6	0.6	U	0.6	0.3	U	0.3	0.3	U	0.3	0.3	U	0.3	0.6	U	0.6	0.6	U	0.6
1,2-Dichloro-1,1,2-trifluoroethane	NS	ug/l	0.2	U	0.2	1.1		0.4	1.1		0.4	0.2	U	0.2	0.8		0.2	0.2	U	0.2	0.4	U	0.4	1.4		0.4
1,2-Dichlorobenzene	3	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
1,2-Dichloroethane	0.6	ug/l	0.1	J	0.1	0.8	J	0.2	0.8	J	0.2	0.1	J	0.1	0.4	J	0.1	0.1	J	0.1	0.4	J	0.2	1.3		0.2
1,2-Dichloroethene, Total	5	ug/l	4		0.1	24		0.2	24		0.2	2.5		0.1	8.1		0.1	2.4		0.1	6.8		0.2	22		0.2
1,2-Dichloropropane	1	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
1,3-Dichlorobenzene	3	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
1,4-Dichlorobenzene	3	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
2-Chlorotoluene	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
4-Chlorotoluene	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Benzene	1	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Benzyl Chloride	NS	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Bromobenzene	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Bromodichloromethane	50*	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Bromoform	50*	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Bromomethane	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Carbon Tetrachloride	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Chlorobenzene	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Chloroethane	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Chloroform	7	ug/l	1.4		0.1	0.2	U	0.2	0.2	U	0.2	1.7		0.1	0.1	U	0.1	1.5		0.1	0.7	J	0.2	0.2	U	0.2
Chloromethane	NS	ug/l	0.2	U	0.2	0.4	U	0.4	0.4	U	0.4	0.2	U	0.2	0.2	U	0.2	0.2	U	0.2	0.4	U	0.4	0.4	U	0.4
cis-1,3-Dichloropropene	0.4	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Dibromochloromethane	50*	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Dibromomethane	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Dichlorodifluoromethane	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Ethylbenzene	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Freon 113	5	ug/l	2.1		0.2	0.7	J	0.4	0.8	J	0.4	1.9		0.2	0.6		0.2	2.8		0.2	1.5		0.4	1	J	0.4
Methylene Chloride	5	ug/l	0.2	U	0.2	0.4	U	0.4	0.4	U	0.4	0.2	U	0.2	0.2	U	0.2	0.2	U	0.2	0.4	U	0.4	0.4	U	0.4
Tetrachloroethene	5	ug/l	2		0.1	0.2	U	0.2	0.2	U	0.2	1.8		0.1	0.1	U	0.1	1.9		0.1	1.9		0.2	0.2	U	0.2
Toluene	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
trans-1,3-Dichloropropene	0.4	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Trichloroethene	5	ug/l	62		1	180		2	190		2	42		1	54		0.5	38		1	84		2	150		2
Trichlorofluoromethane	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2
Vinyl Chloride	2	ug/l	0.1	U	0.1	0.5	J	0.2	0.5	J	0.2	0.1	U	0.1	0.6		0.1	0.1	U	0.1	0.3	J	0.2	0.6	J	0.2
Xylenes, Total	5	ug/l	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2	0.1	U	0.1	0.1	U	0.1	0.1	U	0.1	0.2	U	0.2	0.2	U	0.2

* : Represents a Guidance value provided for a substance in NYSDEC TOGS 1.1.1 (6/1998) where no standard value has been promulgated and placed into regulation.

Notes:

- 1) Std: 6 NYCRR 703.6 Groundwater Effluent Limitations for Discharges to Class GA Water, and as supplemented by NYSDEC TOGS 1.1.1 (6/1998)
- 2) **BOLD** - Result exceeds applicable standard
- 3) RL - Reporting limit
- 4) Qual - Validated Qualifiers
- 5) NS: No Standard
- 6) VOCs - Volatile Organic Compounds
- 7) SVOCs - Semivolatile Organic Compounds
- 8) U - Result not detected above reporting limit
- 9) J - Result is estimated.
- 10) ug/l = micrograms per liter

Table 7a: Correlation of Stratigraphic Units with Investigation Results along A-A'

		A - NORTH					A' - SOUTH				
MIP ID		SAB-MIP-177		SAB-MIP-175			SAB-MIP-173		SAB-MIP-204		
Soil Boring ID		NA		SAB-SB-02			NA		NA		
Temporary Well ID		NA		SAB-TW-03 & SAB-TW-04			NA		SAB-TW-07		
Depth (ft bgs) ¹	Stratigraphic Unit	MIP XSD ² (μ V) ³	Stratigraphic Unit	MIP XSD (μ V)	Total VOCs ⁴ in Soil (mg/kg) ⁵	Total VOCs in GW (μ g/l) ⁶	Stratigraphic Unit	MIP XSD (μ V)	Stratigraphic Unit	MIP XSD (μ V)	Total VOCs ⁴ in GW (μ g/l) ⁵
1	Unsaturated Surficial Sand Unit	34,074	Unsaturated Surficial Sand Unit	22,889	0.004		Unsaturated Surficial Sand Unit	29,756	Unsaturated Surficial Sand Unit	28,230	
2		34,837		22,889				28,993		28,230	
3		34,837		22,126				27,467		28,230	
4		35,600		22,889				27,467		28,993	
5		37,126		24,415				27,467		28,993	
6		35,600		22,126				27,467		28,993	
7	Saturated Surficial Sand Unit	36,363	Saturated Surficial Sand Unit	22,889	67.1		Saturated Surficial Sand Unit	27,467	Saturated Surficial Sand Unit	28,230	
8		36,363		22,126				26,704		28,993	
9		36,363		22,126				26,704		28,993	
10		36,363		22,889				26,704		28,993	
11		35,600		22,126				26,704		28,993	
12		36,363		23,652				27,467		29,756	
13		36,363		24,415				27,467		30,519	
14		37,889		25,941				29,756		29,756	
15		37,126		27,467				29,756		30,519	
16		39,415		28,230				31,281		30,519	
17		40,178		31,281				32,807		31,281	
18	Transition Zone	45,519	Transition Zone	35,859	105.6		Transition Zone	38,148	Transition Zone	31,281	277.1
19		45,519		35,096				34,333		64,089	
20		44,756		36,622				82,400		99,185	
21		47,807		38,911				128,941		103,763	
22		73,748		64,852				125,889		78,585	
23		64,593		61,037				84,689		64,852	
24	Varved Clay Unit	47,807	Varved Clay Unit	56,459	0.003		Varved Clay Unit	80,874	Varved Clay Unit	59,511	
25		40,941		40,437				57,985		47,304	
26		37,126		34,333				48,830		38,148	
27		35,600		29,756				41,200		32,044	
28		35,600		25,941				37,385		29,756	
29		35,600		24,415				34,333		28,993	
30		35,600		24,415				32,044		28,230	

This table correlates the stratigraphic units with MIP XSD responses and the total detected VOC concentrations in soil and groundwater along geologic cross-section A-A', presented on Figure 9. Analytical results are presented as the total of detected VOC concentrations reported in each sample as a visualization aid. NYSDEC does not currently promulgate a total VOC concentration standard in subsurface media. For complete analytical results for soil and groundwater samples see Tables 5 and 6, respectively.

Notes:

- 1) ft bgs = feet below ground surface
- 2) XSD = Halogen Specific Detector
- 3) μ V = microvolts
- 4) VOCs = Volatile Organic Compounds
- 5) mg/kg = milligram per kilogram
- 6) μ g/l = micrograms per liter
- 7) Color indicative of relative magnitude of XSD response and the total VOC concentration observed at each location.

XSD (μ V)	Soil (mg/kg)	GW (μ g/l)
< 99,999	= ND	= ND
> 100,000	< 1	< 5
> 500,000	< 5	< 500
> 1,000,000	< 50	< 5,000
> 3,000,000	< 500	< 50,000
> 5,000,000	< 5,000	< 500,000
> 5,000	> 5,000	> 500,000

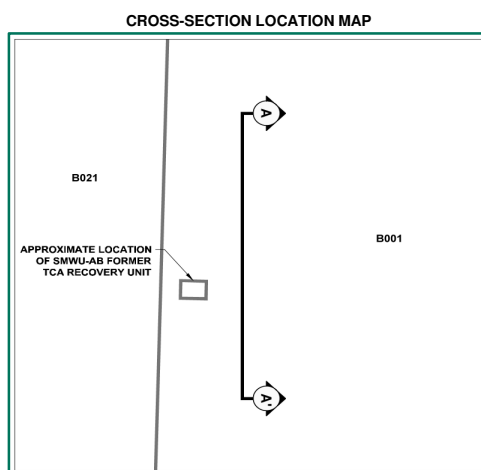


Table 7b: Correlation of Stratigraphic Units with Investigation Results along B-B'

		B - WEST			B' - EAST		
MIP ID		SAB-MIP-176			SAB-MIP-177		
Soil Boring ID		SAB-SB-01			NA		
Temporary Well ID		SAB-TW-01 & SAB-TW-02			NA		
Depth (ft bgs) ¹	Stratigraphic Unit	MIP XSD ² (μV) ³	Total VOCs ⁴ in Soil (mg/kg) ⁵	Total VOCs in GW (μg/l) ⁶	Stratigraphic Unit	MIP XSD (μV)	Stratigraphic Unit
1	Unsaturated Surficial Sand Unit	19,837	98.3	279.4	Unsaturated Surficial Sand Unit	19,074	Unsaturated Surficial Sand Unit
2		20,600				19,837	
3		19,837				19,837	
4		19,837				20,600	
5		20,600				22,126	
6		20,600				20,600	
7		20,600				21,363	
8	Saturated Surficial Sand Unit	19,837			Saturated Surficial Sand Unit	21,363	Saturated Surficial Sand Unit
9		20,600				21,363	
10		21,363				21,363	
11		36,622				20,600	
12		37,385				21,363	
13		27,467				21,363	
14		25,941				22,889	
15	Transition Zone	25,941			Transition Zone	22,126	Transition Zone
16		28,993				24,415	
17		29,756				25,178	
18		31,281				30,519	
19		33,570				30,519	
20		38,911				29,756	
21		62,563				32,807	
22	Varved Clay Unit	95,370			Varved Clay Unit	58,748	Varved Clay Unit
23		89,267				49,593	
24		64,852				32,807	
25		50,356				25,941	
26		41,963				22,126	
27		33,570				20,600	
28		26,704				20,600	
29		25,178				20,600	
30		22,889				20,600	

This table correlates the stratigraphic units with MIP XSD responses and the total detected VOC concentrations in soil and groundwater along geologic cross-section B-B', presented on Figure 9. Analytical results are presented as the total of detected VOC concentrations reported in each sample as a visualization aid. NYSDEC does not currently promulgate a total VOC concentration standard in subsurface media. For complete analytical results for soil and groundwater samples see Tables 5 and 6, respectively.

Notes:

- 1) ft bgs = feet below ground surface
- 2) XSD = Halogen Specific Detector
- 3) μV = microvolts
- 4) VOCs = Volatile Organic Compounds
- 5) mg/kg = milligram per kilogram
- 6) μg/l = micrograms per liter
- 7) Color indicative of relative magnitude of XSD response and the total VOC concentration observed at each location.

XSD (μV)	Soil (mg/kg)	GW (μg/l)
< 99,999	= ND	= ND
> 100,000	< 1	< 5
> 500,000	< 5	< 500
> 1,000,000	< 50	< 5,000
> 3,000,000	< 500	< 50,000
> 5,000,000	< 5,000	< 500,000
>	> 5,000	> 500,000

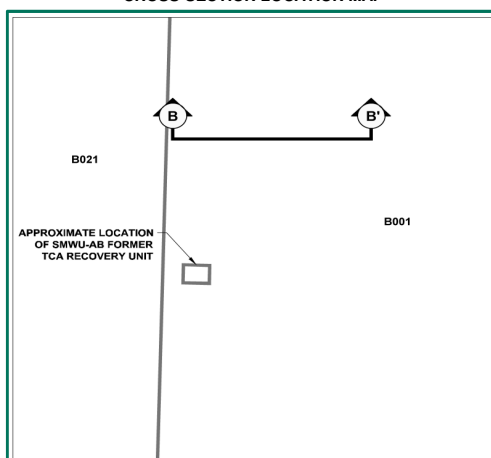
CROSS-SECTION LOCATION MAP

Table 7c: Correlation of Stratigraphic Units with Investigation Results along C-C'

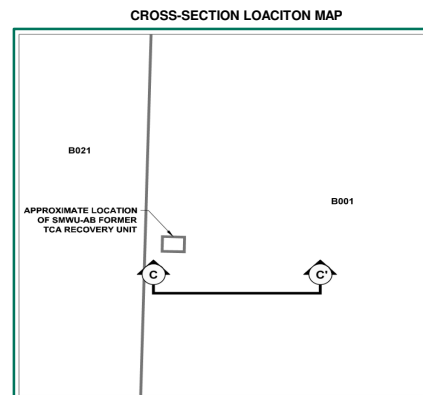
C - WEST							C' - EAST						
MIP ID	SAB-MIP-172				SAB-MIP-204			SAB-MIP-173		SAB-MIP-174		SAB-MIP-207	
Soil Boring ID	SAB-SB-03				NA			NA		NA		NA	
Temporary Well ID	SAB-TW-05 & SAB-TW-06				SAB-TW-07			NA		NA		NA	
Depth (ft bgs) ¹	Stratigraphic Unit	MIP XSD ² (μV) ³	Total VOCs ⁴ in Soil (mg/kg) ⁵	Total VOCs ⁴ in GW (μg/l) ⁵	Stratigraphic Unit	MIP XSD (μV)	Total VOCs ⁴ in GW (μg/l) ⁵	Stratigraphic Unit	MIP XSD (μV)	Stratigraphic Unit	MIP XSD (μV)	Stratigraphic Unit	MIP XSD (μV)
1	Unsaturated Surficial Sand Unit	38,148	61.8		Unsaturated Surficial Sand Unit	28,230		Unsaturated Surficial Sand Unit	29,756	Unsaturated Surficial Sand Unit	22,126	Unsaturated Surficial Sand Unit	21,363
2		37,385				28,230			28,993		23,652		22,889
3		36,622				28,230			27,467		23,652		21,363
4		36,622				28,993			27,467		22,126		22,126
5		36,622				28,993			27,467		23,652		22,126
6		37,385				28,993			27,467		22,126		22,126
7		35,859				28,230			27,467		22,126		22,126
8	Saturated Surficial Sand Unit	34,333	61.8		Saturated Surficial Sand Unit	28,993		Saturated Surficial Sand Unit	26,704	Saturated Surficial Sand Unit	22,126	Saturated Surficial Sand Unit	22,126
9		35,096				28,993			26,704		22,126		22,126
10		36,622				28,993			26,704		22,126		22,126
11		35,859				28,993			26,704		22,889		22,126
12		35,096				29,756			27,467		22,889		22,889
13		35,096				30,519			27,467		23,652		24,415
14		36,622				29,756			29,756		24,415		24,415
15	Transition Zone	35,096	7.986	167.2	Transition Zone	30,519	277.1	Transition Zone	29,756	Transition Zone	25,178	Transition Zone	22,889
16		39,674				30,519			31,281		28,230		24,415
17		39,674				31,281			32,807		31,281		29,756
18		53,407				31,281			38,148		32,807		32,807
19		93,844				64,089			34,333		28,230		32,807
20		126,652				99,185			82,400		32,807		36,622
21		123,600				103,763			128,941		35,859		42,726
22	114,444	78,585			125,889	53,407		50,356					
23	68,667	64,852			84,689	60,274		43,489					
24	64,852	59,511			80,874	61,037		45,778					
25	57,222	47,304			57,985	54,170		31,281					
26	50,356	38,148			48,830	50,356		26,704					
27	Varved Clay Unit	44,252			Varved Clay Unit	32,044		Varved Clay Unit	41,200	Varved Clay Unit	33,570	Varved Clay Unit	25,178
28		40,437				29,756			37,385		28,993		22,126
29		37,385				28,993			34,333		27,467		22,126
30		35,096				28,230			32,044		26,704		22,126

This table correlates the stratigraphic units with MIP XSD responses and the total detected VOC concentrations in soil and groundwater along geologic cross-section C-C', presented on Figure 9. Analytical results are presented as the total of detected VOC concentrations reported in each sample as a visualization aid. NYSDEC does not currently promulgate a total VOC concentration standard in subsurface media. For complete analytical results for soil and groundwater samples see Tables 5 and 6, respectively.

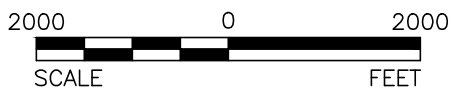
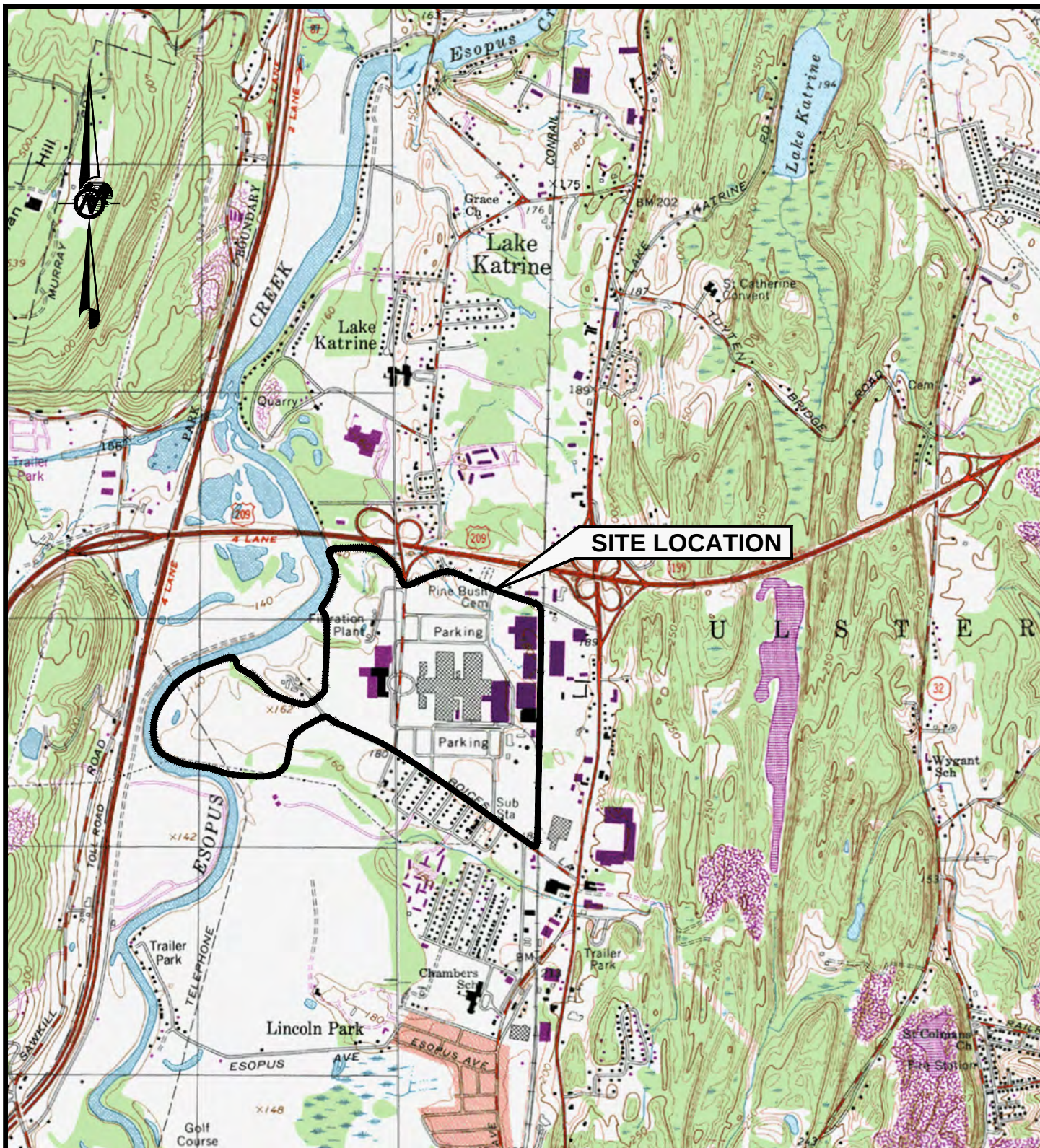
Notes:

- 1) ft bgs = feet below ground surface
- 2) XSD = Halogen Specific Detector
- 3) μ V = microvolts
- 4) VOCs = Volatile Organic Compounds
- 5) mg/kg = milligram per kilogram
- 6) μ g/l = micrograms per liter
- 7) Color indicative of relative magnitude of XSD response and the total VOC concentration observed at each location.

XSD (μ V)	Soil (mg/kg)	GW (μ g/l)
< 99,999	= ND	= ND
> 100,000	< 1	< 5
> 500,000	< 5	< 500
> 1,000,000	< 50	< 5,000
> 3,000,000	< 500	< 50,000
> 5,000,000	< 5,000	< 500,000
> 5,000,000	> 5,000	> 500,000



FIGURES



REFERENCE

1.) BASE MAP TAKEN FROM USGS 7.5 MINUTE SERIES QUADRANGLES OF KINGSTON EAST, NY, DATED 1963, PHOTOREVISED 1980, AND KINGSTON WEST, NY, DATED 1997.

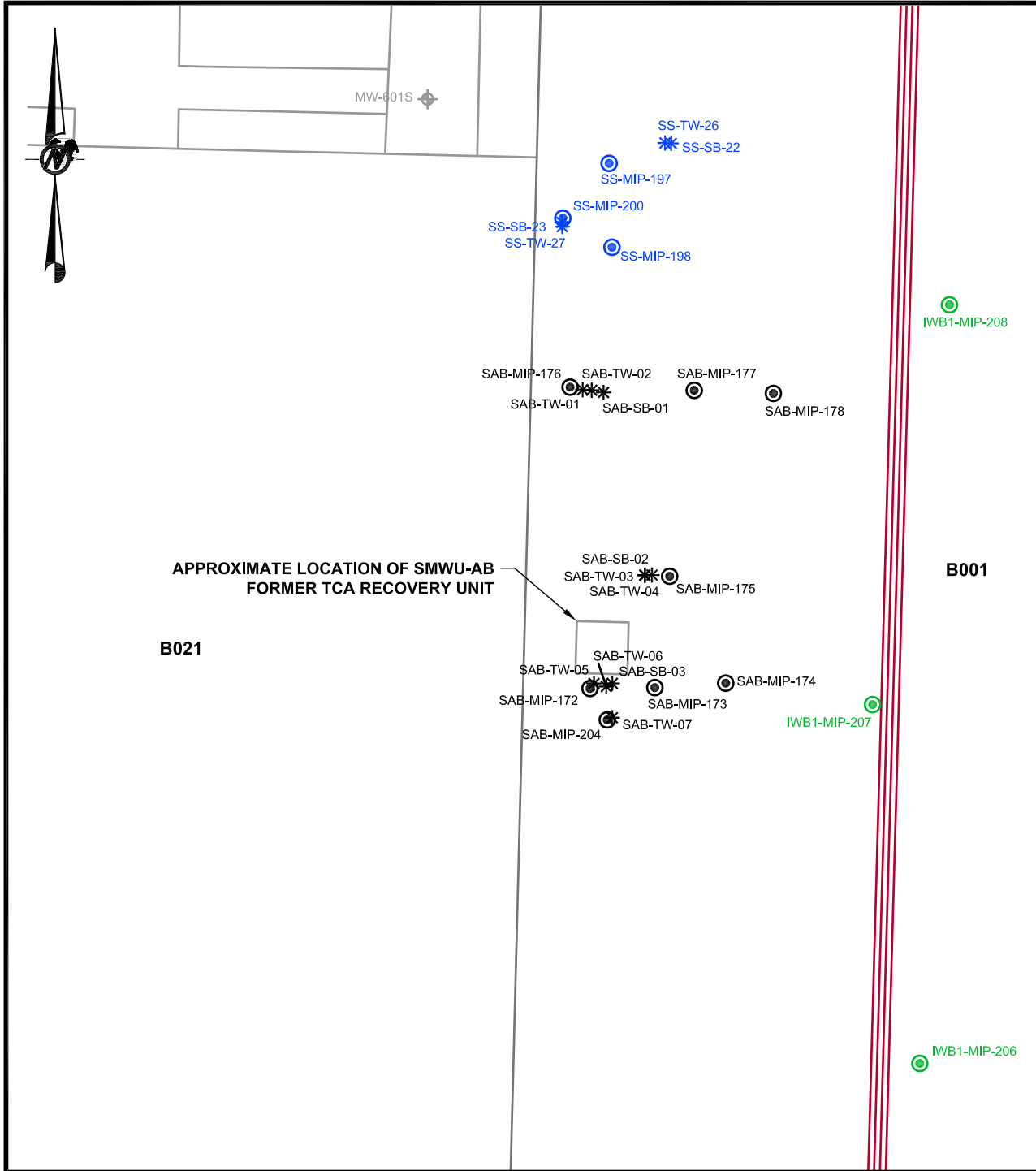
REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW
-----	------	-----	----------------------	------	-----	----

PROJECT FORMER IBM FACILITY
KINGSTON, NEW YORK

TITLE SITE LOCATION MAP



PROJECT No. 083-87071			FILE No. 08387071U001		
DESIGN	DPG	10/24/12	SCALE	AS SHOWN	REV. 0
CADD	RG	10/24/12	FIGURE 1		
CHECK	CDH	10/24/12			
REVIEW	APTM	10/24/12			



LEGEND

- INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES
- B005** BUILDING NUMBER
- EXISTING MONITORING WELL
- SWMU AB SOIL BORING/TEMPORARY WELL LOCATION
- SWMU AB MIP LOCATION
- SWMU S SOIL BORING/TEMPORARY WELL LOCATION
- SWMU S MIP LOCATION
- INDUSTRIAL WASTE LINE MIP LOCATION

REFERENCES

- 1.) BASE MAP TAKEN FROM DIGITAL CAD FILE SITEMAP.DWG, DRAWING NUMBER 93002-SITEMAP/2 ENTITLED "SITE MAP," DATED MAY 9, 2005, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.
- 2.) INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES TAKEN FROM DIGITAL FILE 3002-108-13.DWG, ENTITLED "LOCATION MAP," DATED MARCH 5, 2009, PREPARED BY GROUNDWATER SCIENCES CORPORATION.
- 3.) APPROXIMATE LOCATION OF FORMER SWMU AB EVAPORATOR UNIT TAKEN FROM IBM KINGSTON, NY PLANT ENGINEERING DRAWING No. 001-114-M34 FOR BUILDING B001 DATED 25 FEBRUARY 1966 ENTITLED "SOLVENT RECOVERY SYSTEM - WASTE STORAGE AND PUMPING CIRCUIT".

30030

SCALEFEET

REV	DATE	DES	REVISION	DESCRIPTION	CADD	CHK	RVW
PROJECT							
FORMER IBM FACILITY KINGSTON, NEW YORK							
TITLE							
MEMBRANE INTERFACE PROBE, SOIL BORING AND TEMPORARY WELL LOCATIONS							
NJ Authorization #24GA28029100							
PROJECT No.		083-87071		FILE No.		08387071U017	
DESIGN	DPG	10/24/12		SCALE	AS SHOWN	REV. 0	
CADD	RG	10/24/12		FIGURE 3			
CHECK	CDH	10/24/12					
REVIEW	APTM	10/24/12					

Golder Associates
Newark, New Jersey

[illegible]

FORMER IBM FACILITY
KINGSTON, NEW YORK

**INTERPRETED
TOP OF BEDROCK
CONTOUR MAP**

TITLE			
PROJECT No.		083-87071	
FILE No.		08387071U004	
REV. 0	SCALE	AS SHOWN	
DESIGN	DPG	10/24/12	
CADD	RG	10/24/12	
CHECK	CDH	10/24/12	
REVIEW	APTM	10/24/12	

FIGURE 4

C:\Users\jld\OneDrive\Documents\1025271\1025271.dwg | Layout: 11x17-08-2006 | Modified: 10/24/12 10:35am | Plotted: 10/24/12 10:35am | Plotted by: jld

LEGEND

	PROPERTY/PARCEL BOUNDARY		B003	BUILDING NUMBER
	RIVER/STREAM		160	INTERPRETED ELEVATION OF THE GROUNDWATER TABLE SURFACE (FT. MSL) (SEE REFERENCE 4)
	42-INCH DIAMETER SEWER SYSTEM (SITE PERIMETER CONTROL SYSTEM)			INTERPRETED GROUNDWATER FLOW DIRECTION IN SURFICIAL SAND
	UNSATURATED SURFICIAL SAND UNIT (SITE PERIMETER CONTROL SYSTEM)			INTERPRETED EXTENT OF UNSATURATED PORTION OF THE SURFICIAL SAND (SEE NOTE 1)
	GROUNDWATER COLLECTION SYSTEM (SITE PERIMETER CONTROL SYSTEM)			SWMU AB INVESTIGATION AREA
	60-INCH DIAMETER SEWER SYSTEM (SITE PERIMETER CONTROL SYSTEM)			INFERRED GROUNDWATER DIVIDE
	UTILITY TRENCH BARRIER WALL		1	OPERABLE UNIT (OU)
	STORM SEWER LINE			

NOTE

1.) THE INTERPRETED EXTENT OF THE UNSATURATED SURFICIAL SAND HAS BEEN UPDATED TO REFLECT INFORMATION COLLECTED THROUGH THE SWMU'S INVESTIGATION.

REFERENCES

- 1.) BASE MAP TAKEN FROM DIGITAL CAD FILE 3002-108-13.DWG, DRAWING NUMBER 93002-108-13 ENTITLED "LOCATION MAP," DATED MARCH 5, 2009, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.
- 2.) OPERABLE UNIT BOUNDARIES DIGITIZED FROM A HARDCOPY FILE ENTITLED "Operable Unit Composite MAP_2011-0830.pdf," PREPARED BY BRINNIE & LARIOS, P.C.
- 3.) PERENNIALY SATURATED SHALLOW SAND ABSENT, STORM SEWER LINE AND INTERPRETED PORTION OF UNSATURATED SURFICIAL SAND UNIT FROM DIGITAL FILE 93002-109-T2_GWE2008-12.dwg, ENTITLED "SURFICIAL SAND AQUIFER GROUNDWATER ELEVATION CONTOUR MAP," DECEMBER 2, 2008 (FOURTH QUARTER 2008), PROVIDED BY GROUNDWATER SCIENCES CORPORATION.
- 4.) GROUNDWATER CONTOURS, GROUNDWATER FLOW DIRECTION AND GROUNDWATER DIVIDE DIGITIZED FROM A HARDCOPY FILE ENTITLED "SURFICIAL SAND AQUIFER GROUNDWATER ELEVATION CONTOUR MAP," MAY 6, 2011 (SECOND QUARTER 2011), FIGURE 3-2, DATED SEPTEMBER 6, 2011, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.
- 5.) APPROXIMATE LOCATION OF FORMER SWMU AB EVAPORATOR UNIT TAKEN FROM IBM KINGSTON, NY PLANT ENGINEERING DRAWING No. 001-114-M34 FOR BUILDING B001 DATED 25 FEBRUARY 1966 ENTITLED "SOLVENT RECOVERY SYSTEM - WASTE STORAGE AND PUMPING CIRCUIT".



NY Authorization #2402020100

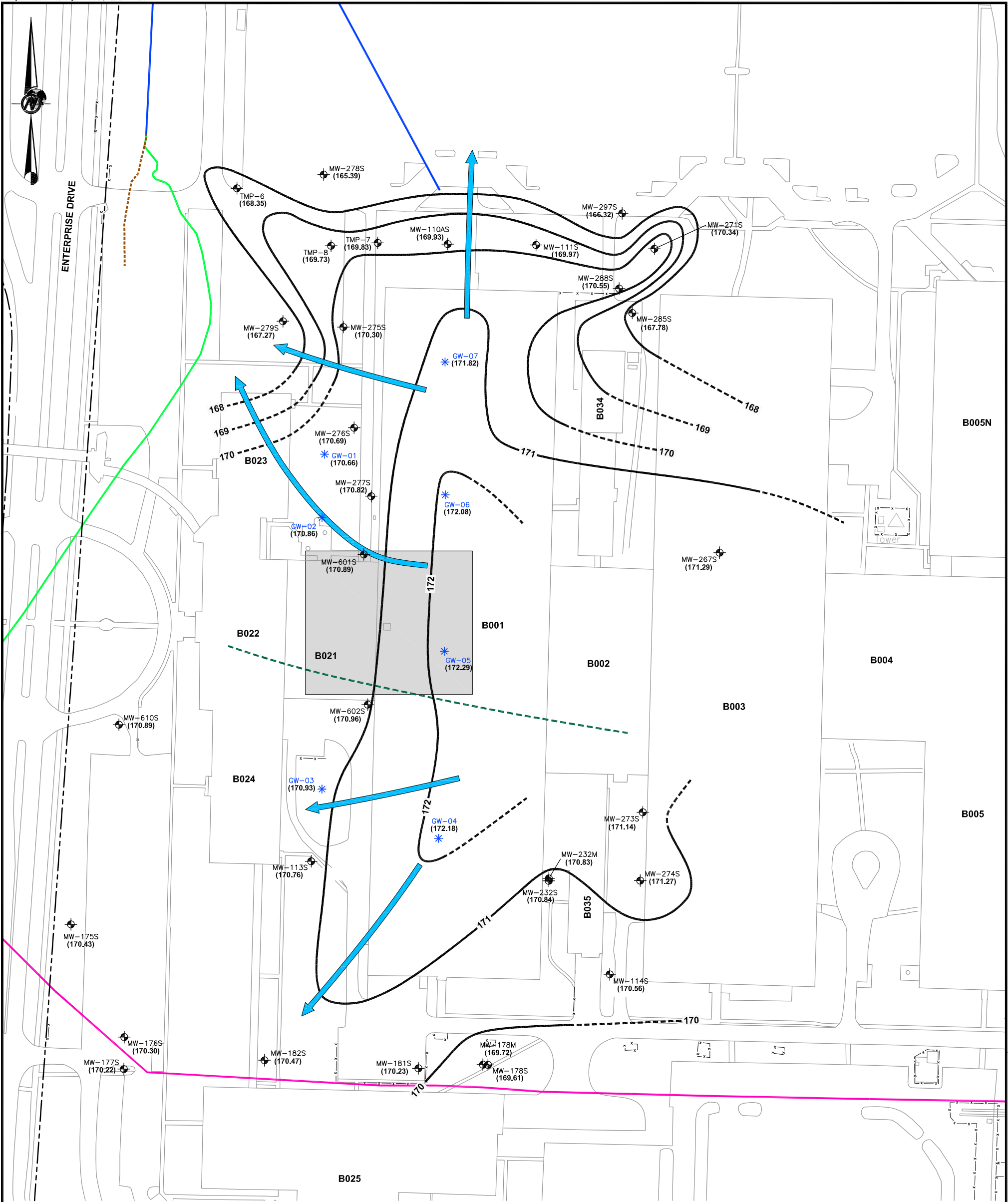


REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW

PROJECT	FORMER IBM FACILITY KINGSTON, NEW YORK
---------	---

TITLE				INTERPRETED GROUNDWATER TABLE ELEVATION CONTOUR MAP			
PROJECT No.		083-87071					
FILE No.		08387071U005					
REV.	0	SCALE	AS SHOWN				
DESIGN		DPG	10/24/12				
CADD		RG	10/24/12				
CHECK		CDH	10/24/12				
REVIEW		APTM	10/24/12				

FIGURE 5



LEGEND

- PROPERTY/PARCEL BOUNDARY

RIVER/STREAM

42-INCH DIAMETER SEWER SYSTEM
(SITE PERIMETER CONTROL SYSTEM)

UNSATURATED SURFICIAL SAND UNIT
(SITE PERIMETER CONTROL SYSTEM)

GROUNDWATER COLLECTION SYSTEM
(SITE PERIMETER CONTROL SYSTEM)

UTILITY TRENCH BARRIER WALL

SWMU AB INVESTIGATION AREA
- MONITORING WELL

TEMPORARY WELL

B003

—170—

(172.18)
-
-

REFERENCES

- 1.) BASE MAP TAKEN FROM DIGITAL CAD FILE 3002-108-13.DWG, DRAWING NUMBER 93002-108-13 ENTITLED "LOCATION MAP," DATED MARCH 5, 2009, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.
- 3.) APPROXIMATE LOCATION OF FORMER SWMU AB EVAPORATOR UNIT TAKEN FROM IBM KINGSTON, NY PLANT ENGINEERING DRAWING No. 001-114-M34 FOR BUILDING B001 DATED 25 FEBRUARY 1966 ENTITLED "SOLVENT RECOVERY SYSTEM - WASTE STORAGE AND PUMPING CIRCUIT".

FIGURE NARRATIVE

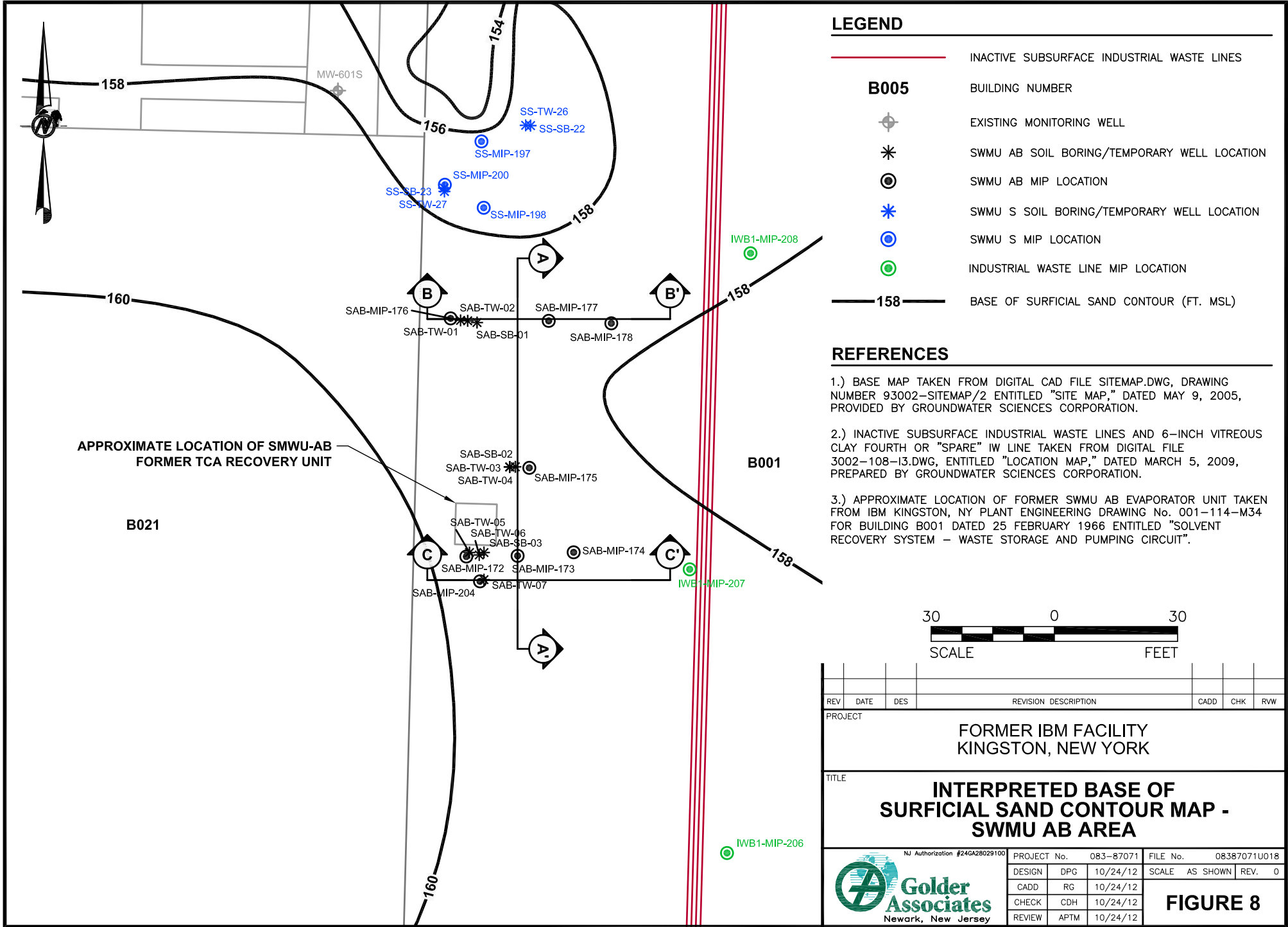
THIS FIGURE DEPICTS THE APPROXIMATE ELEVATION OF THE GROUNDWATER TABLE (PHREATIC SURFACE) CALCULATED FROM SYNOPSIS DEPTH-TO-WATER MEASUREMENTS IN SELECT SITE MONITORING WELLS COLLECTED BY GOLDER ON MARCH 21, 2012. THE DIRECTION OF GROUNDWATER FLOW AT AND NEAR THE PHREATIC SURFACE CAN BE GENERALLY INTERPRETED AS BEING PERPENDICULAR TO THE GROUNDWATER ELEVATION CONTOUR LINES. GOLDER INFERRED THE GROUNDWATER ELEVATION CONTOURS BASED ON THE DATA ILLUSTRATED. THE ACTUAL ELEVATION OF THE PHREATIC SURFACE IS LIKELY MORE HETEROGENEOUS THAN SHOWN AND ACTUAL CONDITIONS MAY VARY. OTHER INTERPRETATIONS ARE POSSIBLE. THE DEPTH TO GROUNDWATER IS KNOWN TO VARY WITH TIME.

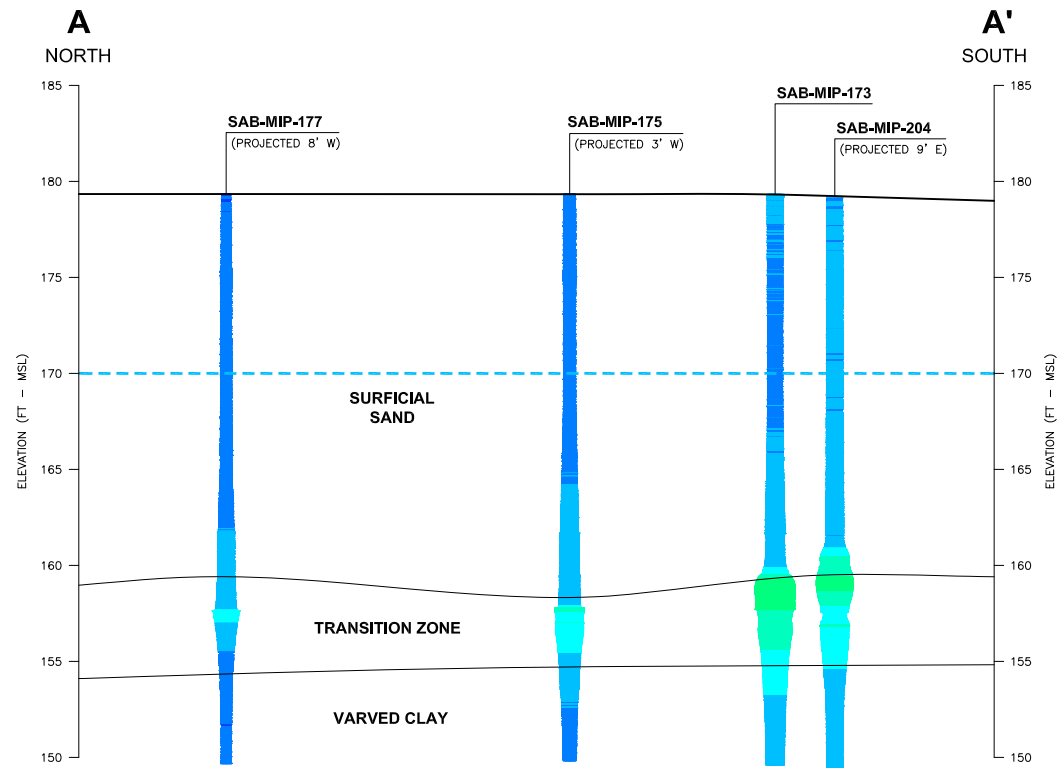


REV	DATE	DES	REVISION DESCRIPTION					CADD	CHK	R/W
PROJECT										
FORMER IBM FACILITY KINGSTON, NEW YORK										
TITLE										
INTERPRETED GROUNDWATER TABLE ELEVATION CONTOUR MAP - SWMU AB AREA MARCH 21, 2012										
NJ Authorization #240A28029100										
PROJECT No.		083-87071		FILE No.		08387071U020				
DESIGN	DPG	10/24/12		SCALE	AS SHOWN	REV. 0				
CADD	RG	10/24/12		FIGURE 6						
CHECK	CDH	10/24/12								
REVIEW	APTM	10/24/12								

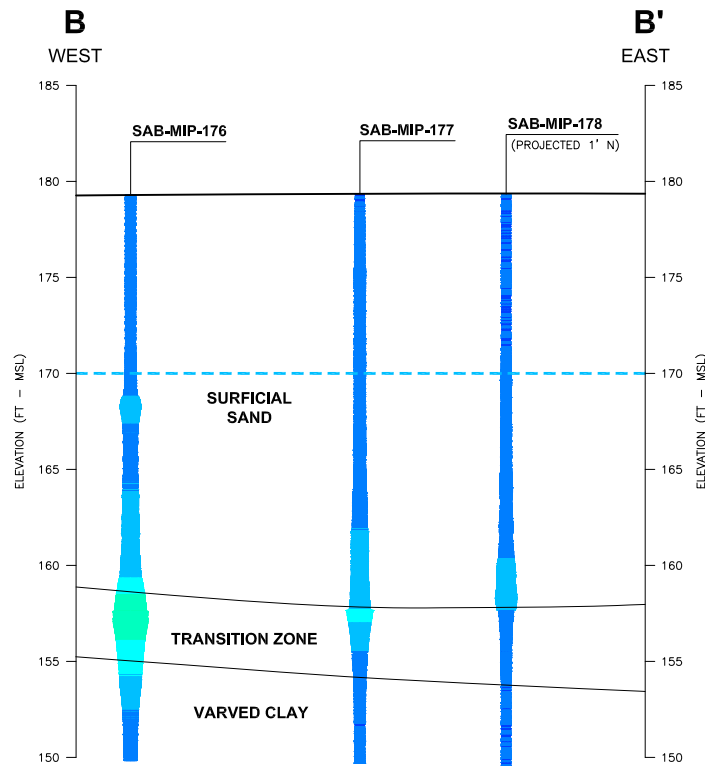


FIGURE 6

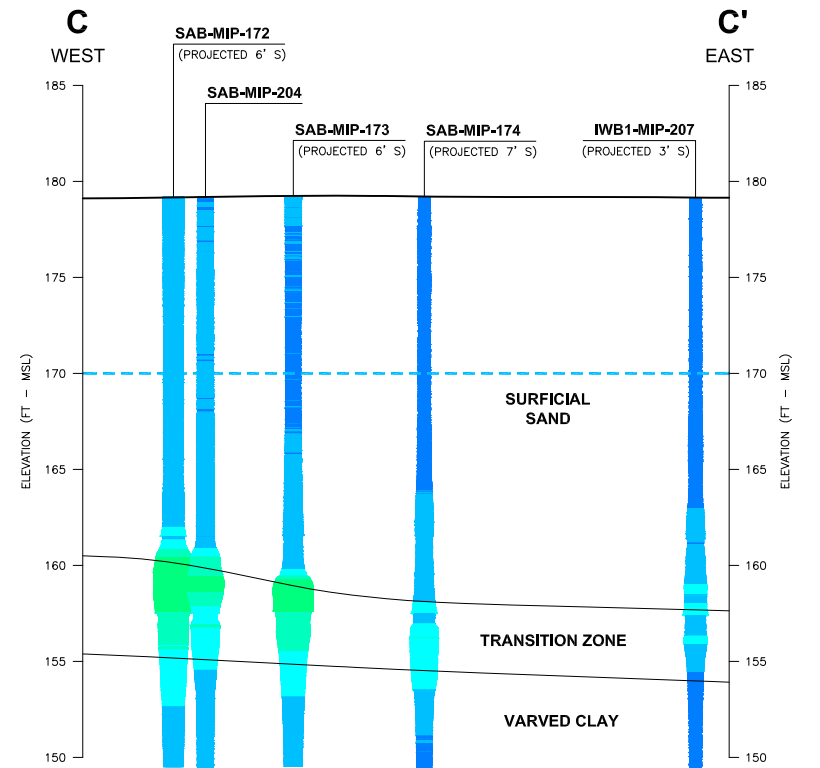




A CROSS SECTION A-A'
9



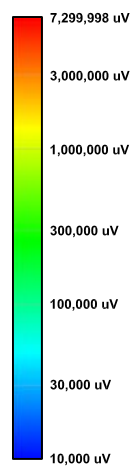
B CROSS SECTION B-B'
9



C CROSS SECTION C-C'
9

LEGEND

XSD RESPONSES



SAB-MIP-175
(PROJECTED 3' W)

← MIP DESIGNATION
← PROJECTED DISTANCE

--- APPROXIMATE ELEVATION OF OBSERVED GROUNDWATER TABLE DURING SWMU AB INVESTIGATION

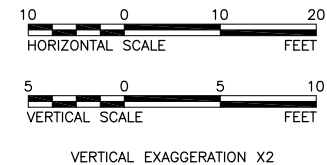
FIGURE NARRATIVE

THESE CROSS SECTIONS PRESENT GOLDER'S INTERPRETATION OF THE SOIL STRATIGRAPHY BASED ON SOIL BORING LOG DESCRIPTIONS AND MIP DATA COLLECTED IN THE INVESTIGATION AREA. PROFESSIONAL JUDGMENT HAS BEEN USED TO DEVELOP THE CROSS SECTION. ACTUAL CONDITIONS WILL VARY FROM THOSE ILLUSTRATED. OTHER INTERPRETATIONS ARE POSSIBLE.

COLOR FLOOD AND DIAMETER OF THE DISCS SHOWN ON THE CROSS SECTION ARE INDICATIVE OF MIP XSD RESPONSES OBSERVED AT EACH LOCATION.

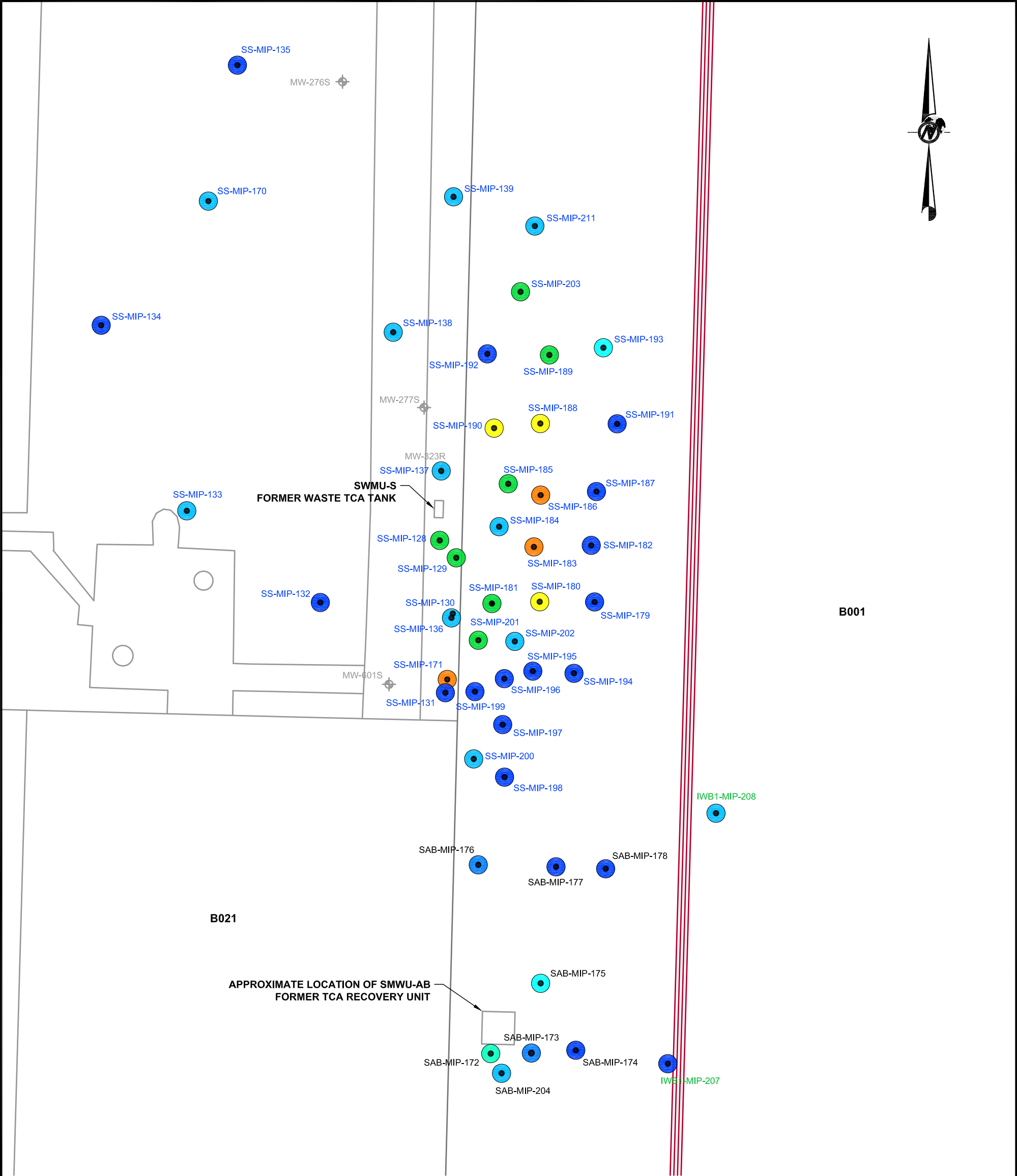
NOTES

- 1.) CROSS SECTION AND MIP BORING PROFILES GENERATED BY EVS/MVS VERSION 9.22 RELEASED BY C TECH CORPORATION (2009) AND INTERPRETED BY GOLDER.
- 2.) SOME MIP PROBE AND SOIL BORING LOCATIONS ARE PROJECTED OFF-SECTION.
- 3.) THE SIZE OF BORINGS AND WELLS SHOWN ARE EXAGGERATED.
- 4.) SEE FIGURE 8 FOR CROSS SECTION LOCATIONS.



REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
PROJECT						
FORMER IBM FACILITY KINGSTON, NEW YORK						
TITLE						
INTERPRETED GEOLOGIC CROSS SECTIONS A-A', B-B' AND C-C'						
NJ Authorization #240A28029100						
PROJECT No.		083-87071		FILE No.		08387071U019
DESIGN	RG	10/24/12		SCALE	AS SHOWN	REV. 0
CADD	DPG	10/24/12		FIGURE 9		
CHECK	CDH	10/24/12				
REVIEW	APTM	10/24/12				





LEGEND

B005

MW-601S

SAB-MIP-178

SS-MIP-198

IWB1-MIP-208

INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES

BUILDING NUMBER

EXISTING MONITORING WELL

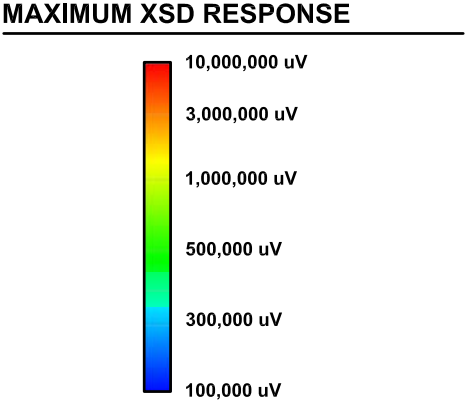
SWMU AB MIP LOCATION WITH RELATIVE MIP XSD RESPONSE (SEE COLOR SCALE)

SWMU S MIP LOCATION WITH RELATIVE MIP XSD RESPONSE (SEE COLOR SCALE)

INDUSTRIAL WASTE LINE MIP LOCATION WITH RELATIVE MIP XSD RESPONSE (SEE COLOR SCALE)

NOTE

1.) COLOR FLOOD INDICATIVE OF RELATIVE MIP XSD RESPONSE.



- REFERENCES**
- 1.) BASE MAP TAKEN FROM DIGITAL CAD FILE SITEMAP.DWG, DRAWING NUMBER 93002-SITEMAP/2 ENTITLED "SITE MAP," DATED MAY 9, 2005, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.

2.) INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES TAKEN FROM DIGITAL FILE 3002-108-I3.DWG, ENTITLED "LOCATION MAP," DATED MARCH 5, 2009, PREPARED BY GROUNDWATER SCIENCES CORPORATION.

3.) APPROXIMATE LOCATION OF FORMER SWMU AB EVAPORATOR UNIT TAKEN FROM IBM KINGSTON, NY PLANT ENGINEERING DRAWING No. 001-114-M34 FOR BUILDING B001 DATED 25 FEBRUARY 1966 ENTITLED "SOLVENT RECOVERY SYSTEM - WASTE STORAGE AND PUMPING CIRCUIT".

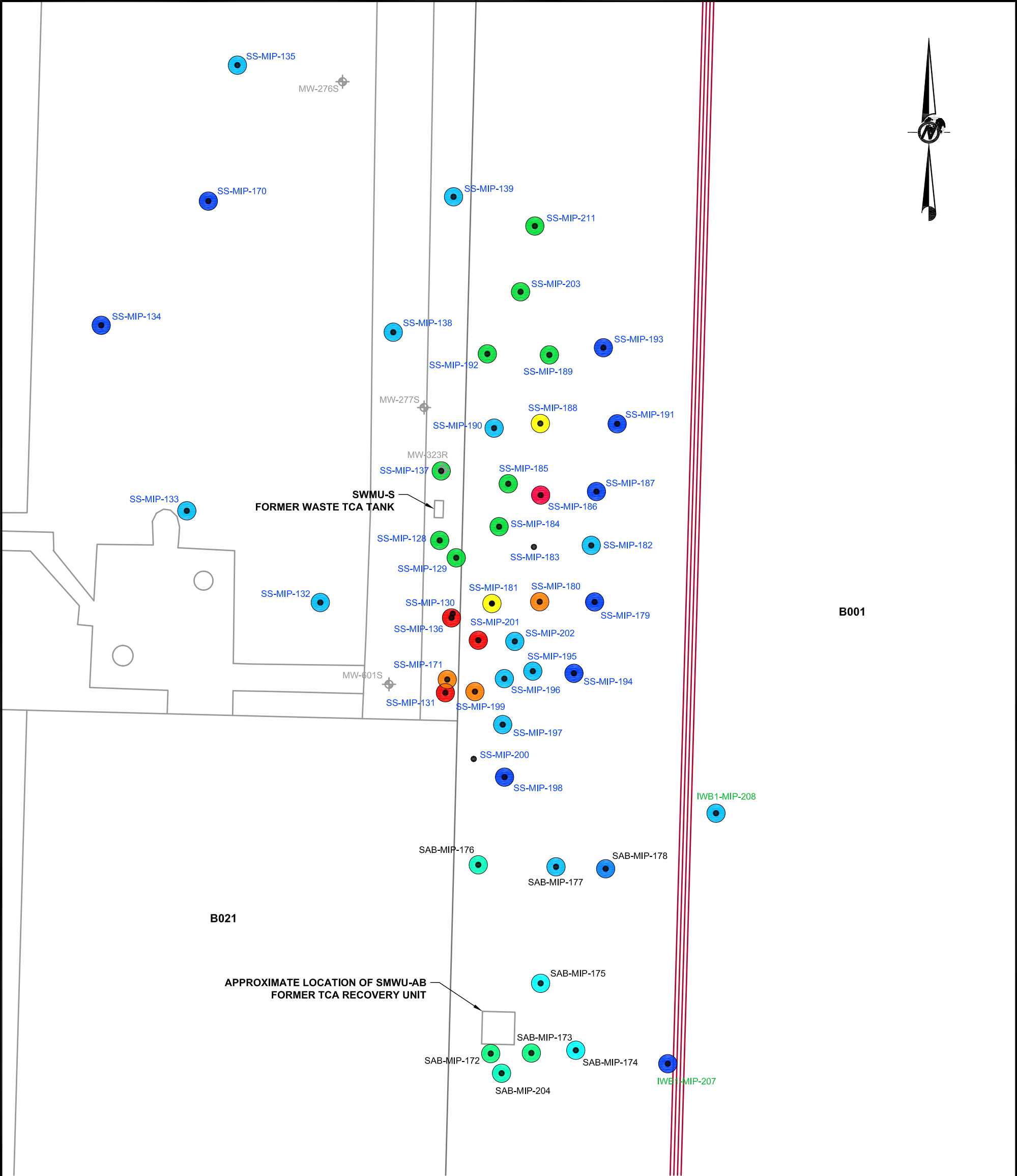
300 0 300

SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
PROJECT						
FORMER IBM FACILITY KINGSTON, NEW YORK						
TITLE						
MAXIMUM XSD RESPONSE - SATURATED SURFICIAL SAND UNIT						
PROJECT No. 083-87071			FILE No. 08387071U015			
DESIGN	DPG	10/24/12	SCALE	AS SHOWN	REV.	0
CADD	RG	10/24/12				
CHECK	CDH	10/24/12				
REVIEW	APTM	10/24/12				

Golder Associates
Mt. Laurel, New Jersey

FIGURE 10



LEGEND

B005

MW-601S

SAB-MIP-178

SS-MIP-198

IWB1-MIP-208

INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES

BUILDING NUMBER

EXISTING MONITORING WELL

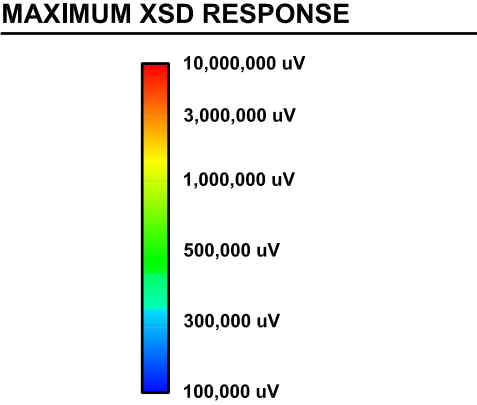
SWMU AB MIP LOCATION WITH RELATIVE MIP XSD RESPONSE (SEE COLOR SCALE)

SWMU S MIP LOCATION WITH RELATIVE MIP XSD RESPONSE (SEE COLOR SCALE)

INDUSTRIAL WASTE LINE MIP LOCATION WITH RELATIVE MIP XSD RESPONSE (SEE COLOR SCALE)

NOTE

1.) COLOR FLOOD INDICATIVE OF RELATIVE MIP XSD RESPONSE.



- REFERENCES
- 1.) BASE MAP TAKEN FROM DIGITAL CAD FILE SITEMAP.DWG, DRAWING NUMBER 93002-SITEMAP/2 ENTITLED "SITE MAP," DATED MAY 9, 2005, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.

2.) INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES TAKEN FROM DIGITAL FILE 3002-108-I3.DWG, ENTITLED "LOCATION MAP," DATED MARCH 5, 2009, PREPARED BY GROUNDWATER SCIENCES CORPORATION.

3.) APPROXIMATE LOCATION OF FORMER SWMU AB EVAPORATOR UNIT TAKEN FROM IBM KINGSTON, NY PLANT ENGINEERING DRAWING No. 001-114-M34 FOR BUILDING B001 DATED 25 FEBRUARY 1966 ENTITLED "SOLVENT RECOVERY SYSTEM - WASTE STORAGE AND PUMPING CIRCUIT".

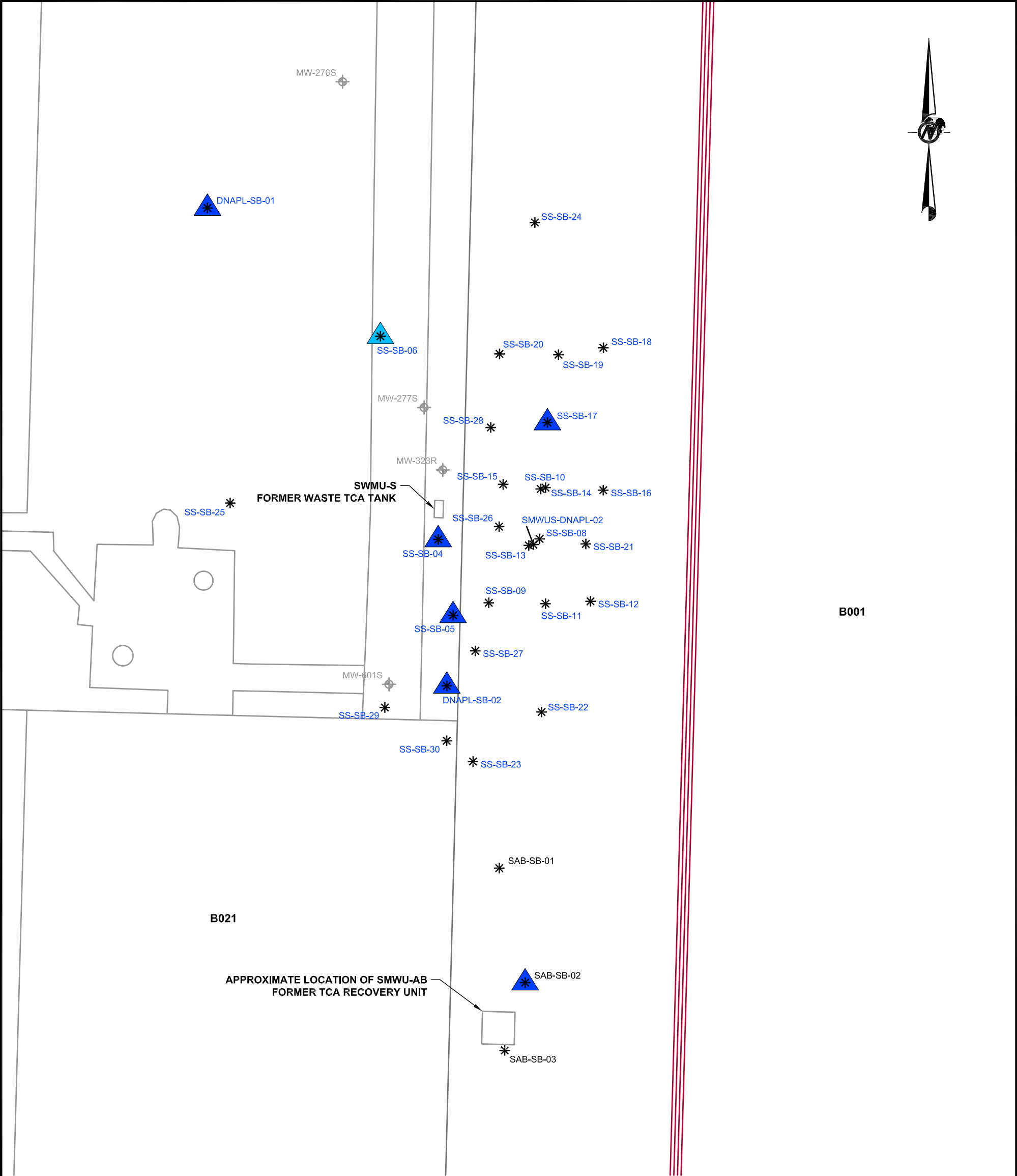
300 0 300

SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RWW
PROJECT						
FORMER IBM FACILITY KINGSTON, NEW YORK						
TITLE						
MAXIMUM XSD RESPONSE - TRANSITION ZONE						
PROJECT No. 083-87071			FILE No. 08387071U016			
DESIGN	DPG	10/24/12	SCALE	AS SHOWN	REV.	0
CADD	RG	10/24/12				
CHECK	CDH	10/24/12				
REVIEW	APTM	10/24/12				

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FIGURE 11



LEGEND

INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES

B005

MW-601S

SAB-SB-02

SS-SB-04

BUILDING NUMBER

EXISTING MONITORING WELL

SWMU AB SOIL BORING LOCATION
(SEE COLOR SCALE FOR TOTAL VOC CONCENTRATION)

SWMU S SOIL BORING LOCATION
(SEE COLOR SCALE FOR TOTAL VOC CONCENTRATION)

TOTAL VOC CONCENTRATION

ND

< 1

< 5 mg/kg

< 10 mg/kg

< 50 mg/kg

< 100 mg/kg

> 200 mg/kg

NOTES

1.) COLOR FLOODING INDICATES TOTAL VOC CONCENTRATION OF ALL VOCs DETECTED IN EACH SOIL ANALYTICAL SAMPLE. NYSDEC HAS NOT ESTABLISHED SOIL STANDARDS FOR TOTAL VOC CONCENTRATION.

2.) mg/kg = MILLIGRAMS PER KILOGRAM.

REFERENCES

1.) BASE MAP TAKEN FROM DIGITAL CAD FILE SITEMAP.DWG, DRAWING NUMBER 93002-SITEMAP/2 ENTITLED "SITE MAP," DATED MAY 9, 2005, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.

2.) INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES TAKEN FROM DIGITAL FILE 3002-108-I3.DWG, ENTITLED "LOCATION MAP," DATED MARCH 5, 2009, PREPARED BY GROUNDWATER SCIENCES CORPORATION.

3.) APPROXIMATE LOCATION OF FORMER SWMU AB EVAPORATOR UNIT TAKEN FROM IBM KINGSTON, NY PLANT ENGINEERING DRAWING No. 001-114-M34 FOR BUILDING B001 DATED 25 FEBRUARY 1966 ENTITLED "SOLVENT RECOVERY SYSTEM - WASTE STORAGE AND PUMPING CIRCUIT".

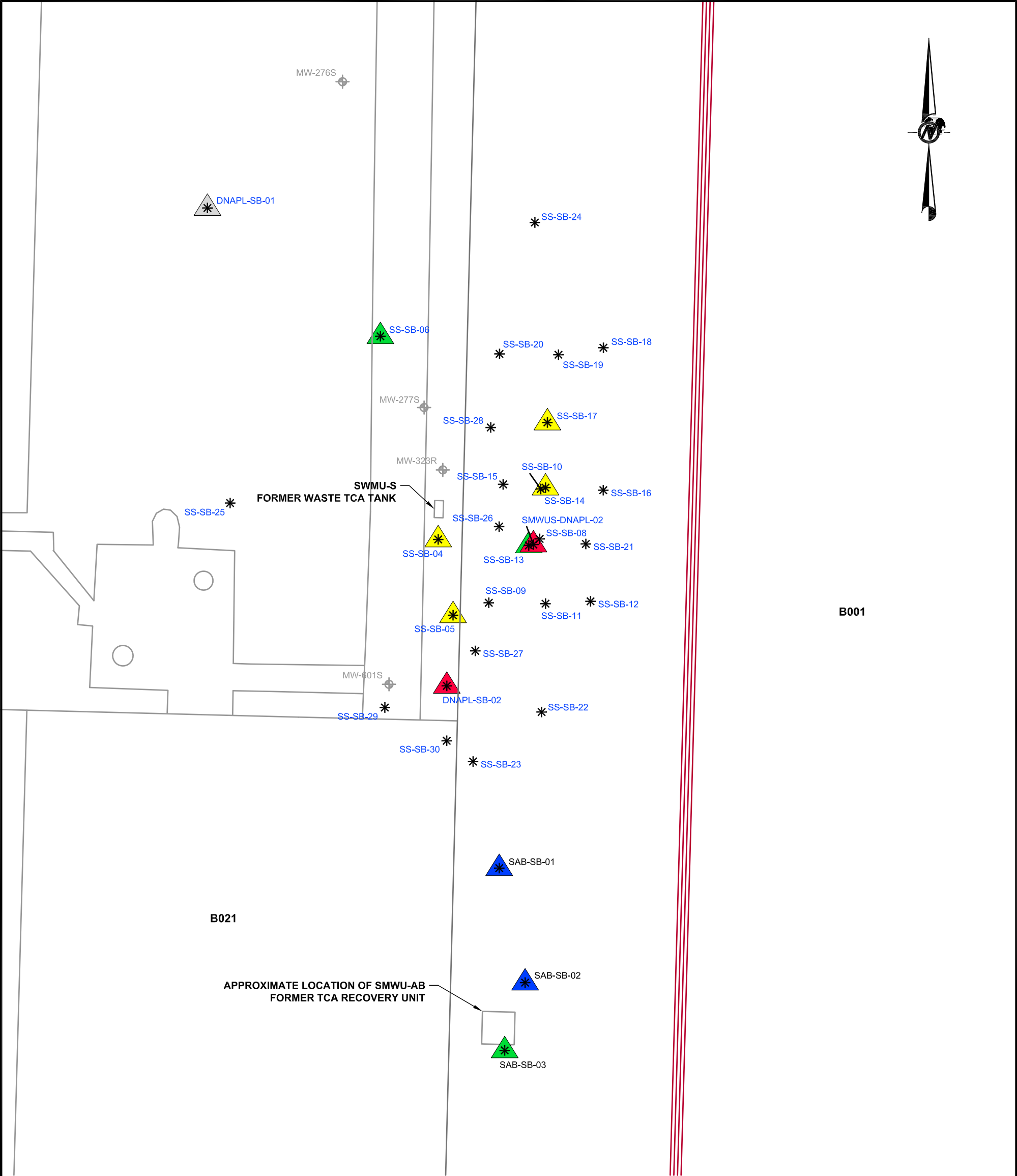
300 0 300

SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
PROJECT						
FORMER IBM FACILITY KINGSTON, NEW YORK						
TITLE						
SOIL ANALYTICAL RESULTS IN SURFICIAL SAND						
PROJECT No. 083-87071			FILE No. 08387071U011			
DESIGN	DPG	10/24/12	SCALE	AS SHOWN	REV.	0
CADD	RG	10/24/12				
CHECK	CDH	10/24/12				
REVIEW	APTM	10/24/12				

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FIGURE 12



LEGEND

INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES

B005

MW-601S

SAB-SB-02

SS-SB-04

BUILDING NUMBER

EXISTING MONITORING WELL

SWMU AB SOIL BORING LOCATION
(SEE COLOR SCALE FOR TOTAL VOC CONCENTRATION)

SWMU S SOIL BORING LOCATION
(SEE COLOR SCALE FOR TOTAL VOC CONCENTRATION)

NOTES

1.) COLOR FLOODING INDICATES TOTAL VOC CONCENTRATION OF ALL VOCs DETECTED IN EACH SOIL ANALYTICAL SAMPLE. NYSDEC HAS NOT ESTABLISHED SOIL STANDARDS FOR TOTAL VOC CONCENTRATION.

2.) mg/kg = MILLIGRAMS PER KILOGRAM.

TOTAL VOC CONCENTRATION

ND

< 1

< 5 mg/kg

< 10 mg/kg

< 50 mg/kg

< 100 mg/kg

> 200 mg/kg

REFERENCES

1.) BASE MAP TAKEN FROM DIGITAL CAD FILE SITEMAP.DWG, DRAWING NUMBER 93002-SITEMAP/2 ENTITLED "SITE MAP," DATED MAY 9, 2005, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.

2.) INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES TAKEN FROM DIGITAL FILE 3002-108-I3.DWG, ENTITLED "LOCATION MAP," DATED MARCH 5, 2009, PREPARED BY GROUNDWATER SCIENCES CORPORATION.

3.) APPROXIMATE LOCATION OF FORMER SWMU AB EVAPORATOR UNIT TAKEN FROM IBM KINGSTON, NY PLANT ENGINEERING DRAWING No. 001-114-M34 FOR BUILDING B001 DATED 25 FEBRUARY 1966 ENTITLED "SOLVENT RECOVERY SYSTEM - WASTE STORAGE AND PUMPING CIRCUIT".

300 0 300

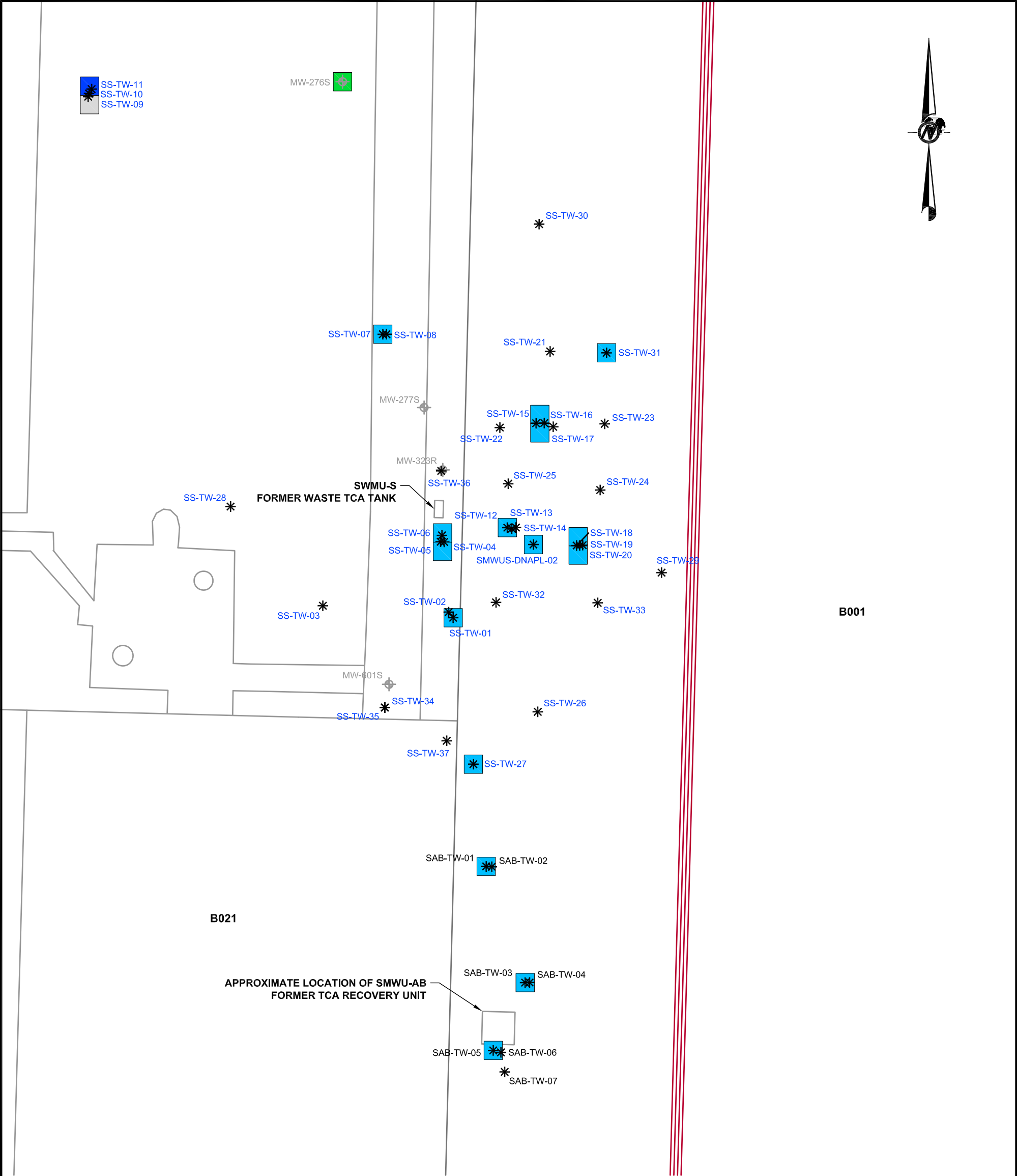
SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RWW
PROJECT						
FORMER IBM FACILITY KINGSTON, NEW YORK						
TITLE						
SOIL ANALYTICAL RESULTS IN TRANSITION ZONE						
PROJECT No. 083-87071			FILE No. 08387071U012			
DESIGN	DPG	10/24/12	SCALE	AS SHOWN	REV.	0
CADD	RG	10/24/12				
CHECK	CDH	10/24/12				
REVIEW	APTM	10/24/12				

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FIGURE 13



LEGEND

INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES

B005

BUILDING NUMBER

MW-601S

EXISTING MONITORING WELL

SAB-TW-01

SWMU AB TEMPORARY WELL LOCATION
(SEE COLOR SCALE FOR TOTAL VOC CONCENTRATION)

SS-TW-27

SWMU S TEMPORARY WELL LOCATION
(SEE COLOR SCALE FOR TOTAL VOC CONCENTRATION)

NOTES

1.) COLOR FLOODING INDICATES RELATIVE TOTAL VOC CONCENTRATION OF ALL VOCs DETECTED IN EACH ANALYTICAL GROUNDWATER SAMPLE. NYSDEC HAS NOT ESTABLISHED SOIL STANDARDS FOR TOTAL VOC CONCENTRATION.

2.) ug/L = MICROGRAMS PER LITER.

TOTAL VOC CONCENTRATION

ND

< 5 ug/L

< 500 ug/L

< 5,000 ug/L

< 50,000 ug/L

< 500,000 ug/L

> 500,000 ug/L

REFERENCES

1.) BASE MAP TAKEN FROM DIGITAL CAD FILE SITEMAP.DWG, DRAWING NUMBER 93002-SITEMAP/2 ENTITLED "SITE MAP," DATED MAY 9, 2005, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.

2.) INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES TAKEN FROM DIGITAL FILE 3002-108-13.DWG, ENTITLED "LOCATION MAP," DATED MARCH 5, 2009, PREPARED BY GROUNDWATER SCIENCES CORPORATION.

3.) APPROXIMATE LOCATION OF FORMER SWMU AB EVAPORATOR UNIT TAKEN FROM IBM KINGSTON, NY PLANT ENGINEERING DRAWING No. 001-114-M34 FOR BUILDING B001 DATED 25 FEBRUARY 1966 ENTITLED "SOLVENT RECOVERY SYSTEM - WASTE STORAGE AND PUMPING CIRCUIT".

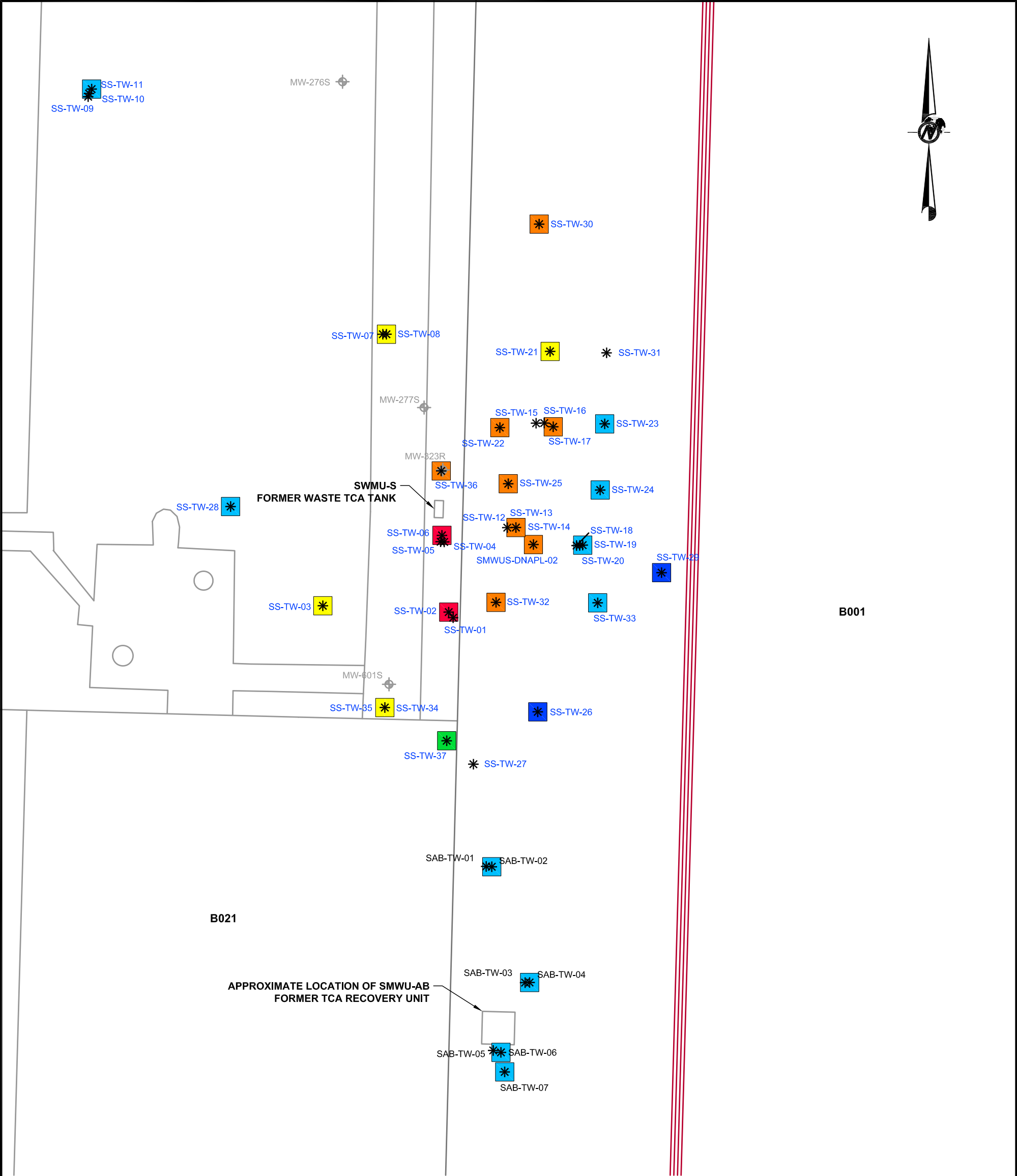
300

0

300

SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW																				
PROJECT																										
FORMER IBM FACILITY KINGSTON, NEW YORK																										
TITLE																										
GROUNDWATER ANALYTICAL RESULTS IN SURFICIAL SAND																										
NJ Authorization #24GA28029100 Golder Associates Mt. Laurel, New Jersey			<table> <tr> <td>PROJECT No.</td><td>083-87071</td><td>FILE No.</td><td>08387071U013</td></tr> <tr> <td>DESIGN</td><td>DPG</td><td>10/24/12</td><td>SCALE AS SHOWN</td></tr> <tr> <td>CADD</td><td>RG</td><td>10/24/12</td><td>REV. 0</td></tr> <tr> <td>CHECK</td><td>CDH</td><td>10/24/12</td><td></td></tr> <tr> <td>REVIEW</td><td>APTM</td><td>10/24/12</td><td></td></tr> </table>				PROJECT No.	083-87071	FILE No.	08387071U013	DESIGN	DPG	10/24/12	SCALE AS SHOWN	CADD	RG	10/24/12	REV. 0	CHECK	CDH	10/24/12		REVIEW	APTM	10/24/12	
PROJECT No.	083-87071	FILE No.	08387071U013																							
DESIGN	DPG	10/24/12	SCALE AS SHOWN																							
CADD	RG	10/24/12	REV. 0																							
CHECK	CDH	10/24/12																								
REVIEW	APTM	10/24/12																								
FIGURE 14																										



LEGEND

INACTIVE SUBSURFACE INDUSTRIAL WASTE LINES

B005

MW-601S

SAB-TW-01

SS-TW-27

BUILDING NUMBER

EXISTING MONITORING WELL

SWMU AB TEMPORARY WELL LOCATION
(SEE COLOR SCALE FOR TOTAL VOC CONCENTRATION)

SWMU S TEMPORARY WELL LOCATION
(SEE COLOR SCALE FOR TOTAL VOC CONCENTRATION)

NOTES

1.) COLOR FLOODING INDICATES RELATIVE TOTAL VOC CONCENTRATION OF ALL VOCs DETECTED IN EACH ANALYTICAL GROUNDWATER SAMPLE. NYSDEC HAS NOT ESTABLISHED SOIL STANDARDS FOR TOTAL VOC CONCENTRATION.

2.) ug/L = MICROGRAMS PER LITER.

TOTAL VOC CONCENTRATION

ND

< 5 ug/L

< 500 ug/L

< 5,000 ug/L

< 50,000 ug/L

< 500,000 ug/L

> 500,000 ug/L

REFERENCES

1.) BASE MAP TAKEN FROM DIGITAL CAD FILE SITEMAP.DWG, DRAWING NUMBER 93002-SITEMAP/2 ENTITLED "SITE MAP," DATED MAY 9, 2005, PROVIDED BY GROUNDWATER SCIENCES CORPORATION.

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3.) APPROXIMATE LOCATION OF FORMER SWMU AB EVAPORATOR UNIT TAKEN FROM IBM KINGSTON, NY PLANT ENGINEERING DRAWING No. 001-114-M34 FOR BUILDING B001 DATED 25 FEBRUARY 1966 ENTITLED "SOLVENT RECOVERY SYSTEM - WASTE STORAGE AND PUMPING CIRCUIT".

300 0 300

SCALE FEET

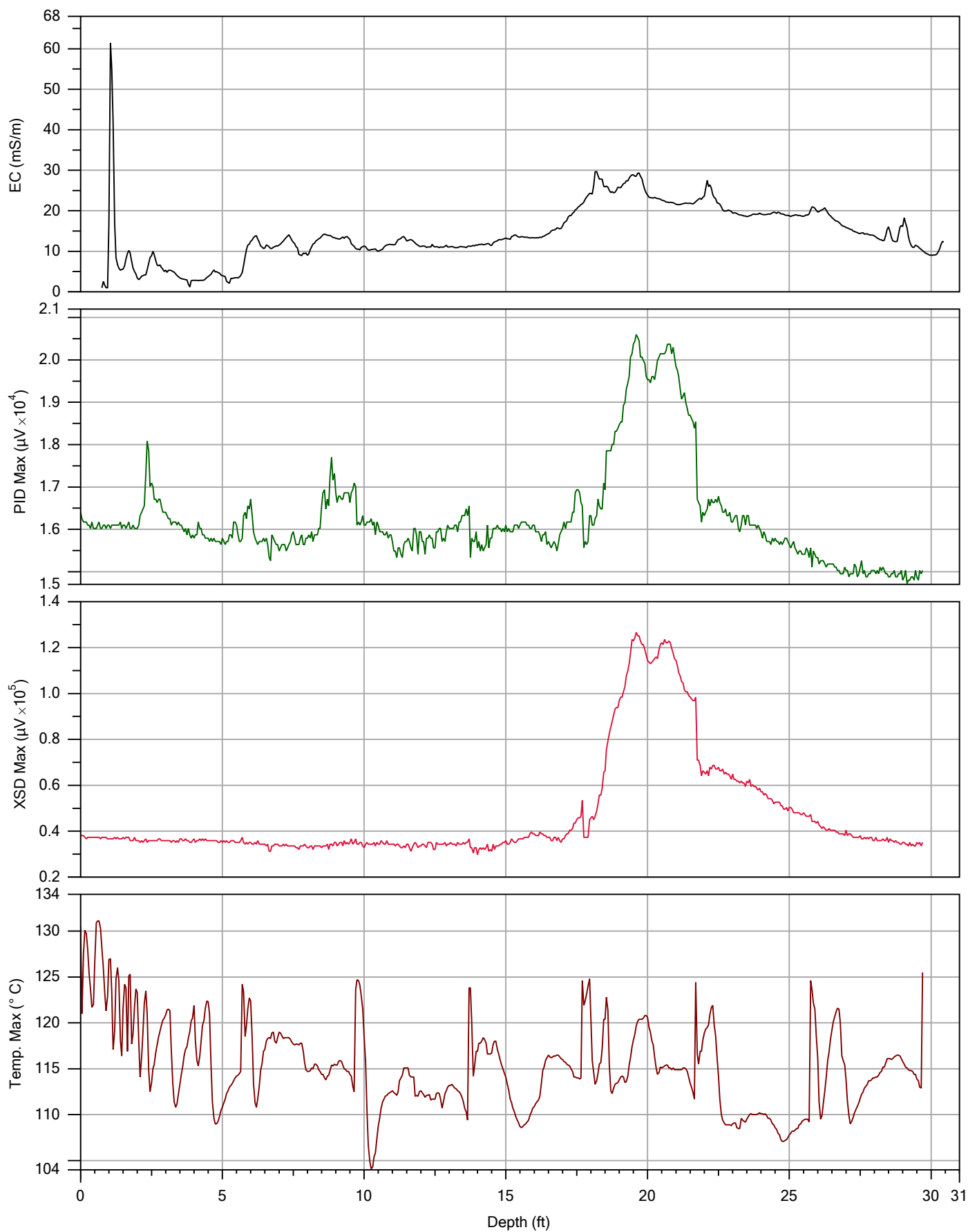
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PROJECT						
FORMER IBM FACILITY KINGSTON, NEW YORK						
TITLE						
GROUNDWATER ANALYTICAL RESULTS IN TRANSITION ZONE						
PROJECT No. 083-87071			FILE No. 08387071U014			
DESIGN	DPG	10/24/12	SCALE	AS SHOWN	REV.	0
CADD	RG	10/24/12				
CHECK	CDH	10/24/12				
REVIEW	APTM	10/24/12				

Golder Associates

Mt. Laurel, New Jersey

FIGURE 15

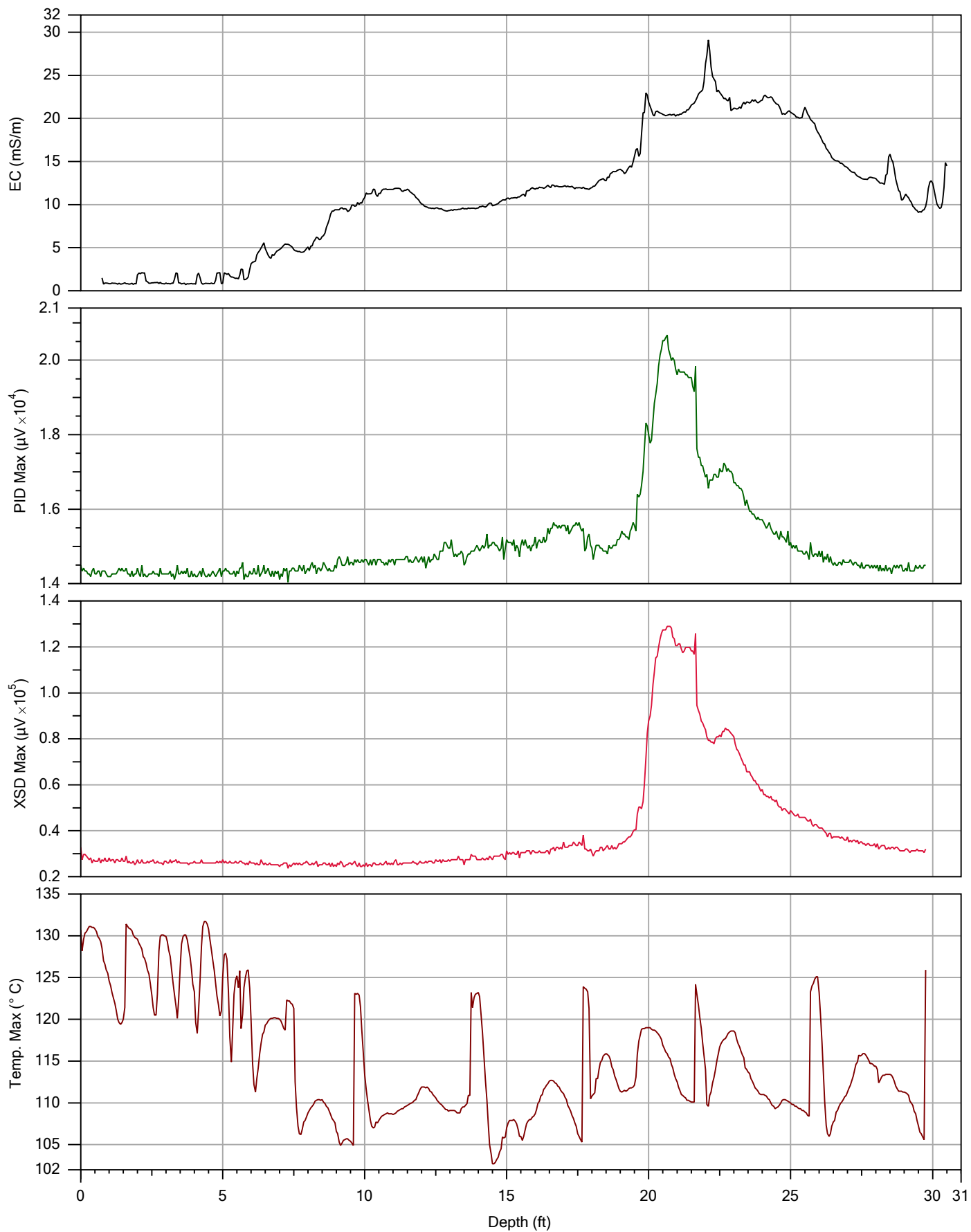
APPENDIX A
MEMBRANE INTERFACE PROBE INFORMATION



Company: Peak Investigations
Project ID: Kingston

Operator: T Armstrong
Client: Golder

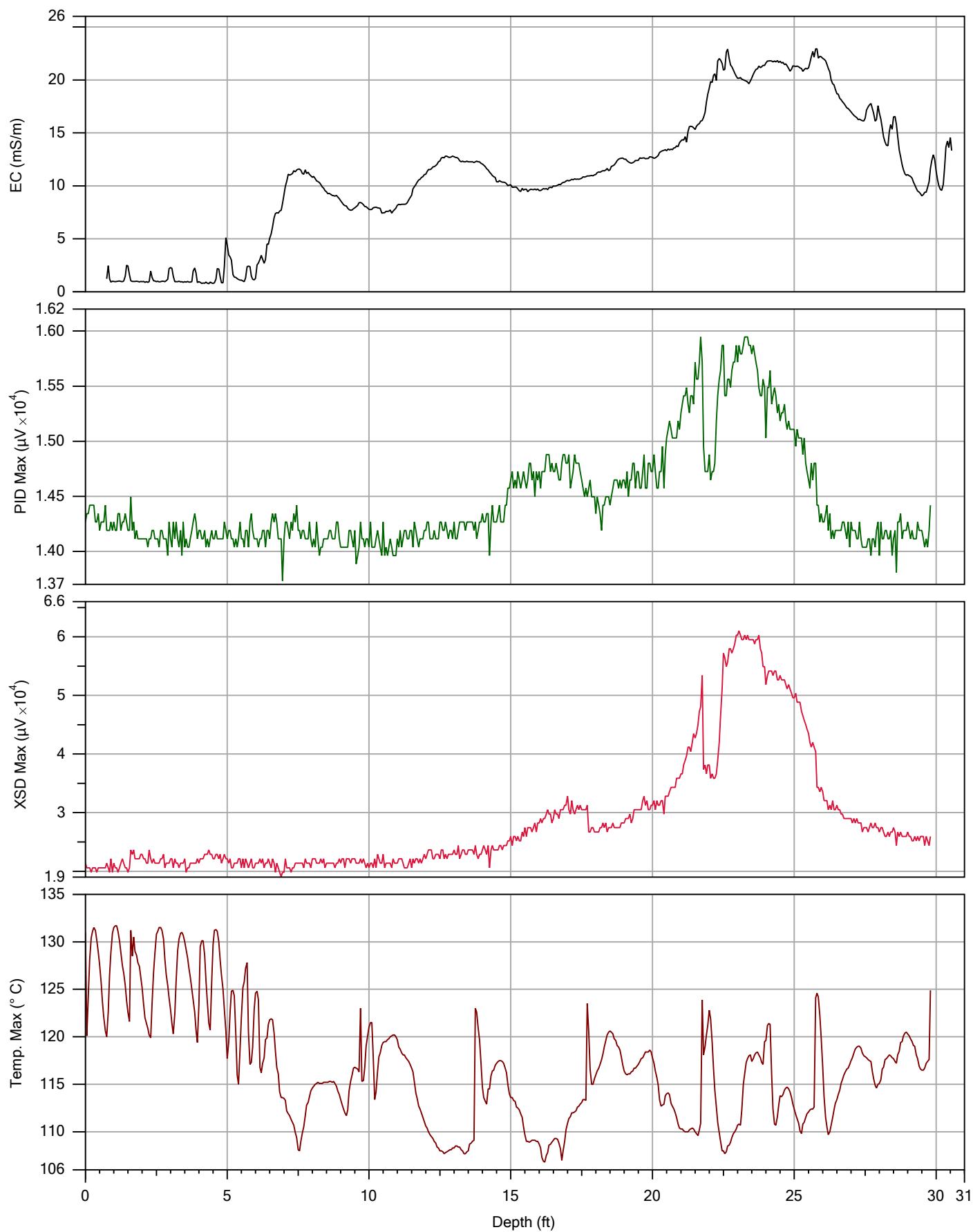
File: MIP0172.MIP
Date: 3/7/2012
Location:



Company: Peak Investigations
Project ID: Kingston

Operator: T Armstrong
Client: Golder

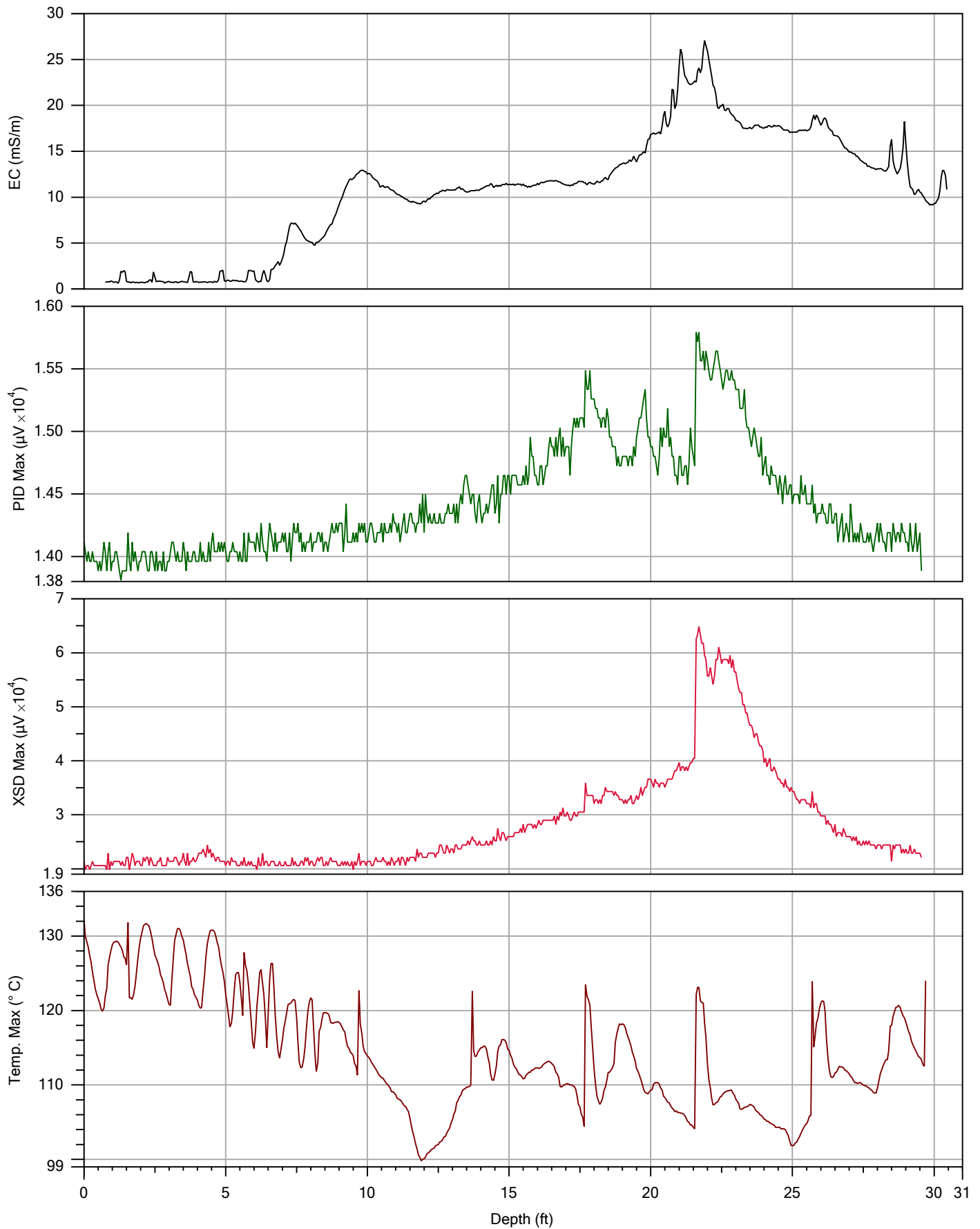
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Date:	3/7/2012
Location:	



Company: Peak Investigations
Project ID: Kingston

Operator: T Armstrong
Client: Golder

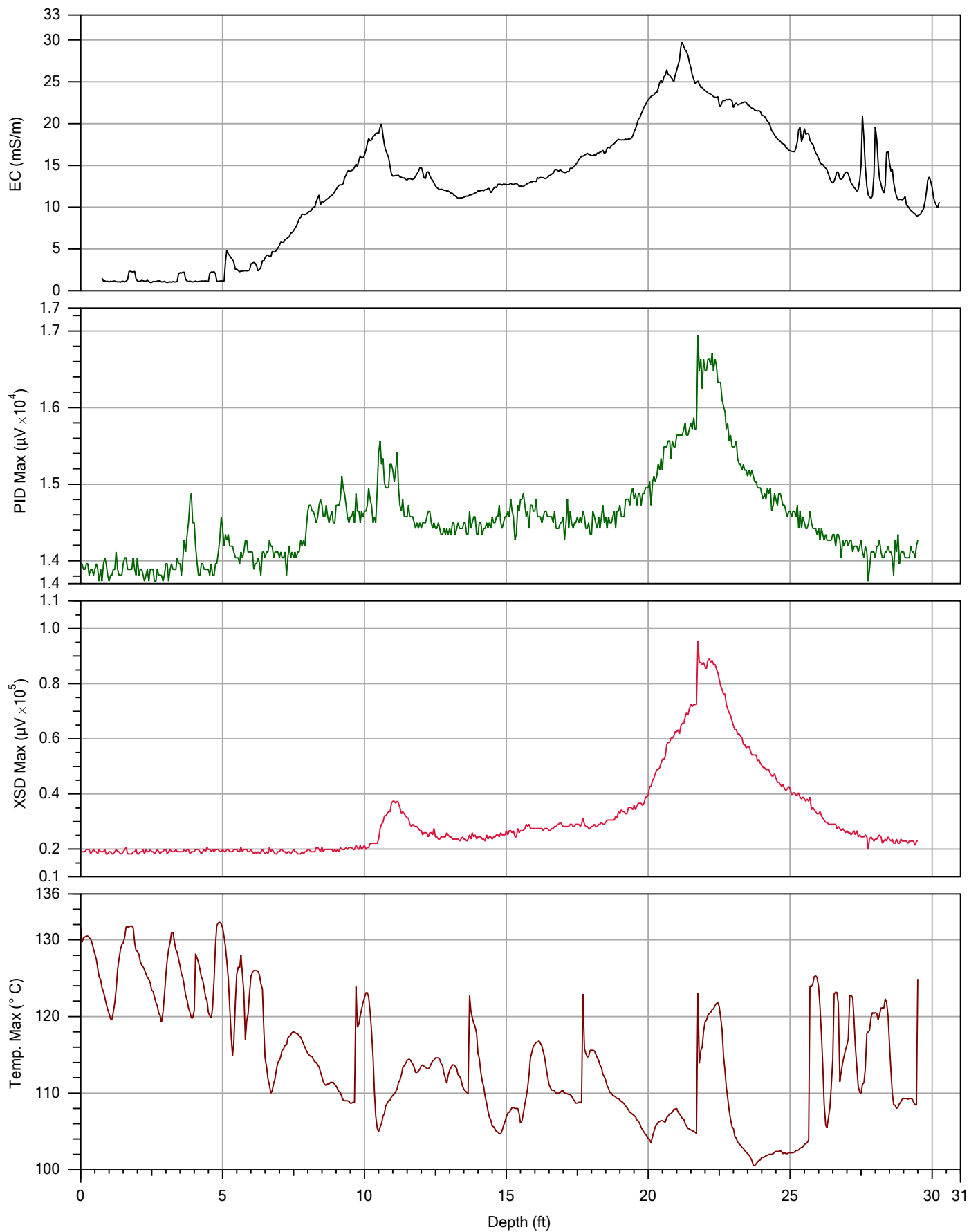
File: MIP0174.MIP
Date: 3/7/2012
Location:



Company: Peak Investigations
Project ID: Kingston

Operator: T Armstrong
Client: Golder

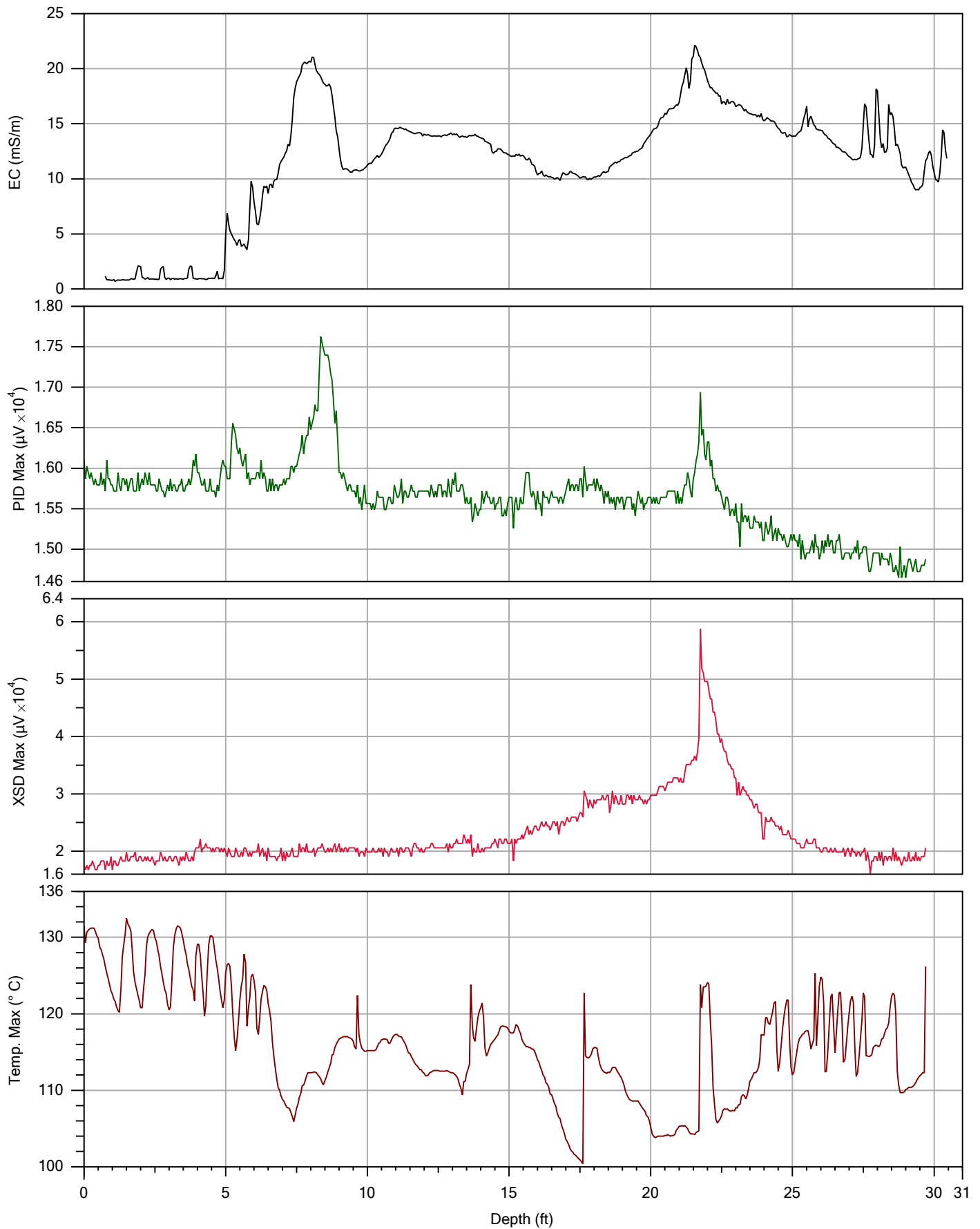
File:	MIP0175.MIP
Date:	3/7/2012
Location:	



Company: Peak Investigations
Project ID: Kingston

Operator: T Armstrong
Client: Golder

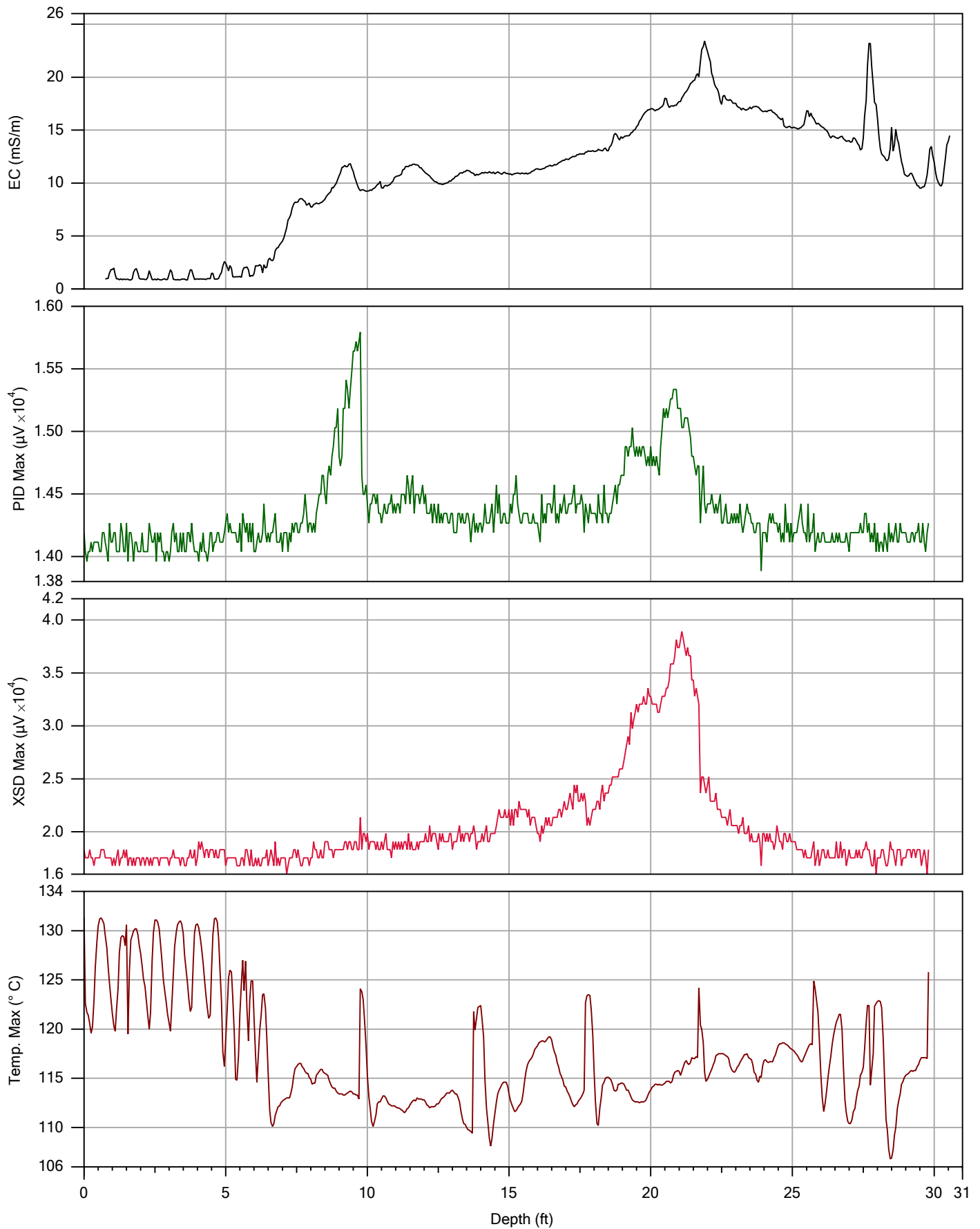
File: MIP0176.MIP
Date: 3/7/2012
Location:



Company: Peak Investigations
Project ID: Kingston

Operator: T Armstrong
Client: Golder

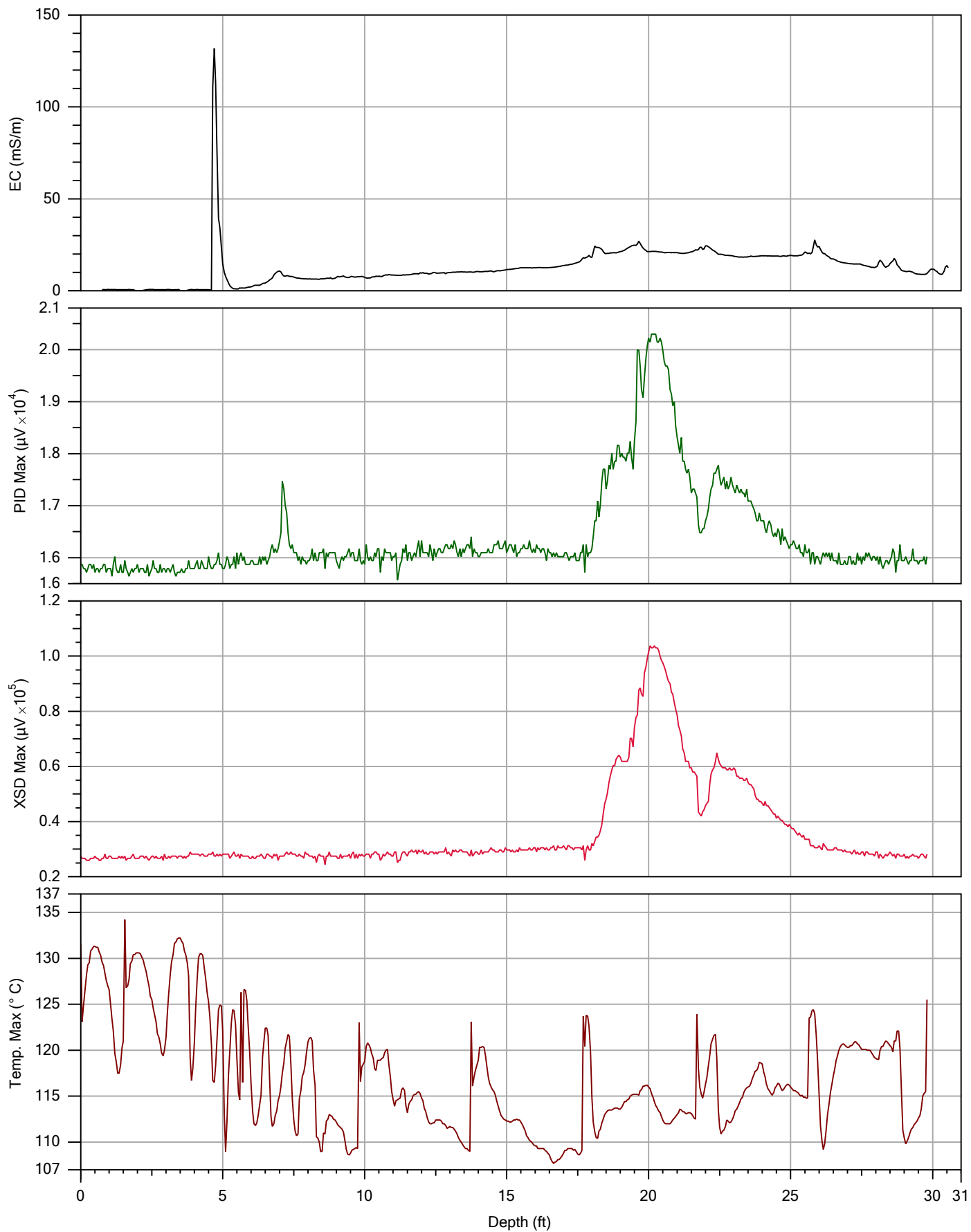
File: MIP0177.MIP
Date: 3/8/2012
Location: 41° 58' 13" N, 73° 59' 50" W



Company: Peak Investigations
Project ID: Kingston

Operator: T Armstrong
Client: Golder

File:	MIP0178.MIP
Date:	3/8/2012
Location:	41° 58' 11" N, 73° 59' 48" W



Company: Peak Investigations
Project ID: Kingston

Operator: T Armstrong
Client: Golder

File:	MIP0204.MIP
Date:	3/23/2012
Location:	

MIP FIELD INFORMATION
FORM



SITE DESCRIPTION

Project Name: IBM/Kingston
Project Number: 083-87071
Location: Kingston, NY

WEATHER CONDITIONS

Temperature: 35°F
Wind: N/A
Precipitation: N/A

BORING DESCRIPTION

MIP Boring ID: SAB-MIP-172
Date: 03/07/12 Start Time: 0830
Date: 03/07/12 End Time: 0920
MIP Contractor: PEAK
MIP Operator: T. ARMSTRONG

INSTRUMENT INFORMATION

Detectors Used: XSD/PID/EC
Probe Type: MP4510 MP6510
Probe S/N: _____

LOGGING INFORMATION

MIP File Name: MIP-0172
Pre-Log Response Test File Name: MIP-0172
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 76
Final Depth of Penetration: 29.70
Post Log Response Test File Name: MIP-0173
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 78 sec

OBSERVATIONS

BASE: 36,000 MAY: 60,000 ~115,000 MP at 18 FT, TRANS OVER

10 X ATN

DPG

**MIP FIELD INFORMATION
FORM**



SITE DESCRIPTION

Project Name: IBM/Kingston
Project Number: 083-87071
Location: Kingston, NY

WEATHER CONDITIONS

Temperature: 35°F
Wind: N/A
Precipitation: N/A

BORING DESCRIPTION

MIP Boring ID: SAB-MIP-173
Date: 03/07/12 Start Time: 0945
Date: 03/07/12 End Time: 1022
MIP Contractor: PEARL
MIP Operator: T. ARMSTRONG

INSTRUMENT INFORMATION

Detectors Used: XSD/PID/EC
Probe Type: MP4510 MP6510
Probe S/N: _____

LOGGING INFORMATION

MIP File Name: MIP-0173
Pre-Log Response Test File Name: MIP-0173
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 7.95 sec
Final Depth of Penetration: 20.75
Post Log Response Test File Name: MIP-0174
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 7.7 sec

OBSERVATIONS

BASE: 25,000 MAX: 62,000 ~125,600 uV AT 222 F7

NO XATION

DPG

MIP FIELD INFORMATION
FORM



SITE DESCRIPTION

Project Name: IBM/Kingston
Project Number: 083-87071
Location: Kingston, NY

WEATHER CONDITIONS

Temperature: 35°F
Wind: N/A
Precipitation: N/A

BORING DESCRIPTION

MIP Boring ID: SAB-MIP-174
Date: 3/7/12 Start Time: 1210
Date: 3/7/12 End Time: 1255
MIP Contractor: PEAC
MIP Operator: T. ARMSTRONG

INSTRUMENT INFORMATION

Detectors Used: XSD/PD/EC
Probe Type: MP4510 MP6510
Probe S/N: _____

LOGGING INFORMATION

MIP File Name: MIP-0174
Pre-Log Response Test File Name: MIP0174
Response Test Compound: TCE Concentration: 2ppm
Trip Time (seconds): 75 sec
Final Depth of Penetration: 29.85
Post Log Response Test File Name: MIP-0175
Response Test Compound: MIP-0175 Concentration: 2ppm
Trip Time (seconds): 77 sec

OBSERVATIONS

BASE: 15,000 NAPP: 59,000 250,000 AT 22 FT

ADDITIONAL

DPG

MIP FIELD INFORMATION
FORM



SITE DESCRIPTION

Project Name: IBM/Kingston
Project Number: 083-87071
Location: Kingston, NY

WEATHER CONDITIONS

Temperature: 35 °F
Wind: N/A
Precipitation: N/A

BORING DESCRIPTION

MIP Boring ID: SAB-MIP-175
Date: 3/7/12 Start Time: 1335
Date: 3/7/12 End Time: 1410
MIP Contractor: PEARL
MIP Operator: T. ARMSTRONG

INSTRUMENT INFORMATION

Detectors Used: XSD/MD/EC
Probe Type: MP4510 MP6510
Probe S/N: _____

LOGGING INFORMATION

MIP File Name: MIP-0175
Pre-Log Response Test File Name: MIP-0175
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 77 sec
Final Depth of Penetration: 29.70
Post Log Response Test File Name: MIP-0176
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 77

OBSERVATIONS

BASE: 10.000 MAX: 66.000 26.000 VSD AT 21.75/22 FT

104 ATIV

DPG

**MIP FIELD INFORMATION
FORM**



SITE DESCRIPTION

Project Name: IBM/Kingston
Project Number: 083-87071
Location: Kingston, NY

WEATHER CONDITIONS

Temperature: 35°F
Wind: N/A
Precipitation: N/A

BORING DESCRIPTION

MIP Boring ID: SAB-HY-176
Date: 3/7/12 Start Time: 1450
Date: 3/7/12 End Time: 1535
MIP Contractor: PEAK
MIP Operator: J. ARMSTRONG

INSTRUMENT INFORMATION

Detectors Used: PIB/XSD/EC
Probe Type: MP4510 MP6510
Probe S/N: _____

LOGGING INFORMATION

MIP File Name: MIP-0176
Pre-Log Response Test File Name: MIP-0176
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 77 sec
Final Depth of Penetration: 29.50
Post Log Response Test File Name: _____
Response Test Compound: _____ Concentration: _____
Trip Time (seconds): _____

OBSERVATIONS

BASE 17.0V MAX: 79.0V ~85.0V AT 22°F

10x AT 17.0V DPG

MIP FIELD INFORMATION
FORM



SITE DESCRIPTION

Project Name: IBM/Kingston
Project Number: 083-87071
Location: Kingston, NY

WEATHER CONDITIONS

Temperature: 35°F
Wind: N/A
Precipitation: N/A

BORING DESCRIPTION

MIP Boring ID: SAB-MIP-177
Date: 03/03/12 Start Time: 0840
Date: 03/08/12 End Time: 1025
MIP Contractor: PEAK
MIP Operator: T. ARMSTRONG

INSTRUMENT INFORMATION

Detectors Used: XSO/PIP/EC
Probe Type: MP4510 MP6510
Probe S/N: _____

LOGGING INFORMATION

MIP File Name: MIP-0177
Pre-Log Response Test File Name: MIP-0177
Response Test Compound: TCF Concentration: 2PPM
Trip Time (seconds): 75 sec
Final Depth of Penetration: 29.70
Post Log Response Test File Name: MIP-0178
Response Test Compound: TCF Concentration: 2PPM
Trip Time (seconds): 77 sec

OBSERVATIONS

BASE: 14,000 MAX: 75,000 250,000 V AT 22 FT, Turns over
BORING TIGHT AT ~ 20 FT, NEED TO HAMMER TO ADVANCE PROBE
NO XATINX DPG

MIP FIELD INFORMATION
FORM



SITE DESCRIPTION

Project Name: IBM/Kingston
Project Number: 083-87071
Location: Kingston, NY

WEATHER CONDITIONS

Temperature: 33°F
Wind: N/A
Precipitation: N/A

BORING DESCRIPTION

MIP Boring ID: SAB-MIP-17B
Date: 3/8/12 Start Time: 1000
Date: 3/8/12 End Time: 1045
MIP Contractor: TEAK
MIP Operator: T. ARMSTRONG

INSTRUMENT INFORMATION

Detectors Used: PID/XSD/EL
Probe Type: MP4510 MP6510
Probe S/N: _____

LOGGING INFORMATION

MIP File Name: MIP-017B
Pre-Log Response Test File Name: MIP-017B
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 77 sec
Final Depth of Penetration: 23.80
Post Log Response Test File Name: MIP-0174
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 70 sec

OBSERVATIONS

BASE: 15,000 MAX: 85,000 ~30,000 uV at 23 FT

NOV 11/12

DPG

MIP FIELD INFORMATION
FORM



SITE DESCRIPTION

Project Name: IBM/Kingston
Project Number: 083-87071
Location: Kingston, NY

WEATHER CONDITIONS

Temperature: 60°F
Wind: N/A
Precipitation: N/A

BORING DESCRIPTION

MIP Boring ID: SAB-MIP-204
Date: 3/23/12 Start Time: 0950
Date: 3/23/12 End Time: 1030
MIP Contractor: PEAK
MIP Operator: T. ARMSTRONG

INSTRUMENT INFORMATION

Detectors Used: ASD/PID/EC
Probe Type: MP4510 MP6510
Probe S/N: _____

LOGGING INFORMATION

MIP File Name: MIP-0204
Pre-Log Response Test File Name: MIP-0204
Response Test Compound: TCE Concentration: 2PPM
Trip Time (seconds): 74sec
Final Depth of Penetration: 29.80
Post Log Response Test File Name: MIP-0205
Response Test Compound: MIP- TCE Concentration: 2PPM
Trip Time (seconds): 74sec

OBSERVATIONS

BASE: 27,000 MAY: 51,000 210,000 AT 20FT

Alex ATW

DPG

APPENDIX B
SOIL BORING AND TEMPORARY WELL LOGS

RECORD OF BOREHOLE SAB-SB-01

SHEET 1 of 1

PROJECT: Former IBM - Kingston
PROJECT NUMBER: 083-87071
DRILLED DEPTH: 25.0 ft
AZIMUTH: N/A
LOCATION: SWMU AB

DRILL METHOD: Direct Push
DRILL RIG: 6620
DATE STARTED: 3/19/12
DATE COMPLETED: 3/19/12
WEATHER: Inside

DATUM: New York State Plane
COORDS: N: 717,992.1 E: 591,225.3
GS ELEVATION: 178.9 ft
TOC ELEVATION:
TEMPERATURE: 46 F

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES				COMMENTS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	PID (ppm)	REC / ATT	
0		0.0 - 0.8 Concrete Slab	SP		178.1					Sample collected from SAB-SB-01 for VOCs, SOD, TOC, and grain size
		0.8 - 1.3 Light brown very fine SAND, dense, moist, no odor			177.6					
		1.3 - 4.5 Brown fine SAND, dry, no odor	SP		1.3			0.0	$\frac{5.0}{5.0}$	
175		4.5 - 5.0 Dark brown fine to medium SAND, dry, no odor	SP		174.4					Sample collected from SAB-SB-01 for VOCs, SOD, TOC, and grain size
		5.0 - 8.5 Brown, fine SAND, dark brown at 8.0, moist at 8.5, no odor	SP		173.9					
					5.0			0.0	$\frac{4.5}{5.0}$	
170		8.5 - 8.8 Light orange to brown SILT, soft, wet, no odor	ML		170.4					Sample collected from SAB-SB-01 for VOCs, SOD, TOC, and grain size (duplicate collected for VOCs)
		8.8 - 10.0 Brown to dark brown fine SAND, wet, no odor	SP		8.8					
		10.0 - 15.0 Brown fine to medium SAND, orange to brown SILT at 13-13.25, soft, wet, no odor	SM		168.9			0.0	$\frac{4.0}{5.0}$	
					10.0					
165		15.0 - 18.0 Dark brown fine to medium SAND, wet, no odor	SP		163.9					Sample collected from SAB-SB-01 for VOCs, SOD, TOC, and grain size
					15.0					
		18.0 - 19.3 Light brown SILT, little fine sand, wet, soft, no odor	ML		160.9			0.0	$\frac{4.0}{5.0}$	
		19.0 - 20.0 Light brown fine SAND, some silt, wet, no odor	SP		159.6					
20		20.0 - 25.0 Light gray very fine SAND, some silt, wet no odor	SP		158.9					Sample collected from SAB-SB-01 for VOCs, SOD, TOC, and grain size
					20.0			0.0	$\frac{4.0}{5.0}$	
155		Boring completed at 25.0 ft			153.9					
25										
150										
30										
145										
35										
140										
40										

AA GEOTECH LOG IBM-KINGSTON ADDITIONAL INVESTIGATIONS.GPJ GOLDER NJ-PA 05-24-06.GDT 10/24/12

LOG SCALE: 1 in = 5 ft
DRILLING COMPANY: Env. Probing Inc
DRILLER: W. Atkinson

GA INSPECTOR: D.Gorman
CHECKED BY: CDH
DATE: 7/13/12



RECORD OF BOREHOLE SAB-SB-02

SHEET 1 of 1

PROJECT: Former IBM - Kingston
PROJECT NUMBER: 083-87071
DRILLED DEPTH: 25.0 ft
AZIMUTH: N/A
LOCATION: SWMU AB

DRILL METHOD: Direct Push
DRILL RIG: 6620
DATE STARTED: 3/19/12
DATE COMPLETED: 3/19/12
WEATHER: Inside

DATUM: New York State Plane
COORDS: N: 717,956.9 E: 591,233.3
GS ELEVATION: 178.9 ft
TOC ELEVATION:
TEMPERATURE: 46 F

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE			SAMPLES				COMMENTS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	PID (ppm)		REC / ATT
					DEPTH (ft)					
0		0.0 - 0.8 Concrete slab			178.1					Sample and MS/MSD collected from SAB-SB-02 for VOCs
		0.8 - 5.0 Brown fine SAND, dense, dry, no odor	SP		0.8			0.0	$\frac{4.0}{5.0}$	
5		5.0 - 8.0 Dark brown fine to medium SAND, dry, no odor	SP		173.9					
					5.0					
		8.0 - 8.5 Dark brown fine SAND, moist, no odor	SP		170.9			0.0	$\frac{4.0}{5.0}$	
		8.5 - 10.0 Light brown and gray mottled fine SAND, wet at 9.0, no odor	SP		170.4					
10		10.0 - 15.0 Light brown fine SAND, some silt, wet, no odor, 0.25 ft light brown silt at 13.5	SP		168.9					
					10.0			0.0	$\frac{5.0}{5.0}$	
15		15.0 - 20.0 Light brown fine SAND, little to some silt, wet, no odor	SP		163.9					
					15.0			0.0	$\frac{5.0}{5.0}$	
20		20.0 - 22.0 Light brown fine SAND, wet, some silt, no odor	SP		158.9					Sample collected from SAB-SB-02 for VOCs
					20.0					
		22.0 - 25.0 Light gray SILT and very fine SAND, wet, soft, no odor	SM		156.9			0.0	$\frac{4.5}{5.0}$	Sample collected from SAB-SB-02 for VOCs
					22.0					
25		Boring completed at 25.0 ft			153.9					
30										
35										
40										

AA GEOTECH LOG IBM-KINGSTON ADDITIONAL INVESTIGATIONS.GPJ GOLDR NJ-PA 05-24-06.GDT 10/24/12

LOG SCALE: 1 in = 5 ft
DRILLING COMPANY: Env. Probing Inc
DRILLER: W. Atkinson

GA INSPECTOR: D.Gorman
CHECKED BY: CDH
DATE: 7/13/12



RECORD OF BOREHOLE SAB-SB-03

SHEET 1 of 1

PROJECT: Former IBM - Kingston
PROJECT NUMBER: 083-87071
DRILLED DEPTH: 25.0 ft
AZIMUTH: N/A
LOCATION: SWMU AB

DRILL METHOD: Direct Push
DRILL RIG: 6620
DATE STARTED: 3/19/12
DATE COMPLETED: 3/19/12
WEATHER: Inside

DATUM: New York State Plane
COORDS: N: 717,936.1 E: 591,227.0
GS ELEVATION: 178.9 ft
TOC ELEVATION:
TEMPERATURE: 46 F

DEPTH (ft)	ELEVATION (ft)	SOIL PROFILE				SAMPLES				COMMENTS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	PID (ppm)	REC / ATT	
0		0.0 - 0.8 Concrete slab			178.1					Sample collected from SAB-SB-04 for VOCs
		0.8 - 5.0 Light brown fine SAND, dense, dry, some silt, very fine to fine sand at 3.5-4 ft, no odor	SP		0.8			0.0	$\frac{5.0}{5.0}$	
5		5.0 - 8.0 Brown fine SAND, moist at 8.0, no odor	SP		173.9			0.0	$\frac{4.5}{5.0}$	
10		8.0 - 9.5 Light brown, SILTY very fine to fine SAND, wet at 9.0, no odor	SM		170.9					Sample collected from SAB-SB-04 for VOCs
		9.5 - 10.0 Dark brown fine to medium SAND, wet, no odor	SP		169.4					
15		10.0 - 15.0 Brown fine SAND, wet, no odor	SP		168.9			0.0	$\frac{3.5}{5.0}$	
20		15.0 - 18.0 Light brown fine SAND, wet, no odor	SP		163.9					Sample collected from SAB-SB-04 for VOCs
		18.0 - 18.5 Orange to brown very fine SAND and SILT, wet, no odor	SM		160.9			0.0	$\frac{5.0}{5.0}$	
25		18.5 - 20.0 Light gray SILT with some very fine sand, wet, no odor	ML		160.4					
30		20.0 - 22.5 Gray very fine SAND, some silt, wet, no odor	SP		158.9					Sample collected from SAB-SB-04 for VOCs
		22.5 - 23.0 Gray SILTY CLAY, soft, wet, pliable, no odor	CL-ML		156.4			0.0	$\frac{4.0}{5.0}$	
35		23.0 - 25.0 Gray very fine SAND, some silt, wet, no odor	SP		155.9					
40		Boring completed at 25.0 ft			153.9					

AA GEOTECH LOG IBM-KINGSTON ADDITIONAL INVESTIGATIONS.GPJ GOLDER NJ-PA 05-24-06.GDT 10/24/12

LOG SCALE: 1 in = 5 ft
DRILLING COMPANY: Env. Probing Inc
DRILLER: W. Atkinson

GA INSPECTOR: D.Gorman
CHECKED BY: CDH
DATE: 7/13/12



FIELD BORING LOG



Golden Associates
MANCHESTER, NEW HAMPSHIRE

M10-176

Sep 26, 2001 - 4:14pm

DEPTH HOLE <u>26</u>	JOB NO. <u>08387071</u>	PROJECT <u>IBM-KINGSTON</u>	BORING NO. <u>SAB-8B-01</u>
DEPTH SOIL DRILL	GA INSP. <u>0 PG</u>	DRILLING METHOD <u>DIRECT PUSH</u>	SHEET <u>1 OF 1</u>
DEPTH ROCK CORE	WEATHER <u>INSIDE</u>	DRILLING COMPANY <u>EPI</u>	SURFACE ELEV.
NO. DIST. SA. UD. SA	TEMP. <u>46°F</u>	DRILL RIG <u>6020 TRACK</u>	DRILLER <u>W. ATICINSO</u>
DEPTH WL.	HRS. PROD.	WT. SAMPLER HAMMER	DROP
TIME WL.	HRS. DELAYED	WT. CASING HAMMER	DROP
			DATUM
			STARTED <u>3/17/12</u>
			COMPLETED <u>3/19/12</u>

Drawing file: FieldLog.dwg

SAMPLE TYPES		ABBREVIATIONS		CONSISTENCY - BLOWS/FT.	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	NON-COHESIVE SOILS	
C.S. CHURN SAMPLE	BR. BROWN	MAC. MACROSCOPIC	SAT. SATURATED	VL. VERY LOOSE	0-4
D.O. DRIVE OPEN (SPUT SPOON)	C. COARSE	MOT. MOTTLED	SD. SAND	LS. LOOSE	4-10
D.S. DENSON SAMPLE	CA. CASING	MP. NON-PLASTIC	SI. SILT	CP. COMPACT	10-30
P.S. PITCHER SAMPLE	CL. CLAY	OG. ORANGE	ST. SILTY	DN. DENSE	30-50
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SOME	VD. VERY DENSE	>50
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE	COHESIVE SOILS	
T.O. THIN-WALLED OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL	VS. VERY SOFT	0-2
T.P. THIN-WALLED PISTON	GR. GRAVEL	R. RED	WH. WEIGHT OF HAMMER	S. SOFT	2-4
W.S. WASH SAMPLE	LTD. LAYERED	RES. RESIDUAL	Y. YELLOW	FM. FIRM	4-8
	U. LITTLE	RX. ROCK		ST. STIFF	8-30
				H. HARD	>30

ELEV. DEPTH	WELL CONSTRUCTION	PID (ppm)	SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS FOR 6" (FORCE)		
			1		5/5		0-0.75' CONCRETE & AG
			2		4 1/5		0.75-1.25' LT BROWN VF SAND, DENSE, MOIST, NO OODOR, 0.0
			3		4 1/5		1.25-4.5' BROWN F SAND, DRY, NO OODOR, 0.0
			4		4 1/5		4.5-5' DARK BROWN F-M SAND, DRY, NO OODOR, 0.0
			5		4 1/5		5-8.5' BROWN F SAND, DARK BROWN 4T 8.0 FT, MOST AT 7.5, NO OODOR, 0.0
					4 1/5		8.5-8.75' LT ORANGE-BROWN SILT, SOFT, WET, NO OODOR, 0.0
					4 1/5		8.75-10' BROWN TO DARK BROWN F SAND, WET, NO OODOR, 0.0
					4 1/5		10-15' BROWN F-M SAND, ORANGE- BROWN SILT @ 13-13.25, SOFT, WET, NO OODOR, 0.0
					4 1/5		15-18' DARK BROWN F-M SAND, WET, NO OODOR, 0.0
					4 1/5		18-19' LT BROWN SILT, LITTLE F SAND, WET, SOFT, NO OODOR, 0.0
					4 1/5		19-20' LT BROWN F SAND, SOME SILT, WET, NO OODOR, 0.0
					4 1/5		20-25' LT GREY VF SAND, SOME F SAND SILT, WET, NO OODOR, 0.0
					4 1/5		SAMPLE FOR VOL, TOC, SOD, & GR. # SILT AT 4.0-4.5, 20.0-20.5 AND 24.5-25.0. D-P FOR VOL @ 20-20.5

FIELD BORING LOG



MLA-175

MANCHESTER, NEW HAMPSHIRE

DEPTH HOLE <u>25</u>	JOB NO. <u>08387071</u>	PROJECT <u>IBM-CONSTRUCTION</u>	BORING NO. <u>CAB-33-02</u>
DEPTH SOIL DRILL	GA INSP. <u>DP4</u>	DRILLING METHOD <u>DIRECT PUSH</u>	SHEET <u>1 OF 1</u>
DEPTH ROCK CORE	WEATHER <u>1 MS/04</u>	DRILLING COMPANY <u>EPI</u>	SURFACE ELEV.
NO. DIST. SA. UD. SA.	TEMP. <u>46°F</u>	DRILL RIG <u>6670 TRACER</u>	DATUM
DEPTH WL	HRS. PROD	WT. SAMPLER HAMMER	DROP
TIME WL	HRS. DELAYED	WT. CASING HAMMER	DROP
			STARTED <u>3/19/12</u>
			COMPLETED <u>3/19/12</u>

SAMPLE TYPES		ABBREVIATIONS		CONSISTENCY - BLOWS/FT.	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	NON-COHESIVE SOILS	
C.S. CHURN SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	VS VERY LOOSE	0-1
D.O. DRIVE OPEN (SPUT SPOON)	C COARSE	MT MOTTLED	SD SAND	LS LOOSE	1-10
D.S. DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	CP COMPACT	10-30
P.S. PITCHER SAMPLE	CL CLAY	OR ORANGE	ST SILTY	DN DENSE	30-50
R.C. ROCK CORE	CLY CLAYEY	OG ORGANIC	SM SOME	VD VERY DENSE	>50
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE	COHESIVE SOILS	
T.O. THIN-WALLED OPEN	FR FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	VS VERY SOFT	0-2
T.P. THIN-WALLED PISTON	GR GRAVEL	R RED	WH WEIGHT OF HAMMER	S SOFT	2-4
W.S. WASH SAMPLE	LY LAYERED	RES RESIDUAL	Y YELLOW	FS FIRM	4-8
	LI LITTLE	RX ROCK		ST STIFF	8-30
				H HARD	>30

ELEV. DEPTH	WELL CONSTRUCTION	PID (ppm)	SAMPLES			REC. ATT.	DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6" (FORCE)			
			1			4 1/5	0-0.75' CONCRETE SLAB	
			2			4 1/5	0.75-5' BROWN F SAND, DENSE, DRY, NO O.O.R., O.O.	
			3			5 1/6	5-8' DARK BROWN F-M SAND, DRY, NO O.O.R., O.O.	
			4			5 1/5	8-8.5' DARK BROWN F SAND, MOIST, NO O.O.R., O.O.	
			5			5 1/5	8.5-10' LT BROWN AND GRAY MOTTLED F SAND, WGT AT 9, NO O.O.R., O.O.	
						5 1/5	10-15' LT BROWN F SAND, SOME SILT, WET, NO O.O.R., O.O. 2.25 FT LT BROWN SILT AT 13.5, O.O.	
						5 1/5	15-20' LT BROWN F SAND, LITTLE TO SOME SILT, WET, NO O.O.R., O.O.	
						5 1/5	20-22' LT BROWN F SAND, WET, SOME SILT, NO O.O.R., O.O.	
						5 1/5	22-25' LT GRAY SILT AND F SAND, WET, SOFT, NO O.O.R., O.O.	

FIELD BORING LOG



Golden
Associates

MIP-172

MANCHESTER, NEW HAMPSHIRE

Sep 26, 2001 - 4:14pm

DEPTH HOLE <u>25</u>	JOB NO. <u>08387071</u>	PROJECT <u>18M-KINGS TURN</u>	BORING NO. <u>SAB-SB-03</u>
DEPTH SOIL DRILL	GA INSP. <u>DPC</u>	DRILLING METHOD <u>DIR</u>	SHEET <u>1 OF 1</u>
DEPTH ROCK CORE	WEATHER <u>INSIDE</u>	DRILLING COMPANY <u>EPZ</u>	SURFACE ELEV.
NO. DIST. SA. UD. SA.	TEMP. <u>46°F</u>	DRILL RIG <u>6620 TRACK</u>	DATUM
DEPTH WL	HRS. PROD.	WT. SAMPLER HAMMER	DROP
TIME WL	HRS. DELAYED	WT. CASING HAMMER	DROP
			STARTED <u>3/19/12</u>
			COMPLETED <u>3/19/12</u>

Drawing file: FieldLog.dwg

SAMPLE TYPES	ABBREVIATIONS	CONSISTENCY - BLOWS/FT.
A.S. AUGER SAMPLE	BL BLACK	NON-COHESIVE SOILS
C.S. CHURN SAMPLE	BR BROWN	VL VERY LOOSE 0-1
D.O. DRIVE OPEN (SPIT SPOON)	MC MOTTLED	LS LOOSE 1-10
D.S. DEHSON SAMPLE	CA COARSE	CP COMPACT 10-30
P.S. PITCHER SAMPLE	CL CLAY	DN DENSE 30-50
R.C. ROCK CORE	CLY CLAYEY	VD VERY DENSE >50
S.T. SLOTTED TUBE	F FINE	COHESIVE SOILS
T.O. THIN-WALLED OPEN	FRAG FRAGMENTS	VS VERY SOFT 0-2
T.P. THIN-WALLED PISTON	GL GRAVEL	S SOFT 2-4
W.S. WASH SAMPLE	LYD LAYERED	FW FIRM 4-8
	LI LITTLE	ST STIFF 8-30
		H HARD >30

ELEV.	WELL CONSTRUCTION	PID (ppm)	SAMPLES			REC. ATT.	DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
DEPTH			NO.	TYPE	HAMMER BLOWS PER 6" (FORCE)			
			1				5 1/2	0-0.75' CONCRETE SLAB
			2				4 1/2	0.75-5' LT BROWN FINE SAND, DENSE DRY SOME SILT VF-F SAND AT 3.5-4 FT, NO OOL, 0.0
			3				3 1/2	5-8' BROWN F SAND, MOIST AT 8, NO OOL, 0.0
			4				5 1/2	8-9.5' LT BROWN SILTY VF-F SAND, WET AT 9, NO OOL, 0.0
			5				5 1/2	9.5-10' DARK BROWN F-M SAND, WET, NO OOL, 0.0
							1 1/2	10-15' BROWN F SAND, WET, NO OOL, 0.0
								15-18' LT BROWN F SAND, WET, NO OOL, 0.0
								18-18.5' ORANGE-BROWN VF SAND AND SILT, WET, NO OOL, 0.0
								18.5-20' LT GRAY SILT WITH SOME VF SAND, WET, NO OOL, 0.0
								20-22.5' GRAY VF SAND, SOME SILT, WET, NO OOL, 0.0
								22.5-23' GRAY SILTY CLAY, SOFT, LCE, LIABLE NO OOL, 0.0
								23-25' GRAY VF SAND, SOME SILT, WET, NO OOL, 0.0

APPENDIX C
SOIL AND GROUNDWATER SAMPLING INFORMATION

Table C-1: SWMU AB Groundwater Stabilization Parameters

Sample ID		SAB-TW-01-12	SAB-TW-02-22	SAB-TW-03-12	SAB-TW-04-22	SAB-TW-05-12	SAB-TW-06-21	SAB-TW-07-21
Sample Date		3/22/2012	3/22/2012	3/28/2012	3/29/2012	4/9/2012	4/9/2012	4/10/2012
Parameter	Unit of Measure							
Temperature	°C	12.58	NM	NM	13.82	NM	NM	NM
Specific Conductivity	mS/cm	0.553	NM	NM	0.467	NM	NM	NM
D.O.	mg/L	5.05	NM	NM	0.13	NM	NM	NM
ORP	mV	31.0	NM	NM	-572.5	NM	NM	NM
pH	s.u.	4.79	NM	NM	7.34	NM	NM	NM
Turbidity	NTU	12.2	NM	156.0	2000+	NM	NM	NM
DTW	feet	NM	NM	NM	NM	NM	NM	NM

Notes

Values are the final reading when stabilization had occurred.

DO - Dissolved Oxygen

ORP - Oxidation reduction potential

°C - Degrees Celsius

mS/cm - MilliSiemens per centimeter

NTU - Nephelometric Turbidity Units

mg/l - Milligrams per liter

S.U. - Standard Units

NM - Not Measured

GOLDER ASSOCIATES SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	IBM - Kingston	Project Number:	08387071
Sample ID:	SAB-TW-01-12	Sample Source:	GW
Golder Personnel Present:			

Purge Date:	3/24/12	Time (24 hr):	1325/215	Elapsed Hrs/Mins.:	1/07
Purging Device:	C	Dedicated?:	Y		
Casing Vol (Gal.):	0.1	Tubing Vol. (L)	0.17 x 0.25	Vol Purged (L)	10.7
Material:					

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Sampling Date:	3/24/12	Time (24 hr):	1325	Matrix:	Aq
Sampling Device:	C	Dedicated?:	Y	Filtered?:	N
Material:	Poly / Silicone			Sample Type:	GRAB

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Analytical Parameters:

Reference Point:		Land Elevation (ft):	NA	
Ref. Elevation (ft):	NA	Historical Well Depth (ft):	NA	Common casing vol. factors 1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96 0.25 = .003, 0.5 = 0.01, 1.0 = 0.041 Casing Vol. = 0.163 * r ²
Depth to Water (ft):	9.5	Sounded Well Depth (ft):	NA	
Screen Interval:	10-12	Stickup (ft):	NA	
Pump Intake:	NA	Well Diameter (in):	1	
GW Elevation (ft):	NA	Tubing Diameter (in)	0.17 x 0.25	

Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)	12.58	pH	(S.U.)	4.79
Spec Cond	(mS/cm)	0.553	ORP	(mV)	+31.0
Dissolved Oxygen	(mg/L)	5.05	Turbidity	(NTU)	12.2
Flow Rate	(mL/min)	160	Drawdown	(Ft)	N/A
Other:			Other:		

When applicable, field stabilization data are recorded on the back of this form

Weather:	Sunny 70s
Sample Description:	cloudy, no odor
Sampler Signature:	[Signature]
Date:	3/22/12

Sample ID:	SAB-TW-01-12
Initial DTW (ft):	9.5

[illegible]

* (+/- 10% or 1.00 whichever is greater)

Sampler Signature:

Date:

GOLDER ASSOCIATES SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	IBM - Kingston	Project Number:	08387071
Sample ID:	SAB-TW-02-22	Sample Source:	GW
Golder Personnel Present:			

PURGING INFORMATION (IF APPLICABLE)			
Purge Date:	3/22/12	Time (24 hr):	1507
Purging Device:	C	Dedicated?:	Y
Casing Vol (Gal.):	N/A	Tubing Vol. (L)	N/A
Material:		Vol Purged (L)	NA

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

SAMPLE COLLECTION INFORMATION			
Sampling Date:	3/22/12	Time (24 hr):	1507
Sampling Device:	C	Dedicated?:	Y
Material:	Poly / Silicone	Matrix:	Aq
		Filtered?:	N
		Sample Type:	GRAB

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Analytical Parameters:

WELL INFORMATION (IF APPLICABLE)			
Reference Point:		Land Elevation (ft):	NA
Ref. Elevation (ft):	NA	Historical Well Depth (ft):	NA
Depth to Water (ft):	10	Sounded Well Depth (ft):	NA
Screen Interval:	20-22	Stickup (ft):	NA
Pump Intake:	NA	Well Diameter (in):	1
GW Elevation (ft):		Tubing Diameter (in)	

Common casing vol. factors
1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96
0.25 = .003, 0.5 = 0.01, 1.0 = 0.041
Casing Vol. = 0.163 * r²

FINAL FIELD MEASUREMENTS PLEASE CHECK UNITS VS. METER!!!					
Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)	/	pH	(S.U.)	/
Spec Cond	(mS/cm)		ORP	(mV)	
Dissolved Oxygen	(mg/L)		Turbidity	(NTU)	
Flow Rate	(mL/min)		Drawdown	(Ft)	
ther:			Other:		

When applicable, field stabilization data are recorded on the back of this form

Weather: Sunny 70s	
Sample Description: Sample not collected, tubing clogged too sitty and turbid, stabilization parameters not collected.	
Collector Signature: [Signature]	
Date: 3/22/12	

Sample ID:	SAB-TW-02-22
Initial DTW (ft):	10
Final DTW (ft):	

Final DTW(ft):

[illegible]

* (+/- 10% or 1.00 whichever is greater)

Date:

GOLDER ASSOCIATES SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	13M Kingston		Project Number:	08387071
Sample ID:	SAB-TN-03-12		Sample Source:	GW
Golder Personnel Present:			J. Lyons	

PURGING INFORMATION (IF APPLICABLE)				
Purge Date:	3/29/12	Time (24 hr):	0858	Elapsed Hrs/Mins.: 0/30
Purging Device:	C	Dedicated?:	Y	
Casing Vol (Gal.):	0.08	Tubing Vol. (L)		Vol Purged (L) 6.0
Material:	Perry Pump			

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

SAMPLE COLLECTION INFORMATION				
Sampling Date:	3/29/12	Time (24 hr):	0928	Matrix: Aq
Sampling Device:	C	Dedicated?:	Y	Filtered?: N
Material:	Poly / Silicone			Sample Type: GRAB

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Analytical Parameters:	VOCs
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WELL INFORMATION (IF APPLICABLE)				
Reference Point:	NA	Land Elevation (ft):	NA	Common casing vol. factors 1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96 0.25 = .003, 0.5 = 0.01, 1.0 = 0.041 Casing Vol. = 0.163 * r ²
Ref. Elevation (ft):	NA	Historical Well Depth (ft):	NA	
Depth to Water (ft):	9.50	Sounded Well Depth (ft):	NA	
Screen Interval:	10-12	Stickup (ft):	NA	
Pump Intake:	NA	Well Diameter (in):	1	
GW Elevation (ft):	NA	Tubing Diameter (in):	0.17	

FINAL FIELD MEASUREMENTS PLEASE CHECK UNITS VS. METER!!!					
Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)		pH	(S.U.)	
Spec Cond	(mS/cm)		ORP	(mV)	
Dissolved Oxygen	(mg/L)		Turbidity	(NTU)	156.0
Flow Rate	(mL/min)	200	Drawdown	(Ft)	
ther:			Other:		

When applicable, field stabilization data are recorded on the back of this form

COMMENTS / CALCULATIONS	
Weather:	Cloudy, 60-90s
Sample Description:	cloudy, no odor
Sampler Signature:	J. Lyons
Date:	3/29/12

GOLDER ASSOCIATES
PURGING AND STABILIZATION INFORMATION

Sample ID:	SAB-TW-03-12
Initial DTW (ft):	9.50

Final DTW(ft):

FIELD MEASUREMENTS

[illegible]

Comments: Unable to take stabilization parameters due to damaged V51 probe. Purge for 0.5 hrs then sampled. Final turbidity reading before sampled is 156.0 NTU

* (+/- 10% or 1.00 whichever is greater)

Sampler Signature:

Date: _____

3/29/12

GOLDER ASSOCIATES SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	IBM Kingston	Project Number:	08387071
Sample ID:	SAB-TW-04-22	Sample Source:	GW
Golder Personnel Present:		J. Loms	

PURGING INFORMATION (IF APPLICABLE)			
Purge Date:	3/29/12	Time (24 hr):	1115
Purging Device:	C	Dedicated?:	Y
Casing Vol (Gal.):	10.48	Tubing Vol. (L)	
Material:	Perry Pump	Vol Purged (L)	8.0

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

SAMPLE COLLECTION INFORMATION			
Sampling Date:	3/29/12	Time (24 hr):	1203
Sampling Device:	C	Dedicated?:	Y
Material:	Poly / Silicone	Matrix:	Aq
		Filtered?:	N
		Sample Type:	GRAB

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Analytical Parameters: VOCs, NAPs

WELL INFORMATION (IF APPLICABLE)			
Reference Point:	NA	Land Elevation (ft):	NA
Ref. Elevation (ft):	NA	Historical Well Depth (ft):	NA
Depth to Water (ft):	10.00	Sounded Well Depth (ft):	NA
Screen Interval:	20-22	Stickup (ft):	NA
Pump Intake:	NA	Well Diameter (in):	1
GW Elevation (ft):	NA	Tubing Diameter (in):	2.17

Common casing vol. factors
1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96
0.25 = .003, 0.5 = 0.01, 1.0 = 0.041
Casing Vol. = 0.163 * r²

FINAL FIELD MEASUREMENTS PLEASE CHECK UNITS VS. METER!!!					
Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)	13.82	pH	(S.U.)	7.34
Spec Cond	(mS/cm)	0.467	ORP	(mV)	-572.5
Dissolved Oxygen	(mg/L)	0.13	Turbidity	(NTU)	7.2060
Flow Rate	(mL/min)	200	Drawdown	(Ft)	NA
ther:			Other:		

When applicable, field stabilization data are recorded on the back of this form

COMMENTS / CALCULATIONS	
Weather:	Cloudy, 90s
Sample Description:	brown, no odor, super silty
Collector Signature:	Jill Loms
Date:	3/29/12

**GOLDER ASSOCIATES
PURGING AND STABILIZATION INFORMATION**

Sample ID:	SSAB-TN-04-22
Initial DTW (ft):	10.00
Final DTW (ft):	

FIELD MEASUREMENTS

[illegible]

Comments: Purged for 30 min water too silty for YSI. Started parameter readings at 1138; ~ 4.0L purged
unable to take turbidity reading water too silty

* (+/- 10% or 1.00 whichever is greater)

Sampler Signature:

Date: _____

3/29/12

GOLDER ASSOCIATES SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	IBM Kingston	Project Number:	08387071
Sample ID:	SAB-TW-05-12	Sample Source:	GW
Golder Personnel Present:		J. Lous	

PURGING INFORMATION (IF APPLICABLE)			
Purge Date:	03/30/12	Time (24 hr):	0802
Purging Device:	C	Dedicated?:	Y
Casing Vol (Gal.):	0.08	Tubing Vol. (L)	
Material:	Perry Pump	Vol Purged (L)	3.5

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

SAMPLE COLLECTION INFORMATION			
Sampling Date:	03/30/12	Time (24 hr):	0828
Sampling Device:	C	Dedicated?:	Y
Material:	Poly / Silicone	Matrix:	Aq
		Filtered?:	N
		Sample Type:	GRAB

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Analytical Parameters: VOCs

WELL INFORMATION (IF APPLICABLE)			
Reference Point:	NA	Land Elevation (ft):	NA
Ref. Elevation (ft):	NA	Historical Well Depth (ft):	NA
Depth to Water (ft):	9.50	Sounded Well Depth (ft):	NA
Screen Interval:	10'-12'	Stickup (ft):	NA
Pump Intake:	NA	Well Diameter (in):	1
GW Elevation (ft):	NA	Tubing Diameter (in):	0.17

Common casing vol. factors
1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96
0.25 = .003, 0.5 = 0.01, 1.0 = 0.041
Casing Vol. = 0.163 * r²

FINAL FIELD MEASUREMENTS PLEASE CHECK UNITS VS. METER!!!					
Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)	11.69	pH	(S.U.)	9.51
Spec Cond	(mS/cm)	0.523	ORP	(mV)	+276.9
Dissolved Oxygen	(mg/L)	7.97	Turbidity	(NTU)	0.76
Flow Rate	(mL/min)	25.51 200	Drawdown	(Ft)	NA

When applicable, field stabilization data are recorded on the back of this form

Weather: Sunny 40s

Sample Description: clear, no odor

Sampler Signature: [Signature] Date: 7/20/12

COMMENTS / CALCULATIONS

Sample ID:	SAB-TW-05-12
Initial DTW (ft):	7.50

Final DTW(ft):

[illegible]

0828 sampled

Sampler Signature:

3/30/12

GOLDER ASSOCIATES SAMPLE COLLECTION INFORMATION FORM

RE-SAMPLE

GAI Project Name:	IBM-KINGSTON	Project Number:	083-87071
Sample ID:	SAB-TW-05-12	Sample Source:	GW
Golder Personnel Present:	D. GORMAN		

Purge Date:	07/09/12	Time (24 hr):	1215	Elapsed Hrs/Mins.:	
Purging Device:	C	Dedicated?:	Y		
Casing Vol (Gal.):		Tubing Vol. (L)			
Material:				Vol Purged (L)	

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Sampling Date:	07/09/12	Time (24 hr):	1330	Matrix:	Aq
Sampling Device:	C	Dedicated?:	Y	Filtered?:	N
Material:	Poly / Silicone			Sample Type:	GRAB

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Analytical Parameters:

Reference Point:		Land Elevation (ft):	NA	Common casing vol. factors 1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96 0.25 = .003, 0.5 = 0.01, 1.0 = 0.041 Casing Vol. = $0.163 \times r^2$
Ref. Elevation (ft):	NA	Historical Well Depth (ft):		
Depth to Water (ft):		Sounded Well Depth (ft):		
Screen Interval:		Stickup (ft):	NA	
Pump Intake:	NA	Well Diameter (in):		
GW Elevation (ft):		Tubing Diameter (in)		

Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)		pH	(S.U.)	
Spec Cond	(mS/cm)		ORP	(mV)	
Dissolved Oxygen	(mg/L)		Turbidity	(NTU)	
Flow Rate	(mL/min)		Drawdown	(Ft)	
Other:			Other:		

When applicable, field stabilization data are recorded on the back of this form

Weather: 50°F overcast

Sample Description: CLEAR, NO ODOR

SPUB RE-SAMPLE DUE TO OUT-OF-METHOD TEMP ON ORIGINAL
COLLECT MS/MSD VOLUME

Golder Signature: [Signature]

Date: 07/09/2012

Sample ID:	
Initial DTW (ft):	
Final DTW (ft):	

Final DTW (h):

[illegible]

* (+/- 10% or 1.00 whichever is greater)

Sampler Signature: _____ Date: _____

Date: _____

GOLDER ASSOCIATES SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	IBM Kingston	Project Number:	08387071
Sample ID:	SAB-TW-046-21	Sample Source:	GW
Golder Personnel Present:	J. Loans		

PURGING INFORMATION (IF APPLICABLE)			
Purge Date:	3/30/12	Time (24 hr):	
Purging Device:	C	Dedicated?:	Y
Casing Vol (Gal.):		Tubing Vol. (L)	
Material:		Vol Purged (L)	

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

SAMPLE COLLECTION INFORMATION			
Sampling Date:	3/30/12	Time (24 hr):	1015
Sampling Device:	C	Dedicated?:	Y
Material:	Poly / Silicone	Matrix:	Aq
		Filtered?:	N
		Sample Type:	GRAB

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Analytical Parameters:

WELL INFORMATION (IF APPLICABLE)			
Reference Point:		Land Elevation (ft):	NA
Ref. Elevation (ft):	NA	Historical Well Depth (ft):	
Depth to Water (ft):		Sounded Well Depth (ft):	
Screen Interval:		Stickup (ft):	NA
Pump Intake:	NA	Well Diameter (in):	
GW Elevation (ft):		Tubing Diameter (in)	

Common casing vol. factors
1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96
0.25 = .003, 0.5 = 0.01, 1.0 = 0.041
Casing Vol. = 0.163 * r²

FINAL FIELD MEASUREMENTS PLEASE CHECK UNITS VS. METER!!!					
Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)		pH	(S.U.)	
Spec Cond	(mS/cm)		ORP	(mV)	
Dissolved Oxygen	(mg/L)		Turbidity	(NTU)	
Flow Rate	(mL/min)		Drawdown	(Ft)	
ther:			Other:		

When applicable, field stabilization data are recorded on the back of this form

Weather: sunny 40s

Sample Description: Grab sample collected

Collector Signature: [Signature]

Date: 3/30/12

**GOLDER ASSOCIATES
PURGING AND STABILIZATION INFORMATION**

Sample ID:	SAB-TW-04-21
Initial DTW (ft):	SAB-TW-04-21 10.0
Final DTW (ft):	

[illegible]

Comments: unable to collect parameters water too silty

^a (+/- 10% or 1.00 whichever is greater)

Sampler Signature: *[Signature]*

Date: 3/30/12

GOLDER ASSOCIATES SAMPLE COLLECTION INFORMATION FORM

Handwritten note: 2nd sample

GAI Project Name:	IBM-KINGSTON	Project Number:	003-87071
Sample ID:	SAB-TW-06-21	Sample Source:	GW
Golder Personnel Present:		D. GORMAN	

Purge Date:	04/09/12	Time (24 hr):	1250	Elapsed Hrs/Mins.:	
Purging Device:	C	Dedicated?:	Y		
Casing Vol (Gal.):		Tubing Vol. (L)			
Material:				Vol Purged (L)	

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Sampling Date:	04/09/12	Time (24 hr):	1310	Matrix:	Aq
Sampling Device:	C	Dedicated?:	Y	Filtered?:	N
Material:	Poly / Silicone			Sample Type:	GRAB

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Analytical Parameters:

Reference Point:		Land Elevation (ft):	NA	Common casing vol. factors 1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96 0.25 = .003, 0.5 = 0.01, 1.0 = 0.041 Casing Vol. = 0.163 * r ²
Ref. Elevation (ft):	NA	Historical Well Depth (ft):		
Depth to Water (ft):		Sounded Well Depth (ft):		
Screen Interval:		Stickup (ft):	NA	
Pump Intake:	NA	Well Diameter (in):		
GW Elevation (ft):		Tubing Diameter (in)		

Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)		pH	(S.U.)	
Spec Cond	(mS/cm)		ORP	(mV)	
Dissolved Oxygen	(mg/L)		Turbidity	(NTU)	
Flow Rate	(mL/min)		Drawdown	(Ft)	
Other:			Other:		

When applicable, field stabilization data are recorded on the back of this form

Weather: 50°F, overcast

Sample Description: LIGHT GRAY, TURBID, NO ODOR
SP-16 RE-SAMPLES DUE TO OUT-OF-TEMP ON ORIGINAL

Golder Signature: *[Signature]* Date: 04/09/2012

**GOLDER ASSOCIATES
PURGING AND STABILIZATION INFORMATION**

Sample ID:	
Initial DTW (ft):	
Final DTW (ft):	

FIELD MEASUREMENTS

[illegible]

Comments:

^a (+/- 10% or 1.00 whichever is greater)

Sampler Signature:

Date: _____

GOLDER ASSOCIATES SAMPLE COLLECTION INFORMATION FORM

GAI Project Name:	IBM-KINGSTON	Project Number:	083-87071
Sample ID:	SAB-TW-07-21	Sample Source:	GW
Golder Personnel Present:		D. GORMAN	

PURGING INFORMATION (IF APPLICABLE)			
Purge Date:	04/09/12	Time (24 hr):	1330
Purging Device:	C	Dedicated?:	Y
Casing Vol (Gal.):		Tubing Vol. (L)	
Material:		Vol Purged (L)	

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

SAMPLE COLLECTION INFORMATION			
Sampling Date:	04/09/12	Time (24 hr):	1345
Sampling Device:	C	Dedicated?:	Y
Material:	Poly / Silicone	Matrix:	Aq
		Filtered?:	N
		Sample Type:	GRAB

(A) Air-Lift Pump; (B) Bladder Pump; (C) Peristaltic Pump; (D) Scoop / Shovel; (E) Bailor; (F) Foot Valve; (G) Other.

Analytical Parameters:

WELL INFORMATION (IF APPLICABLE)			
Reference Point:		Land Elevation (ft):	NA
Ref. Elevation (ft):	NA	Historical Well Depth (ft):	
Depth to Water (ft):		Sounded Well Depth (ft):	
Screen Interval:		Stickup (ft):	NA
Pump Intake:	NA	Well Diameter (in):	
GW Elevation (ft):		Tubing Diameter (in):	

Common casing vol. factors
1.5 = 0.09, 2.0 = 0.163, 4.0 = 1.96
0.25 = .003, 0.5 = 0.01, 1.0 = 0.041
Casing Vol. = 0.163 * r²

FINAL FIELD MEASUREMENTS PLEASE CHECK UNITS VS. METER!!!					
Parameter	Units (proposed) actual	Result	Parameter	Units (proposed) actual	Result
Temperature	(°C)		pH	(S.U.)	
Spec Cond	(mS/cm)		ORP	(mV)	
Dissolved Oxygen	(mg/L)		Turbidity	(NTU)	
Flow Rate	(mL/min)		Drawdown	(Ft)	
Other:			Other:		

When applicable, field stabilization data are recorded on the back of this form

Weather: 50°F, OVERCAST

Sample Description: LIGHT GRAY, NO CO₂

Golder Signature: 

Date: 04/09/2012

**GOLDER ASSOCIATES
PURGING AND STABILIZATION INFORMATION**

Sample ID:	
Initial DTW (ft):	
Final DTW(ft):	

FIELD MEASUREMENTS

[illegible]

Comments:

^a (+/- 10% or 1.00 whichever is greater)

Sampler Signature:

Date:

COC # 016010

Client Information						Analyses Requested							
Client IBM		Acc#		Project Name/# KIN GStON		Matrix		Preservation Code					
IBM PM M.KOLINEK				State New York		Ground Surface		SCRF#					
P.O.#		Sampler D.BORRMAN				Air		Preservation Codes H = HC N = HNO ₃ S = H ₂ SO ₄ T = Thiosulfate B = NaOH O = Other					
Check One:		☐ Routine Lab GW		☐ Routine GTF O&M		Potable NPDES		Remarks					
☐ Non-Routine Investigation		☐ Non-Routine Upgrades/Installs		(Endicott Non-Routine only)		Oil							
OU:						Total # of Containers							
Sample Identification		Collected		Grab Composite		Soil Water Oil							
		Date	Time										
SAB-SB-01-4.0-4.5		03/19/12	1115	X		X		7	X	X	X		
SAB-SB-01-20.0-20.5			1135	X		X		7	X	X	X		
SAB-SB-01-24.0-24.5			1135	X		X		4	X				
SAB-SB-02-4.0-4.5			1150	X		Y		7	X	X	Y		
SAB-SB-02-4.0-4.5 MS			1230	X		X		4	X				
SAB-SB-02-4.0-4.5 MS			1235	X		X		4	X				
SAB-SB-02-4.0-4.5 MS			1240	X		V		4	X				
SAB-SB-02-24.0-24.5			1245	X		X		4	X				
SAB-SB-03-4.0-4.5		03/19/12	1355	X		X		4	X				
Turnaround Time Requested (TAT) (please circle)		Standard Rush		Relinquished by		Date	Time	Received by		Date	Time		
Date results are needed:				Relinquished by		03/19/12	1600	Received by					
Rush results requested by (please circle) E-mail Phone				Relinquished by				Received by					
E-mail: CHEMINGWAY@6060606060.com Phone: 973.646.1922				Relinquished by				Received by					
Data Package Options (please circle if required)		Type I (Validation/NJ Reg)		TX TRRP-13		NY ASP A		Site-specific QC (MS/MSD/Dup)?		Yes No		Temperature upon receipt °C	
Type III (Reduced NJ)		MA MCP		NY ASP B									
Type VI (Raw Data Only)		CT RCP											
SDG Complete?		Yes No											

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # _____ Group # _____ Sample # _____

Please print. Instructions on reverse side correspond with circled numbers.

COC # 302122

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO₃ B=NaOH
S=H₂SO₄ O=Other

1 Client: IRM Acct. #: _____

Project Name: KINGSTON PWSID #: _____

Project Manager: M. KORNICK P.O. #: _____

Sampler: ST. JOSEPH/DOCKMAN Quote #: _____

Name of state where samples were collected: New York

2 Sample Identification

SAB-TW-01-12 03/22/12 1325

SAB-TW-01-12MS 03/22/12 1325

SAB-TW-01-12MSO 03/22/12 1325

SAB-TW-02 03/22/12 1507

SAB-TW-02 03/22/12 1507

TB12044-032212 03/22/12

RINSAITE-032212 03/22/12

3 Grab Composite

Soil ☐ Sediment ☐

Water ☐ Potable ☐ Ground-Surface ☒ NPDES ☐

Other: LAB DE

Total # of Containers

1005

Remarks

Temperature of samples upon receipt (if requested)

5 Analyses Requested

Preservation Codes

7 Turnaround Time Requested (TAT) (please circle): Standard Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: _____

Rush results requested by (please circle): Phone E-mail

Phone #: 936451922

E-mail address: CHEMUN@GMAIL.COM

8 Data Package Options (please circle if required)

Type I (Validation/non-CLP) MA MCP CT RCP Yes No

Type III (Reduced non-CLP) Yes No

Type IV (CLP SOW) Yes No

Type VI (Raw Data Only) Yes No

TX TRRP-13

Relinquished by: [Signature] Date 4/2/11 Time 1145 Received by: _____ Date _____ Time _____

Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____

Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____

Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____

Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____



COC # 016005

005

Client Information						Matrix		Analyses Requested							
1 Client		Acc#						5 Preservation Code							
Project Name/#		Project State		IBM PM		Sediment		H N S H							
KINGSTON		NEW YORK		M. KOMINEK		Ground		015							
P.O. #		Sampler		J. LOCUS/D. GORMAN		Surface		015							
Check One:		Routine Lab GW		Routine GTF O&M		Air		Preservation Codes							
☐ Non-Routine Investigation		☐ Non-Routine Upgrades/Installs		(Endicott Non-Routine only)		Potable NPDES		H = HC N = HNO ₃ S = H ₂ SO ₄							
OU: _____		Collected		Grab		Composite		T = Thiosulfate B = NaOH O = Other							
Sample Identification		Date		Time		Soil		Water		Oil		Total # of Containers		Remarks	
SS-TW-27-15		3/29/12		0826		X		X		X		VOLs		0 = H ₂ PO ₄	
SAB-TW-03-12**		0918		X		X		X		X		BOD/TOS/TSS/FLOURIDE			
SAB-TW-04-22		1203		X		X		X		X		NTAS/BAR/CADICAL/CHR/COP/IRON/ LEAD/MAG/MAN/POT/SER/SOD			
TWB1-TW-10-12		1430		X		X		X		X		CHLORIDE/SULFATE			
TWB1-TW-10-12D		1430		X		X		X		X		NITRATE NITROGEN			
TWB1-TW-11-18		1530		X		X		X		X		METHANE			
TWB1-TW-11-18MS		1530		X		X		X		X		ALKALINITY			
TWB1-TW-11-18MSD		1530		X		X		X		X		NITRITE NITROGEN			
TAB12075-1032912		---		---		---		---		---		TOC/PHOS			
KMSA76-0322912		3/29/12		1030		---		---		---		COD/TOTAL PARS P			
Turnaround Time Requested (TAT) (please circle)		Standard		Rush		49801		2		X		AMMONIA NITROGEN			
Date results are needed: _____		Reinquired by		Date		Time		Received by		Date		Time			
(Rush TAT is subject to Lancaster Laboratories approval and surcharges.)		Reinquired by		3/1/12		1230		Received by		2/3/2012		1030			
Rush results requested by (please circle) E-mail Phone		Reinquired by		2/29/12		1600		Received by							
E-mail? HELEN.KAWA@LANCASTERLABS.COM Phone: 932.645.1472		Reinquired by		Date		Time		Received by		Date		Time			
Data Package Options (please circle if required)		Type I (Validation/NJ Reg)		TX TRRP-13		NY ASP A		Site-specific QC (MS/MSD/Dup)?		Yes		No		Temperature upon receipt _____ °C	
Type III (Reduced NJ)		MA MCP		NY ASP B											
Type VI (Raw Data Only)		CT RCP													
SDG Complete?		Yes		No											

The white copy should accompany samples to Lancaster Laboratories. The yellow copy should be retained by the client.

Issued by Dept. 40 Management
7052.01



Lancaster Laboratories

Acct. # _____ Group # _____
Sample # _____
Instructions on reverse side correspond with circled numbers.

COC # 016042

IBM Chain of Custody

1 Client Information			4 Matrix			5 Analyses Requested			6 For Lab Use Only		
Client	Acc#		Soil	Sediment	Water	Oil	Total # of Containers	Preservation Code	SCR#	Preservation Codes	Remarks
Project Name#			☐	☒ Ground	☐ Potable	☐ Air				H = HC	
IBM PM		Project State	☐	☐ Surface	☐ NPDES					N = HNO ₃	T = Thiosulfate
KIN6STON		NEW YORK	☐							S = H ₂ SO ₄	B = NaOH
M. KAMINEK		SAMPLER								O = Other	
P.O. #		51LOCUS									
Check One: ☐ Routine Lab GW ☐ Routine GTF O&M											
☐ Non-Routine Investigation ☐ Non-Routine Upgrades/Installs											
OU: _____ (Endicott Non-Routine only)											
2 Sample Identification			3 Grab			4 Composite			5		
	Collected	Grab									
	Date	Time									
T012072-033012	3/29/12	0835	4801			2			VOCs		
RIN5A7E-033012	0828	X	4801			3					
SAB-TW-05-12	1015	Y	X			3					
SAR-741-06-21	1045	X	X			3					
TW01-TW-12-25											
7 Turnaround Time Requested (TAT) (please circle)			8			9			10		
Standard	Rush		Relinquished by			Date			Time		
Date results are needed: _____			Relinquished by			Date			Time		
Rush results requested by (please circle) E-mail Phone			Relinquished by			Date			Time		
E-mail: CHEMINGS VAI @ ColocoR.com Phone: 9736451922			Relinquished by			Date			Time		
8 Data Package Options (please circle if required)			9			10			11		
Type I (Validation/NJ Reg)	TX TRRP-13	NY ASP A	Site-specific QC (MS/MSD/Dup)?			Yes			No		
Type III (Reduced NJ)	MA MCP	NY ASP B									
Type VI (Raw Data Only)	CT RCP										
SDG Complete?	Yes	No									



Lancaster Laboratories

Acct. # _____ Group # _____
Sample # _____
Instructions on reverse side correspond with circled numbers.

COC # 016048

IBM Chain of Custody

1 Client Information			4 Matrix			5 Analyses Requested			
Client	Acc#					Preservation Code			
Project Name/#									
IBM PM									
M. Kominek									
P.O. #									
Check One:	☐ Routine Lab GW	☐ Routine GTF O&M							
☐ Non-Routine Investigation	☐ Non-Routine Upgrades/Installs								
OU: _____	(Endicott Non-Routine only)								
2 Sample Identification		3 Collected		Grab		Composite			
	Date	Time							
LAUSA7E-040912	04/09/12	1010							
TD 12075-040912									
CS-TW-28-28	04/09/12	1047							
IMRI-TW-12-25									
SAB-TW-05-12									
SAB-TW-05-12MS									
SAB-TW-05-12MSD									
SAB-TW-06-21									
SAB-TW-107-21									
SAB-TW-29-27									
	04/09/12	1445							
7 Turnaround Time Requested (TAT) (please circle)		Relinquished by		Date	Time	Received by		Date	Time
Standard		Rush							
(Rush TAT is subject to Lancaster Laboratories approval and surcharges.)									
Date results are needed: _____		Relinquished by		Date	Time	Received by		Date	Time
Rush results requested by (please circle) E-mail Phone									
E-mail: HEH11NGW/AN/250-05R (607) Phone: 938451922									
8 Data Package Options (please circle if required)		Relinquished by		Date	Time	Received by		Date	Time
Type I (Validation/NU Reg)									
Type III (Reduced NU)									
Type VI (Raw Data Only)									
SDG Complete?									
Yes		No							
(If yes, indicate QC sample and submit triplicate volume.)									
Site-specific QC (MS/MSD/Dup)?									
Yes		No							
Temperature upon receipt _____ °C									
6 Preservation Codes		Remarks							
H = HC									
N = HNO ₃									
S = H ₂ SO ₄									
T = Thiourea									
B = NaOH									
O = Other									
SCR# 120207									
For Lab Use Only									

[illegible]



Lancaster Laboratories

For Lancaster Laboratories use only
Acct # _____ Group # _____
Sample # _____
Instructions on reverse side correspond with circled numbers.

COC # 016053

IBM Chain of Custody

Client Information

Matrix

Analyses Requested

For Lab Use Only 2 of 2

Client

Acc#

Project Name/#

IBM PM

P.O. #

Sampler

Project State

IBM PM

Project State

Sampler

Project State

Sampler

Project State

Sampler

Project State

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Sampler

Project State

Sampler

Project State

Sampler

Project State

Sampler

Project State

Sampler

Project State

Sampler

Project State

Sampler

Project State

Sampler

Check One: ☐ Routine Lab GW ☐ Routine GTF O&M

☐ Non-Routine Investigation ☐ Non-Routine Upgrades/Installs

OU: _____ (Endicott Non-Routine only)

2

Sample Identification

SAB/JS/JWB1-WC-Soil-H1

04/12/12 0835

X

X

4

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

3

Grab

Composite

Soil

Water

Oil

Sediment

Ground

Surface

Potable

NPDES

Air

Water

Oil

Sediment

Ground

Surface

Potable

NPDES

Air

Water

Oil

Sediment

Water

Oil

Sediment

Ground

Surface

Potable

NPDES

Air

Water

Oil

Sediment

Ground

Surface

Potable

NPDES

Air

Water

Oil

Sediment

Ground

Surface

Potable

NPDES

Air

Water

Oil

Sediment

Ground

Surface

Potable

NPDES

Air

Water

Oil

Sediment

Ground

Surface

Potable

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APPENDIX D
DATA USABILITY SUMMARY REPORT

Data Usability Summary Report (DUSR)
SWMU AB Area
Former IBM Kingston Facility
Kingston, New York

This report presents the findings of the data quality assessment performed on the analyses of environmental samples collected between March 19, 2012 and April 12, 2012 at the Former IBM Kingston Facility, located at 300 Enterprise Drive, in Kingston, New York (Site). The chemical data were reviewed to verify:

- Data package completeness following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Category B deliverables;
- Sample holding time and method compliance; and,
- Quality control (QC) parameters, which could affect the use of the data for decision making purposes, are within required specifications.

Nine (9) grab soil samples, two (2) composite soil samples, seven (7) grab water samples, and one (1) composite water sample, were collected from the Site. Additionally, two (2) field duplicates, six (6) trip blanks, three (3) matrix spike/matrix spike duplicates (MS/MSD), and six (6) rinsate blanks were collected for quality control (QC) purposes. Lancaster Laboratories of Lancaster, PA analyzed the samples utilizing one or more of the following method guidelines:

- Volatile Organic Compounds (VOCs) by USEPA SW-846¹ Method 8260B Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 2, December 1996;
- Methane by USEPA SW-846 Method 8015B Total Petroleum Hydrocarbons (TPH) as Gasoline and Diesel, Revision 2, December 1996;
- Select metals by USEPA SW-846 Method 6010B Inductively Coupled Plasma-Atomic Emission Spectrometry, Revision 2, December 1996;
- Nitrate / nitrite by USEPA MCAWW² Method 353.2 Determination of Nitrate-Nitrite by Automated Colorimetry, Revision 2, August 1993;
- Chemical oxygen demand by USEPA MCAWW Method 410.4 The Determination of Chemical Oxygen Demand by Semi-Automated Colorimetry, Revision 2, August 1993;

¹ USEPA, 1996, Test methods for evaluating solid waste, physical/chemical methods (SW-846): 3rd edition, Environmental Protection Agency, National Center for Environmental Publications, Cincinnati, Ohio, accessed at URL <http://www.epa.gov/epaoswer/hazwaste/test/sw846.htm>

² USEPA, Methods for Chemical Analysis of Water and Wastes (MCAWW), Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Cincinnati, Ohio, accessed at URL <http://www.epa.gov/waterscience/methods/method/organics/>

- Total phosphorous by USEPA MCAWW Method 365.1 Determination of Phosphorus by Semi-Automated Colorimetry, Revision 2, August 1993;
- Sulfate, chloride, and fluoride by USEPA MCAWW Method 300.0 Determination of Inorganic Ions by Ion Chromatography, Revision 2.1, August 1993;
- Total organic carbon by SM 5310B Total Organic Carbon (TOC) / High-Temperature Combustion Method, Standard Methods 20th Edition³ (1998);
- Biological oxygen demand by SM 5210B Biological Oxygen Demand / 5-Day BOD Test, Standard Methods 20th Edition (1998);
- Total dissolved solids by SM 2540C Solids / Total Dissolved Solids Dried at 180 °C, Standard Methods 20th Edition (1998);
- Total suspended solids by SM 2540D Solids / Total Suspended Solids Dried at 103-105 °C, Standard Methods 20th Edition (1998);
- Alkalinity by SM 2320B Alkalinity / Titration Method, Standard Methods 20th Edition (1998);
- Ammonia by SM 4500-NH3 Nitrogen (Ammonia) / Titrimetric Method, Standard Methods 20th Edition (1998);
- Sulfide by SM 4500 S2 F Sulfide / Iodimetric Method, Standard Methods 20th Edition (1998); and,
- Grain size by ASTM Standard D422 Standard Test Method for Particle-Size Analysis of Soils, 63(2007), ASTM International⁴.

Information regarding the sample point identifications, analytical parameters, QC samples, sampling dates and contract laboratory sample delivery group (SDG) designations are summarized in Table 1.

The samples and associated QC data were evaluated following guidelines provided by the NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, May 2010 and utilizing the guidance provided by USEPA Region II Standard Operating Procedures (SOPs) HW-24, Revision 2 (Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW846 8260B) and HW-2, Revision 13 (Evaluation of Metals Data for the Contract Laboratory Program (CLP) based on SOW – ILM05.3), where applicable to the analytical methodologies previously noted. Where there was a conflict between the NYSDEC guidelines or USEPA Region II guidelines, method-specific criteria or professional judgment was used.

³ Standard Methods for the Examination of Water and Waste Water, accessed at URL <http://standardmethods.org>

⁴ American Society of Testing and Materials, ASTM International, West Conshohocken, PA, accessed at URL <http://www.astm.org>

The data were evaluated for sample preservation and holding times, method and field blanks, surrogate spikes (volatile organics only), MS/MSDs, post-digestion spikes (metals analysis only), laboratory control samples (LCS), serial dilutions (metals analysis only) and field duplicate precision.

Grain size data provided following ASTM Standard D422 were not evaluated as part of this data usability summary as no QC parameters were analyzed.

Analytical results for the samples collected at the Site were qualified on the basis of outlying precision and accuracy parameters, or on the basis of professional judgment. The following definitions provide brief explanations of the qualifiers which may have been assigned to data during the data validation process.

- J** The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
- U** The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

The data generated as part of this sampling event met the QC criteria established in the respective USEPA and NYSDEC guidelines, except as noted below:

- Select results VOC results were qualified as estimated (J) because field duplicate criteria were not achieved.
- One result for cadmium was reported at the CRQL and qualified as non-detect (U) due to laboratory blank contamination.
- Select VOC results were qualified as estimated (J) when surrogate recoveries were outside of QC criteria.

Table 2 summarizes all qualifications applied to the data.

Several samples were analyzed at dilution in order to bring target analyte concentrations within the calibrated range of the analytical instruments. The detection limits of these samples are considered elevated since undiluted results were not provided.

In general, the data generated during the SWMU AB Area Investigation met the QC criteria established in the respective USEPA and NYSDEC guidelines. All data provided by the laboratory met the terms of NYSDEC ASP Category B deliverables, the requested analytical methodology was completed, and sample holding time requirements were observed.

Based on the data validations and data quality assessment, the analytical data for samples collected at the Site were determined to be acceptable (including estimated data) for their intended use. The overall data completeness (i.e. the ratio of the amount of valid data obtained to the amount expected, including estimated data) was 100%, which exceeds the completeness goal identified in Section 4.3.4 of the RFI Management Plans.

Table D-1: SWMU AB Sampling and Analysis Summary

Lab SDG	Field ID	Matrix	Sample Date	MS/MSD	VOCs	COD	TOC	BOD	TDS	TSS	Metals	Alkalinity	Ammonia	Methane	Nitrate / Nitrite	Phosphorous (Total)	Sulfate / Chloride / Fluoride	Sulfide	Grain Size
Primary Field Samples																			
1296319	SAB-SB-01-4.0-4.5	GS	3/19/2012		x		x												x
1296319	SAB-SB-01-20.0-20.5	GS	3/19/2012		x		x												x
1296319	SAB-SB-01-24.0-24.5	GS	3/19/2012		x		x												x
1296319	SAB-SB-02-4.0-4.5	GS	3/19/2012	x	x														
1296319	SAB-SB-02-19.0-19.5	GS	3/19/2012		x														
1296319	SAB-SB-02-24.0-24.5	GS	3/19/2012		x														
1296319	SAB-SB-03-4.0-4.5	GS	3/19/2012		x														
1296319	SAB-SB-03-19.0-19.5	GS	3/19/2012		x														
1296319	SAB-SB-03-24.0-24.5	GS	3/19/2012		x														
1297526	SAB-TW-01-12	GW	3/22/2012	x	x														
1297526	SAB-TW-02	GW	3/22/2012		x														
1299021	SAB-TW-03-12	GW	3/29/2012		x														
1299021	SAB-TW-04-22	GW	3/29/2012		x	x	x	x	x	x	x	x	x	x	x	x	x	x	
1301104	SAB-TW-05-12	GW	4/9/2012	x	x														
1301104	SAB-TW-06-21	GW	4/9/2012		x														
1301104	SAB-TW-67-21	GW	4/9/2012		x														
1302007	SAB/SS/IWB1-WC-DECON/PURGE	CW	4/11/2012		x														
1302007	SAB/SS/IWB1-WC-SOIL-LO	CS	4/12/2012		x														
1302007	SAB/SS/IWB1-WC-SOIL-HI	CS	4/12/2012		x														
Field Duplicates																			
1296319	SAB-SB-01-20.0-20.5D	GS	3/19/2012		x														
1297526	SAB-TW-02D	GW	3/22/2012		x														
Trip Blanks																			
1296319	TRIPBLANK12051-031912	TB	3/19/2012		x														
1297526	TB12044-032212	TB	3/22/2012		x														
1299021	TB12075-032912	TB	3/29/2012		x														
1299021	TB12075-032912	TB	3/29/2012		x														
1301104	TB12075-040912	TB	4/9/2012		x														
1302007	TB12086	TB	4/11/2012		x														
Rinsate Blanks																			
1296319	RINSATE-031912	RB	3/19/2012		x														
1297526	RINSATE-032212	RB	3/22/2012		x														
1299021	RINSATE02-032912	RB	3/29/2012		x														
1299021	RINSATE-032912	RB	3/29/2012		x														
1301104	RINSATE-040912	RB	4/9/2012		x														
1302007	RINSATE-041112	RB	4/11/2012		x														

Notes:

BOD = Biological Oxygen Demand

COD = Chemical Oxygen Demand

CS = Composite Soil

CW = Composite Water

GS = Grab Soil

GW = Grab Water

MS/MSD = Matrix Spike / Matrix Spike Duplicate

RB = Rinse Blank

SDG = Sample Delivery Group

TB = Trip Blank

TDS - Total Dissolved Solids

TOC = Total Organic Carbon

TSS - Total Suspended Solids

VOCs = Volatile Organic Compounds



Table D-2: SWMU AB Area Data Qualifier Summary

SDG	Sample ID	Analyte	New Result	New CRQL	QUAL	Comments
1296319	SAB-SB-01-20.0-20.5	1,2-Dichloroethene (Total)	-	-	J	Field duplicate precision outside QC criteria
1296319	SAB-SB-01-20.0-20.5	Tetrachloroethene	-	-	J	Field duplicate precision outside QC criteria
1296319	SAB-SB-01-20.0-20.5	Trichloroethene	-	-	J	Field duplicate precision outside QC criteria
1296319	SAB-SB-01-20.0-20.5D	1,2-Dichloroethene (Total)	-	-	J	Field duplicate precision outside QC criteria
1296319	SAB-SB-01-20.0-20.5D	Tetrachloroethene	-	-	J	Field duplicate precision outside QC criteria
1296319	SAB-SB-01-20.0-20.5D	Trichloroethene	-	-	J	Field duplicate precision outside QC criteria
1299021	SAB-TW-04-22	Cadmium	5.0	-	U	Method blank contamination
1302007	SAB/SS/IWB1-WC-SOIL-LO	1,2-Dichloroethane	-	-	J	Surrogate recovery outside QC criteria
1302007	SAB/SS/IWB1-WC-SOIL-LO	Trichloroethene	-	-	J	Surrogate recovery outside QC criteria

Notes:

CRQL = Contract Required Quantitation Limit

QC = Quality Control

QUAL = Interpreted Qualifier

SDG = Sample Delivery Group

J = Estimated result

U = Not detected above the CRQL

APPENDIX E
LABORATORY ANALYTICAL REPORTS

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

March 30, 2012

Project: IBM - Kingston

Submittal Date: 03/20/2012

Group Number: 1296319

SDG: IBK35

PO Number: 5003311252

Release Number: 083-87071

State of Sample Origin: NY

Client Sample DescriptionLancaster Labs (LLI) #

SAB-SB-01-4.0-4.5 Grab Soil	6584361
SAB-SB-01-20.0-20.5 Grab Soil	6584362
SAB-SB-01-20.0-20.5D Grab Soil	6584363
SAB-SB-01-24.5-25.0 Grab Soil	6584364
SAB-SB-02-4.0-4.5 Grab Soil	6584365
SAB-SB-02-4.0-4.5MS Grab Soil	6584366
SAB-SB-02-4.0-4.5MSD Grab Soil	6584367
SAB-SB-02-19.0-19.5 Grab Soil	6584368
SAB-SB-02-24.0-24.5 Grab Soil	6584369
SAB-SB-03-4.0-4.5 Grab Soil	6584370
SAB-SB-03-19.0-19.5 Grab Soil	6584371
SAB-SB-03-24.0-24.5 Grab Soil	6584372
RINSATE-031912 Grab Water	6584373
TRIPBLANK12051-031912 Water	6584374

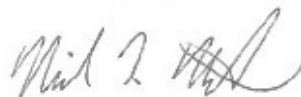
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC Golder Associates, Inc.
COPY TO
ELECTRONIC Golder Associates
COPY TO
1 COPY TO Data Package Group

Attn: Christopher Hemingway

Attn: Cindi Lucas-Youmans

Respectfully Submitted,



Nicole L. Maljovec
Senior Specialist Group Leader

(717) 556-7259

Sample Description: SAB-SB-01-4.0-4.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584361
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 11:15 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

01404 SDG#: IBK35-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	1.11
10237	Benzyl Chloride	100-44-7	N.D.	1	5	1.11
10237	Bromobenzene	108-86-1	N.D.	1	6	1.11
10237	Bromodichloromethane	75-27-4	N.D.	1	6	1.11
10237	Bromoform	75-25-2	N.D.	1	6	1.11
10237	Bromomethane	74-83-9	N.D.	2	6	1.11
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	1.11
10237	Chlorobenzene	108-90-7	N.D.	1	6	1.11
10237	Chloroethane	75-00-3	N.D.	2	6	1.11
10237	Chloroform	67-66-3	N.D.	1	6	1.11
10237	Chloromethane	74-87-3	N.D.	2	6	1.11
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	1.11
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	1.11
10237	Dibromochloromethane	124-48-1	N.D.	1	6	1.11
10237	Dibromomethane	74-95-3	N.D.	1	6	1.11
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	1.11
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	1.11
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	1.11
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	1.11
10237	1,1-Dichloroethane	75-34-3	N.D.	1	6	1.11
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	1.11
10237	1,1-Dichloroethene	75-35-4	N.D.	1	6	1.11
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	6	1.11
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	1.11
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	1.11
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	1.11
10237	Ethylbenzene	100-41-4	N.D.	1	6	1.11
10237	Freon 113	76-13-1	N.D.	2	12	1.11
10237	Freon 123a	354-23-4	N.D.	2	6	1.11
10237	Methylene Chloride	75-09-2	N.D.	2	6	1.11
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	1.11
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	1.11
10237	Tetrachloroethene	127-18-4	N.D.	1	6	1.11
10237	Toluene	108-88-3	N.D.	1	6	1.11
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	1.11
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	1.11
10237	Trichloroethene	79-01-6	N.D.	1	6	1.11
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	1.11
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	1.11
10237	Vinyl Chloride	75-01-4	N.D.	1	6	1.11
10237	Xylene (Total)	1330-20-7	N.D.	1	6	1.11
Wet Chemistry	SM20 5310 B modified		ug/kg	ug/kg	ug/kg	
02079	TOC Solids/Sludges Combustion	n.a.	N.D.	104,000	313,000	1
Wet Chemistry	ASTM D422		% Passing	% Passing	% Passing	
07103	75 mm	n.a.	100	0.50	1.0	1
07103	37.5 mm	n.a.	100	0.50	1.0	1
07103	19 mm	n.a.	100	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-01-4.0-4.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584361
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 11:15 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

01404 SDG#: IBK35-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry		ASTM D422	% Passing	% Passing	% Passing	
07103	4.75 mm	n.a.	100	0.50	1.0	1
07103	3.35 mm	n.a.	99.8	0.50	1.0	1
07103	2.36 mm	n.a.	99.3	0.50	1.0	1
07103	1.18 mm	n.a.	96.2	0.50	1.0	1
07103	0.6 mm	n.a.	86.2	0.50	1.0	1
07103	0.3 mm	n.a.	40.0	0.50	1.0	1
07103	0.15 mm	n.a.	11.0	0.50	1.0	1
07103	0.075 mm	n.a.	7.6	0.50	1.0	1
07103	0.064 mm	n.a.	7.5	0.50	1.0	1
07103	0.05 mm	n.a.	7.0	0.50	1.0	1
07103	0.02 mm	n.a.	5.0	0.50	1.0	1
07103	0.005 mm	n.a.	4.0	0.50	1.0	1
07103	0.002 mm	n.a.	2.0	0.50	1.0	1
07103	0.001 mm	n.a.	1.0	0.50	1.0	1

Wet Chemistry		SM20 2540 G	%	%	%	
00111	Moisture	n.a.	4.0	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120811AA	03/21/2012 20:45	Andrea E Lando	1.11
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:07	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:07	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:05	Lois E Hiltz	n.a.
02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	12086049531A	03/27/2012 00:25	James S Mathiot	1
07103	Grain Size to 1 um	ASTM D422	1	12080710301A	03/20/2012 20:00	Luz M Groff	1
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-01-20.0-20.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584362
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 11:35 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

01200 SDG#: IBK35-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	0.89
10237	Benzyl Chloride	100-44-7	N.D.	1	5	0.89
10237	Bromobenzene	108-86-1	N.D.	1	6	0.89
10237	Bromodichloromethane	75-27-4	N.D.	1	6	0.89
10237	Bromoform	75-25-2	N.D.	1	6	0.89
10237	Bromomethane	74-83-9	N.D.	2	6	0.89
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	0.89
10237	Chlorobenzene	108-90-7	N.D.	1	6	0.89
10237	Chloroethane	75-00-3	N.D.	2	6	0.89
10237	Chloroform	67-66-3	N.D.	1	6	0.89
10237	Chloromethane	74-87-3	N.D.	2	6	0.89
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	0.89
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	0.89
10237	Dibromochloromethane	124-48-1	N.D.	1	6	0.89
10237	Dibromomethane	74-95-3	N.D.	1	6	0.89
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	0.89
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	0.89
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	0.89
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	0.89
10237	1,1-Dichloroethane	75-34-3	2	J	6	0.89
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	0.89
10237	1,1-Dichloroethene	75-35-4	7	1	6	0.89
10237	1,2-Dichloroethene (Total)	540-59-0	1	J	6	0.89
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	0.89
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	0.89
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	0.89
10237	Ethylbenzene	100-41-4	N.D.	1	6	0.89
10237	Freon 113	76-13-1	N.D.	2	11	0.89
10237	Freon 123a	354-23-4	N.D.	2	6	0.89
10237	Methylene Chloride	75-09-2	2	J	6	0.89
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	0.89
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	0.89
10237	Tetrachloroethene	127-18-4	2	J	6	0.89
10237	Toluene	108-88-3	N.D.	1	6	0.89
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	0.89
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	0.89
10237	Trichloroethene	79-01-6	34	1	6	0.89
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	0.89
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	0.89
10237	Vinyl Chloride	75-01-4	N.D.	1	6	0.89
10237	Xylene (Total)	1330-20-7	N.D.	1	6	0.89
Wet Chemistry	SM20 5310 B modified		ug/kg	ug/kg	ug/kg	
02079	TOC Solids/Sludges Combustion	n.a.	N.D.	127,000	382,000	1
Wet Chemistry	ASTM D422		% Passing	% Passing	% Passing	
07103	75 mm	n.a.	100	0.50	1.0	1
07103	37.5 mm	n.a.	100	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-01-20.0-20.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584362
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 11:35 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

01200 SDG#: IBK35-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry		ASTM D422	% Passing	% Passing	% Passing	
07103	19 mm	n.a.	100	0.50	1.0	1
07103	4.75 mm	n.a.	100	0.50	1.0	1
07103	3.35 mm	n.a.	99.9	0.50	1.0	1
07103	2.36 mm	n.a.	99.7	0.50	1.0	1
07103	1.18 mm	n.a.	99.7	0.50	1.0	1
07103	0.6 mm	n.a.	99.6	0.50	1.0	1
07103	0.3 mm	n.a.	97.8	0.50	1.0	1
07103	0.15 mm	n.a.	58.3	0.50	1.0	1
07103	0.075 mm	n.a.	36.7	0.50	1.0	1
07103	0.064 mm	n.a.	33.0	0.50	1.0	1
07103	0.05 mm	n.a.	30.0	0.50	1.0	1
07103	0.02 mm	n.a.	22.0	0.50	1.0	1
07103	0.005 mm	n.a.	16.0	0.50	1.0	1
07103	0.002 mm	n.a.	9.0	0.50	1.0	1
07103	0.001 mm	n.a.	4.0	0.50	1.0	1

Wet Chemistry		SM20 2540 G	%	%	%	
00111	Moisture	n.a.	21.5	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120811AA	03/21/2012 21:08	Andrea E Lando	0.89
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:10	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:11	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:09	Lois E Hiltz	n.a.
02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	12086049531A	03/27/2012 00:35	James S Mathiot	1
07103	Grain Size to 1 um	ASTM D422	1	12080710301A	03/20/2012 20:00	Luz M Groff	1
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-01-20.0-20.5D Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584363
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 11:35 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

0120D SDG#: IBK35-03FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	0.91
10237	Benzyl Chloride	100-44-7	N.D.	1	5	0.91
10237	Bromobenzene	108-86-1	N.D.	1	6	0.91
10237	Bromodichloromethane	75-27-4	N.D.	1	6	0.91
10237	Bromoform	75-25-2	N.D.	1	6	0.91
10237	Bromomethane	74-83-9	N.D.	2	6	0.91
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	0.91
10237	Chlorobenzene	108-90-7	N.D.	1	6	0.91
10237	Chloroethane	75-00-3	N.D.	2	6	0.91
10237	Chloroform	67-66-3	N.D.	1	6	0.91
10237	Chloromethane	74-87-3	N.D.	2	6	0.91
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	0.91
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	0.91
10237	Dibromochloromethane	124-48-1	N.D.	1	6	0.91
10237	Dibromomethane	74-95-3	N.D.	1	6	0.91
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	0.91
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	0.91
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	0.91
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	0.91
10237	1,1-Dichloroethane	75-34-3	3	J	6	0.91
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	0.91
10237	1,1-Dichloroethene	75-35-4	11		6	0.91
10237	1,2-Dichloroethene (Total)	540-59-0	3	J	6	0.91
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	0.91
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	0.91
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	0.91
10237	Ethylbenzene	100-41-4	N.D.	1	6	0.91
10237	Freon 113	76-13-1	N.D.	2	12	0.91
10237	Freon 123a	354-23-4	N.D.	2	6	0.91
10237	Methylene Chloride	75-09-2	2	J	6	0.91
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	0.91
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	0.91
10237	Tetrachloroethene	127-18-4	5	J	6	0.91
10237	Toluene	108-88-3	N.D.	1	6	0.91
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	0.91
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	0.91
10237	Trichloroethene	79-01-6	58		6	0.91
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	0.91
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	0.91
10237	Vinyl Chloride	75-01-4	N.D.	1	6	0.91
10237	Xylene (Total)	1330-20-7	N.D.	1	6	0.91

Wet Chemistry

SM20 2540 G

00111 **Moisture**

n.a.

21.6

0.50

0.50

1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: SAB-SB-01-20.0-20.5D Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584363
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 11:35 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

0120D SDG#: IBK35-03FD

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120811AA	03/21/2012 21:30	Andrea E Lando	0.91
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:13	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:14	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:13	Lois E Hiltz	n.a.
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

Sample Description: SAB-SB-01-24.5-25.0 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584364
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 11:50 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

01240 SDG#: IBK35-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	0.92
10237	Benzyl Chloride	100-44-7	N.D.	1	5	0.92
10237	Bromobenzene	108-86-1	N.D.	1	6	0.92
10237	Bromodichloromethane	75-27-4	N.D.	1	6	0.92
10237	Bromoform	75-25-2	N.D.	1	6	0.92
10237	Bromomethane	74-83-9	N.D.	2	6	0.92
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	0.92
10237	Chlorobenzene	108-90-7	N.D.	1	6	0.92
10237	Chloroethane	75-00-3	N.D.	2	6	0.92
10237	Chloroform	67-66-3	N.D.	1	6	0.92
10237	Chloromethane	74-87-3	N.D.	2	6	0.92
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	0.92
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	0.92
10237	Dibromochloromethane	124-48-1	N.D.	1	6	0.92
10237	Dibromomethane	74-95-3	N.D.	1	6	0.92
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	0.92
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	0.92
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	0.92
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	0.92
10237	1,1-Dichloroethane	75-34-3	5	J	6	0.92
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	0.92
10237	1,1-Dichloroethene	75-35-4	7	1	6	0.92
10237	1,2-Dichloroethene (Total)	540-59-0	6	1	6	0.92
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	0.92
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	0.92
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	0.92
10237	Ethylbenzene	100-41-4	N.D.	1	6	0.92
10237	Freon 113	76-13-1	N.D.	2	12	0.92
10237	Freon 123a	354-23-4	N.D.	2	6	0.92
10237	Methylene Chloride	75-09-2	N.D.	2	6	0.92
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	0.92
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	0.92
10237	Tetrachloroethene	127-18-4	N.D.	1	6	0.92
10237	Toluene	108-88-3	N.D.	1	6	0.92
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	0.92
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	0.92
10237	Trichloroethene	79-01-6	43	1	6	0.92
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	0.92
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	0.92
10237	Vinyl Chloride	75-01-4	N.D.	1	6	0.92
10237	Xylene (Total)	1330-20-7	N.D.	1	6	0.92
Wet Chemistry	SM20 5310 B modified		ug/kg	ug/kg	ug/kg	
02079	TOC Solids/Sludges Combustion	n.a.	339,000	134,000	402,000	1
			J			
Wet Chemistry	ASTM D422		% Passing	% Passing	% Passing	
07103	75 mm	n.a.	100	0.50	1.0	1
07103	37.5 mm	n.a.	100	0.50	1.0	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-01-24.5-25.0 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584364
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 11:50 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

01240 SDG#: IBK35-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry		ASTM D422	% Passing	% Passing	% Passing	
07103	19 mm	n.a.	100	0.50	1.0	1
07103	4.75 mm	n.a.	99.9	0.50	1.0	1
07103	3.35 mm	n.a.	99.8	0.50	1.0	1
07103	2.36 mm	n.a.	99.7	0.50	1.0	1
07103	1.18 mm	n.a.	99.7	0.50	1.0	1
07103	0.6 mm	n.a.	99.6	0.50	1.0	1
07103	0.3 mm	n.a.	99.2	0.50	1.0	1
07103	0.15 mm	n.a.	93.2	0.50	1.0	1
07103	0.075 mm	n.a.	43.0	0.50	1.0	1
07103	0.064 mm	n.a.	35.0	0.50	1.0	1
07103	0.05 mm	n.a.	26.0	0.50	1.0	1
07103	0.02 mm	n.a.	15.0	0.50	1.0	1
07103	0.005 mm	n.a.	3.5	0.50	1.0	1
07103	0.002 mm	n.a.	2.0	0.50	1.0	1
07103	0.001 mm	n.a.	1.0	0.50	1.0	1

Wet Chemistry		SM20 2540 G	%	%	%	
00111	Moisture	n.a.	25.4	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120811AA	03/21/2012 21:53	Andrea E Lando	0.92
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:16	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:17	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:16	Lois E Hiltz	n.a.
02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	12086049531A	03/27/2012 00:46	James S Mathiot	1
07103	Grain Size to 1 um	ASTM D422	1	12080710301A	03/20/2012 20:00	Luz M Groff	1
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-02-4.0-4.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584365
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:30 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

02404 SDG#: IBK35-05BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	1.15
10237	Benzyl Chloride	100-44-7	N.D.	1	5	1.15
10237	Bromobenzene	108-86-1	N.D.	1	6	1.15
10237	Bromodichloromethane	75-27-4	N.D.	1	6	1.15
10237	Bromoform	75-25-2	N.D.	1	6	1.15
10237	Bromomethane	74-83-9	N.D.	2	6	1.15
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	1.15
10237	Chlorobenzene	108-90-7	N.D.	1	6	1.15
10237	Chloroethane	75-00-3	N.D.	2	6	1.15
10237	Chloroform	67-66-3	N.D.	1	6	1.15
10237	Chloromethane	74-87-3	N.D.	2	6	1.15
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	1.15
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	1.15
10237	Dibromochloromethane	124-48-1	N.D.	1	6	1.15
10237	Dibromomethane	74-95-3	N.D.	1	6	1.15
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	1.15
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	1.15
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	1.15
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	1.15
10237	1,1-Dichloroethane	75-34-3	N.D.	1	6	1.15
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	1.15
10237	1,1-Dichloroethene	75-35-4	N.D.	1	6	1.15
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	6	1.15
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	1.15
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	1.15
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	1.15
10237	Ethylbenzene	100-41-4	N.D.	1	6	1.15
10237	Freon 113	76-13-1	N.D.	2	12	1.15
10237	Freon 123a	354-23-4	N.D.	2	6	1.15
10237	Methylene Chloride	75-09-2	3	J	2	6
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	1.15
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	1.15
10237	Tetrachloroethene	127-18-4	N.D.	1	6	1.15
10237	Toluene	108-88-3	N.D.	1	6	1.15
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	1.15
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	1.15
10237	Trichloroethene	79-01-6	1	J	1	6
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	1.15
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	1.15
10237	Vinyl Chloride	75-01-4	N.D.	1	6	1.15
10237	Xylene (Total)	1330-20-7	N.D.	1	6	1.15

Wet Chemistry

SM20 2540 G

00111	Moisture	n.a.	4.8	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

Sample Description: SAB-SB-02-4.0-4.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584365
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:30 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

02404 SDG#: IBK35-05BKG

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120811AA	03/21/2012 19:37	Andrea E Lando	1.15
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:19	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:30	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:19	Lois E Hiltz	n.a.
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

Sample Description: SAB-SB-02-4.0-4.5MS Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584366
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:35 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

02404 SDG#: IBK35-05MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	28	0.6	6	1.21
10237	Benzyl Chloride	100-44-7	23	1	5	1.21
10237	Bromobenzene	108-86-1	25	1	6	1.21
10237	Bromodichloromethane	75-27-4	28	1	6	1.21
10237	Bromoform	75-25-2	26	1	6	1.21
10237	Bromomethane	74-83-9	27	3	6	1.21
10237	Carbon Tetrachloride	56-23-5	32	1	6	1.21
10237	Chlorobenzene	108-90-7	25	1	6	1.21
10237	Chloroethane	75-00-3	25	3	6	1.21
10237	Chloroform	67-66-3	30	1	6	1.21
10237	Chloromethane	74-87-3	21	3	6	1.21
10237	2-Chlorotoluene	95-49-8	23	1	6	1.21
10237	4-Chlorotoluene	106-43-4	22	1	6	1.21
10237	Dibromochloromethane	124-48-1	26	1	6	1.21
10237	Dibromomethane	74-95-3	29	1	6	1.21
10237	1,2-Dichlorobenzene	95-50-1	23	1	6	1.21
10237	1,3-Dichlorobenzene	541-73-1	23	1	6	1.21
10237	1,4-Dichlorobenzene	106-46-7	23	1	6	1.21
10237	Dichlorodifluoromethane	75-71-8	23	3	6	1.21
10237	1,1-Dichloroethane	75-34-3	28	1	6	1.21
10237	1,2-Dichloroethane	107-06-2	32	1	6	1.21
10237	1,1-Dichloroethene	75-35-4	31	1	6	1.21
10237	1,2-Dichloroethene (Total)	540-59-0	59	1	6	1.21
10237	1,2-Dichloropropane	78-87-5	25	1	6	1.21
10237	cis-1,3-Dichloropropene	10061-01-5	26	1	6	1.21
10237	trans-1,3-Dichloropropene	10061-02-6	25	1	6	1.21
10237	Ethylbenzene	100-41-4	25	1	6	1.21
10237	Freon 113	76-13-1	33	3	13	1.21
10237	Freon 123a	354-23-4	27	3	6	1.21
10237	Methylene Chloride	75-09-2	30	3	6	1.21
10237	1,1,1,2-Tetrachloroethane	630-20-6	27	1	6	1.21
10237	1,1,2,2-Tetrachloroethane	79-34-5	24	1	6	1.21
10237	Tetrachloroethene	127-18-4	30	1	6	1.21
10237	Toluene	108-88-3	26	1	6	1.21
10237	1,1,1-Trichloroethane	71-55-6	32	1	6	1.21
10237	1,1,2-Trichloroethane	79-00-5	27	1	6	1.21
10237	Trichloroethene	79-01-6	30	1	6	1.21
10237	Trichlorofluoromethane	75-69-4	33	3	6	1.21
10237	1,2,3-Trichloropropane	96-18-4	29	1	6	1.21
10237	Vinyl Chloride	75-01-4	25	1	6	1.21
10237	Xylene (Total)	1330-20-7	74	1	6	1.21

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-02-4.0-4.5MS Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584366
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:35 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

02404 SDG#: IBK35-05MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
00118	Moisture	n.a.	4.8	0.50	0.50	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120811AA	03/21/2012 20:00	Andrea E Lando	1.21
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:32	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:33	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:31	Lois E Hiltz	n.a.
00118	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

Sample Description: SAB-SB-02-4.0-4.5MSD Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584367
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:40 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

02404 SDG#: IBK35-05MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	22	0.6	6	1.06
10237	Benzyl Chloride	100-44-7	18	1	4	1.06
10237	Bromobenzene	108-86-1	18	1	6	1.06
10237	Bromodichloromethane	75-27-4	23	1	6	1.06
10237	Bromoform	75-25-2	21	1	6	1.06
10237	Bromomethane	74-83-9	24	2	6	1.06
10237	Carbon Tetrachloride	56-23-5	26	1	6	1.06
10237	Chlorobenzene	108-90-7	18	1	6	1.06
10237	Chloroethane	75-00-3	22	2	6	1.06
10237	Chloroform	67-66-3	24	1	6	1.06
10237	Chloromethane	74-87-3	18	2	6	1.06
10237	2-Chlorotoluene	95-49-8	16	1	6	1.06
10237	4-Chlorotoluene	106-43-4	15	1	6	1.06
10237	Dibromochloromethane	124-48-1	21	1	6	1.06
10237	Dibromomethane	74-95-3	24	1	6	1.06
10237	1,2-Dichlorobenzene	95-50-1	16	1	6	1.06
10237	1,3-Dichlorobenzene	541-73-1	16	1	6	1.06
10237	1,4-Dichlorobenzene	106-46-7	15	1	6	1.06
10237	Dichlorodifluoromethane	75-71-8	20	2	6	1.06
10237	1,1-Dichloroethane	75-34-3	23	1	6	1.06
10237	1,2-Dichloroethane	107-06-2	27	1	6	1.06
10237	1,1-Dichloroethene	75-35-4	26	1	6	1.06
10237	1,2-Dichloroethene (Total)	540-59-0	48	1	6	1.06
10237	1,2-Dichloropropane	78-87-5	21	1	6	1.06
10237	cis-1,3-Dichloropropene	10061-01-5	20	1	6	1.06
10237	trans-1,3-Dichloropropene	10061-02-6	20	1	6	1.06
10237	Ethylbenzene	100-41-4	18	1	6	1.06
10237	Freon 113	76-13-1	28	2	11	1.06
10237	Freon 123a	354-23-4	23	2	6	1.06
10237	Methylene Chloride	75-09-2	24	2	6	1.06
10237	1,1,1,2-Tetrachloroethane	630-20-6	20	1	6	1.06
10237	1,1,2,2-Tetrachloroethane	79-34-5	21	1	6	1.06
10237	Tetrachloroethene	127-18-4	22	1	6	1.06
10237	Toluene	108-88-3	20	1	6	1.06
10237	1,1,1-Trichloroethane	71-55-6	26	1	6	1.06
10237	1,1,2-Trichloroethane	79-00-5	22	1	6	1.06
10237	Trichloroethene	79-01-6	24	1	6	1.06
10237	Trichlorofluoromethane	75-69-4	29	2	6	1.06
10237	1,2,3-Trichloropropane	96-18-4	25	1	6	1.06
10237	Vinyl Chloride	75-01-4	22	1	6	1.06
10237	Xylene (Total)	1330-20-7	53	1	6	1.06

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-02-4.0-4.5MSD Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584367
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:40 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

02404 SDG#: IBK35-05MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry						
		SM20 2540 G	%	%	%	
00118	Moisture	n.a.	4.8	0.50	0.50	1
00121	Moisture Duplicate	n.a.	4.7	0.50	0.50	1

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120811AA	03/21/2012 20:23	Andrea E Lando	1.06
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:35	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:36	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:35	Lois E Hiltz	n.a.
00118	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1
00121	Moisture Duplicate	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-02-19.0-19.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584368
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:45 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

02190 SDG#: IBK35-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	0.92
10237	Benzyl Chloride	100-44-7	N.D.	1	5	0.92
10237	Bromobenzene	108-86-1	N.D.	1	6	0.92
10237	Bromodichloromethane	75-27-4	N.D.	1	6	0.92
10237	Bromoform	75-25-2	N.D.	1	6	0.92
10237	Bromomethane	74-83-9	N.D.	2	6	0.92
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	0.92
10237	Chlorobenzene	108-90-7	N.D.	1	6	0.92
10237	Chloroethane	75-00-3	N.D.	2	6	0.92
10237	Chloroform	67-66-3	N.D.	1	6	0.92
10237	Chloromethane	74-87-3	N.D.	2	6	0.92
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	0.92
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	0.92
10237	Dibromochloromethane	124-48-1	N.D.	1	6	0.92
10237	Dibromomethane	74-95-3	N.D.	1	6	0.92
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	0.92
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	0.92
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	0.92
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	0.92
10237	1,1-Dichloroethane	75-34-3	7	1	6	0.92
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	0.92
10237	1,1-Dichloroethene	75-35-4	10	1	6	0.92
10237	1,2-Dichloroethene (Total)	540-59-0	2 J	1	6	0.92
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	0.92
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	0.92
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	0.92
10237	Ethylbenzene	100-41-4	N.D.	1	6	0.92
10237	Freon 113	76-13-1	N.D.	2	12	0.92
10237	Freon 123a	354-23-4	N.D.	2	6	0.92
10237	Methylene Chloride	75-09-2	N.D.	2	6	0.92
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	0.92
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	0.92
10237	Tetrachloroethene	127-18-4	3 J	1	6	0.92
10237	Toluene	108-88-3	N.D.	1	6	0.92
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	0.92
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	0.92
10237	Trichloroethene	79-01-6	60	1	6	0.92
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	0.92
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	0.92
10237	Vinyl Chloride	75-01-4	N.D.	1	6	0.92
10237	Xylene (Total)	1330-20-7	N.D.	1	6	0.92

Wet Chemistry

SM20 2540 G

00111	Moisture	n.a.	20.8	0.50	0.50	1
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"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: SAB-SB-02-19.0-19.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584368
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:45 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

02190 SDG#: IBK35-06

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120831AA	03/23/2012 12:44	Lauren C Temple	0.92
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:39	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:40	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:39	Lois E Hiltz	n.a.
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

Sample Description: SAB-SB-02-24.0-24.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584369
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:50 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

02240 SDG#: IBK35-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	0.89
10237	Benzyl Chloride	100-44-7	N.D.	1	5	0.89
10237	Bromobenzene	108-86-1	N.D.	1	6	0.89
10237	Bromodichloromethane	75-27-4	N.D.	1	6	0.89
10237	Bromoform	75-25-2	N.D.	1	6	0.89
10237	Bromomethane	74-83-9	N.D.	2	6	0.89
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	0.89
10237	Chlorobenzene	108-90-7	N.D.	1	6	0.89
10237	Chloroethane	75-00-3	N.D.	2	6	0.89
10237	Chloroform	67-66-3	N.D.	1	6	0.89
10237	Chloromethane	74-87-3	N.D.	2	6	0.89
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	0.89
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	0.89
10237	Dibromochloromethane	124-48-1	N.D.	1	6	0.89
10237	Dibromomethane	74-95-3	N.D.	1	6	0.89
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	0.89
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	0.89
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	0.89
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	0.89
10237	1,1-Dichloroethane	75-34-3	N.D.	1	6	0.89
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	0.89
10237	1,1-Dichloroethene	75-35-4	N.D.	1	6	0.89
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	6	0.89
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	0.89
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	0.89
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	0.89
10237	Ethylbenzene	100-41-4	N.D.	1	6	0.89
10237	Freon 113	76-13-1	N.D.	2	11	0.89
10237	Freon 123a	354-23-4	N.D.	2	6	0.89
10237	Methylene Chloride	75-09-2	3 J	2	6	0.89
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	0.89
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	0.89
10237	Tetrachloroethene	127-18-4	N.D.	1	6	0.89
10237	Toluene	108-88-3	N.D.	1	6	0.89
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	0.89
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	0.89
10237	Trichloroethene	79-01-6	N.D.	1	6	0.89
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	0.89
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	0.89
10237	Vinyl Chloride	75-01-4	N.D.	1	6	0.89
10237	Xylene (Total)	1330-20-7	N.D.	1	6	0.89

The GC/MS volatile internal standard peak areas were outside the QC limits. A re-analysis was performed, and the matrix effect was confirmed.

Wet Chemistry	SM20 2540 G	%	%	%	
00111 Moisture	n.a.	22.1	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

*=This limit was used in the evaluation of the final result

Sample Description: SAB-SB-02-24.0-24.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584369
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 12:50 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

02240 SDG#: IBK35-07

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120831AA	03/23/2012 13:06	Lauren C Temple	0.89
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:42	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:43	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:42	Lois E Hiltz	n.a.
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

Sample Description: SAB-SB-03-4.0-4.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584370
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 13:55 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

03404 SDG#: IBK35-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	1.06
10237	Benzyl Chloride	100-44-7	N.D.	1	5	1.06
10237	Bromobenzene	108-86-1	N.D.	1	6	1.06
10237	Bromodichloromethane	75-27-4	N.D.	1	6	1.06
10237	Bromoform	75-25-2	N.D.	1	6	1.06
10237	Bromomethane	74-83-9	N.D.	2	6	1.06
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	1.06
10237	Chlorobenzene	108-90-7	N.D.	1	6	1.06
10237	Chloroethane	75-00-3	N.D.	2	6	1.06
10237	Chloroform	67-66-3	N.D.	1	6	1.06
10237	Chloromethane	74-87-3	N.D.	2	6	1.06
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	1.06
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	1.06
10237	Dibromochloromethane	124-48-1	N.D.	1	6	1.06
10237	Dibromomethane	74-95-3	N.D.	1	6	1.06
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	1.06
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	1.06
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	1.06
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	1.06
10237	1,1-Dichloroethane	75-34-3	N.D.	1	6	1.06
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	1.06
10237	1,1-Dichloroethene	75-35-4	N.D.	1	6	1.06
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	6	1.06
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	1.06
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	1.06
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	1.06
10237	Ethylbenzene	100-41-4	N.D.	1	6	1.06
10237	Freon 113	76-13-1	N.D.	2	11	1.06
10237	Freon 123a	354-23-4	N.D.	2	6	1.06
10237	Methylene Chloride	75-09-2	N.D.	2	6	1.06
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	1.06
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	1.06
10237	Tetrachloroethene	127-18-4	N.D.	1	6	1.06
10237	Toluene	108-88-3	N.D.	1	6	1.06
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	1.06
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	1.06
10237	Trichloroethene	79-01-6	N.D.	1	6	1.06
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	1.06
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	1.06
10237	Vinyl Chloride	75-01-4	N.D.	1	6	1.06
10237	Xylene (Total)	1330-20-7	N.D.	1	6	1.06

Wet Chemistry

SM20 2540 G

00111 **Moisture**

n.a.

7.3

0.50

0.50

1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: SAB-SB-03-4.0-4.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584370
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 13:55 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

03404 SDG#: IBK35-08

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	A120831AA	03/23/2012 13:29	Lauren C Temple	1.06
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:45	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:47	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:45	Lois E Hiltz	n.a.
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

Sample Description: SAB-SB-03-19.0-19.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584371
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 14:15 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

03190 SDG#: IBK35-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.5	5	0.8
10237	Benzyl Chloride	100-44-7	N.D.	1	4	0.8
10237	Bromobenzene	108-86-1	N.D.	1	5	0.8
10237	Bromodichloromethane	75-27-4	N.D.	1	5	0.8
10237	Bromoform	75-25-2	N.D.	1	5	0.8
10237	Bromomethane	74-83-9	N.D.	2	5	0.8
10237	Carbon Tetrachloride	56-23-5	N.D.	1	5	0.8
10237	Chlorobenzene	108-90-7	N.D.	1	5	0.8
10237	Chloroethane	75-00-3	N.D.	2	5	0.8
10237	Chloroform	67-66-3	N.D.	1	5	0.8
10237	Chloromethane	74-87-3	N.D.	2	5	0.8
10237	2-Chlorotoluene	95-49-8	N.D.	1	5	0.8
10237	4-Chlorotoluene	106-43-4	N.D.	1	5	0.8
10237	Dibromochloromethane	124-48-1	N.D.	1	5	0.8
10237	Dibromomethane	74-95-3	N.D.	1	5	0.8
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	0.8
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	0.8
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	0.8
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	5	0.8
10237	1,1-Dichloroethane	75-34-3	21	1	5	0.8
10237	1,2-Dichloroethane	107-06-2	1 J	1	5	0.8
10237	1,1-Dichloroethene	75-35-4	24	1	5	0.8
10237	1,2-Dichloroethene (Total)	540-59-0	40	1	5	0.8
10237	1,2-Dichloropropane	78-87-5	N.D.	1	5	0.8
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	5	0.8
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	5	0.8
10237	Ethylbenzene	100-41-4	N.D.	1	5	0.8
10237	Freon 113	76-13-1	N.D.	2	11	0.8
10237	Freon 123a	354-23-4	N.D.	2	5	0.8
10237	Methylene Chloride	75-09-2	N.D.	2	5	0.8
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	5	0.8
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	0.8
10237	Tetrachloroethene	127-18-4	N.D.	1	5	0.8
10237	Toluene	108-88-3	N.D.	1	5	0.8
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	0.8
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	0.8
10237	Trichloroethene	79-01-6	7,900	64	320	47.44
10237	Trichlorofluoromethane	75-69-4	N.D.	2	5	0.8
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	0.8
10237	Vinyl Chloride	75-01-4	N.D.	1	5	0.8
10237	Xylene (Total)	1330-20-7	N.D.	1	5	0.8

Wet Chemistry

SM20 2540 G

00111	Moisture	n.a.	25.8	0.50	0.50	1
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"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: SAB-SB-03-19.0-19.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584371
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 14:15 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

03190 SDG#: IBK35-09

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution
					Date	Time		
10237	Volatiles by 8260B	SW-846 8260B	1	X120851AA	03/26/2012	04:02	Andrea E Lando	0.8
10237	Volatiles by 8260B	SW-846 8260B	1	Q120861AA	03/26/2012	16:09	Kerri E Legerlotz	47.44
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012	20:49	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012	20:50	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012	20:48	Lois E Hiltz	n.a.
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012	19:29	Scott W Freisher	1

Sample Description: SAB-SB-03-24.0-24.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584372
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 14:30 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

03240 SDG#: IBK35-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	0.88
10237	Benzyl Chloride	100-44-7	N.D.	1	5	0.88
10237	Bromobenzene	108-86-1	N.D.	1	6	0.88
10237	Bromodichloromethane	75-27-4	N.D.	1	6	0.88
10237	Bromoform	75-25-2	N.D.	1	6	0.88
10237	Bromomethane	74-83-9	N.D.	2	6	0.88
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	0.88
10237	Chlorobenzene	108-90-7	N.D.	1	6	0.88
10237	Chloroethane	75-00-3	N.D.	2	6	0.88
10237	Chloroform	67-66-3	N.D.	1	6	0.88
10237	Chloromethane	74-87-3	N.D.	2	6	0.88
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	0.88
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	0.88
10237	Dibromochloromethane	124-48-1	N.D.	1	6	0.88
10237	Dibromomethane	74-95-3	N.D.	1	6	0.88
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	0.88
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	0.88
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	0.88
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	0.88
10237	1,1-Dichloroethane	75-34-3	4	J	6	0.88
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	0.88
10237	1,1-Dichloroethene	75-35-4	N.D.	1	6	0.88
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	6	0.88
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	0.88
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	0.88
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	0.88
10237	Ethylbenzene	100-41-4	N.D.	1	6	0.88
10237	Freon 113	76-13-1	N.D.	2	12	0.88
10237	Freon 123a	354-23-4	N.D.	2	6	0.88
10237	Methylene Chloride	75-09-2	N.D.	2	6	0.88
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	0.88
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	0.88
10237	Tetrachloroethene	127-18-4	N.D.	1	6	0.88
10237	Toluene	108-88-3	N.D.	1	6	0.88
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	0.88
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	0.88
10237	Trichloroethene	79-01-6	N.D.	1	6	0.88
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	0.88
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	0.88
10237	Vinyl Chloride	75-01-4	N.D.	1	6	0.88
10237	Xylene (Total)	1330-20-7	N.D.	1	6	0.88

Wet Chemistry

SM20 2540 G

00111	Moisture	n.a.	24.5	0.50	0.50	1
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"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: SAB-SB-03-24.0-24.5 Grab Soil
IBM - Kingston, NY

LLI Sample # SW 6584372
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 14:30 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

03240 SDG#: IBK35-10

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120851AA	03/26/2012 02:29	Andrea E Lando	0.88
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201208027101	03/20/2012 20:52	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201208027101	03/20/2012 20:53	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201208027101	03/20/2012 20:51	Lois E Hiltz	n.a.
00111	Moisture	SM20 2540 G	1	12082820004B	03/22/2012 19:29	Scott W Freisher	1

Sample Description: RINSATE-031912 Grab Water
IBM - Kingston, NY

LLI Sample # WW 6584373
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 14:45 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/20/2012 09:30

Reported: 03/30/2012 19:37

RINSA SDG#: IBK35-11RB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: RINSATE-031912 Grab Water
IBM - Kingston, NY

LLI Sample # WW 6584373
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/19/2012 14:45 by DG

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

RINSA SDG#: IBK35-11RB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120802AA	03/20/2012 23:59	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120802AA	03/20/2012 23:59	Sara E Johnson	1

Sample Description: TRIPBLANK12051-031912 Water
IBM - Kingston, NY

LLI Sample # WW 6584374
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/15/2012

IBM

Submitted: 03/20/2012 09:30

8976 Wellington Road

Reported: 03/30/2012 19:37

Manassas VA 20109

TRPBL SDG#: IBK35-12TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: TRIPBLANK12051-031912 Water
IBM - Kingston, NY

LLI Sample # WW 6584374
LLI Group # 1296319
Account # 12694

Project Name: IBM - Kingston

Collected: 03/15/2012

IBM

8976 Wellington Road

Submitted: 03/20/2012 09:30

Manassas VA 20109

Reported: 03/30/2012 19:37

TRPBL SDG#: IBK35-12TB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120802AA	03/21/2012 00:21	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120802AA	03/21/2012 00:21	Sara E Johnson	1

Quality Control Summary

Client Name: IBM

Group Number: 1296319

Reported: 03/30/12 at 07:37 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: A120811AA	Sample number(s): 6584361-6584367								
Benzene	N.D.	0.5	5	ug/kg	106		80-120		
Benzyl Chloride	N.D.	1.	4	ug/kg	86		66-120		
Bromobenzene	N.D.	1.	5	ug/kg	106		79-120		
Bromodichloromethane	N.D.	1.	5	ug/kg	107		78-120		
Bromoform	N.D.	1.	5	ug/kg	94		70-120		
Bromomethane	N.D.	2.	5	ug/kg	103		32-162		
Carbon Tetrachloride	N.D.	1.	5	ug/kg	120		69-122		
Chlorobenzene	N.D.	1.	5	ug/kg	103		80-120		
Chloroethane	N.D.	2.	5	ug/kg	97		37-154		
Chloroform	N.D.	1.	5	ug/kg	114		80-120		
Chloromethane	N.D.	2.	5	ug/kg	80		56-120		
2-Chlorotoluene	N.D.	1.	5	ug/kg	101		78-120		
4-Chlorotoluene	N.D.	1.	5	ug/kg	100		79-120		
Dibromochloromethane	N.D.	1.	5	ug/kg	97		77-120		
Dibromomethane	N.D.	1.	5	ug/kg	104		80-120		
1,2-Dichlorobenzene	N.D.	1.	5	ug/kg	103		79-120		
1,3-Dichlorobenzene	N.D.	1.	5	ug/kg	106		78-120		
1,4-Dichlorobenzene	N.D.	1.	5	ug/kg	104		79-120		
Dichlorodifluoromethane	N.D.	2.	5	ug/kg	85		20-120		
1,1-Dichloroethane	N.D.	1.	5	ug/kg	106		80-120		
1,2-Dichloroethane	N.D.	1.	5	ug/kg	117		71-129		
1,1-Dichloroethene	N.D.	1.	5	ug/kg	116		73-129		
1,2-Dichloroethene (Total)	N.D.	1.	5	ug/kg	114		80-120		
1,2-Dichloropropane	N.D.	1.	5	ug/kg	96		77-120		
cis-1,3-Dichloropropene	N.D.	1.	5	ug/kg	100		74-120		
trans-1,3-Dichloropropene	N.D.	1.	5	ug/kg	95		77-120		
Ethylbenzene	N.D.	1.	5	ug/kg	103		80-120		
Freon 113	N.D.	2.	10	ug/kg	123		64-137		
Freon 123a	N.D.	2.	5	ug/kg	110		61-127		
Methylene Chloride	N.D.	2.	5	ug/kg	110		76-124		
1,1,1,2-Tetrachloroethane	N.D.	1.	5	ug/kg	105		80-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	5	ug/kg	83		71-123		
Tetrachloroethene	N.D.	1.	5	ug/kg	118		78-126		
Toluene	N.D.	1.	5	ug/kg	101		80-120		
1,1,1-Trichloroethane	N.D.	1.	5	ug/kg	120		71-125		
1,1,2-Trichloroethane	N.D.	1.	5	ug/kg	97		80-120		
Trichloroethene	N.D.	1.	5	ug/kg	113		80-120		
Trichlorofluoromethane	N.D.	2.	5	ug/kg	126		58-133		
1,2,3-Trichloropropane	N.D.	1.	5	ug/kg	93		71-123		
Vinyl Chloride	N.D.	1.	5	ug/kg	93		53-120		
Xylene (Total)	N.D.	1.	5	ug/kg	104		80-120		
Batch number: A120831AA	Sample number(s): 6584368-6584370								
Benzene	N.D.	0.5	5	ug/kg	105		80-120		
Benzyl Chloride	N.D.	1.	4	ug/kg	91		66-120		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1296319

Reported: 03/30/12 at 07:37 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Bromobenzene	N.D.	1.	5	ug/kg	102		79-120		
Bromodichloromethane	N.D.	1.	5	ug/kg	100		78-120		
Bromoform	N.D.	1.	5	ug/kg	87		70-120		
Bromomethane	N.D.	2.	5	ug/kg	97		32-162		
Carbon Tetrachloride	N.D.	1.	5	ug/kg	99		69-122		
Chlorobenzene	N.D.	1.	5	ug/kg	103		80-120		
Chloroethane	N.D.	2.	5	ug/kg	99		37-154		
Chloroform	N.D.	1.	5	ug/kg	104		80-120		
Chloromethane	N.D.	2.	5	ug/kg	90		56-120		
2-Chlorotoluene	N.D.	1.	5	ug/kg	101		78-120		
4-Chlorotoluene	N.D.	1.	5	ug/kg	101		79-120		
Dibromochloromethane	N.D.	1.	5	ug/kg	95		77-120		
Dibromomethane	N.D.	1.	5	ug/kg	99		80-120		
1,2-Dichlorobenzene	N.D.	1.	5	ug/kg	103		79-120		
1,3-Dichlorobenzene	N.D.	1.	5	ug/kg	104		78-120		
1,4-Dichlorobenzene	N.D.	1.	5	ug/kg	104		79-120		
Dichlorodifluoromethane	N.D.	2.	5	ug/kg	92		20-120		
1,1-Dichloroethane	N.D.	1.	5	ug/kg	100		80-120		
1,2-Dichloroethane	N.D.	1.	5	ug/kg	106		71-129		
1,1-Dichloroethene	N.D.	1.	5	ug/kg	104		73-129		
1,2-Dichloroethene (Total)	N.D.	1.	5	ug/kg	106		80-120		
1,2-Dichloropropane	N.D.	1.	5	ug/kg	98		77-120		
cis-1,3-Dichloropropene	N.D.	1.	5	ug/kg	98		74-120		
trans-1,3-Dichloropropene	N.D.	1.	5	ug/kg	97		77-120		
Ethylbenzene	N.D.	1.	5	ug/kg	106		80-120		
Freon 113	N.D.	2.	10	ug/kg	106		64-137		
Freon 123a	N.D.	2.	5	ug/kg	116		61-127		
Methylene Chloride	N.D.	2.	5	ug/kg	118		76-124		
1,1,1,2-Tetrachloroethane	N.D.	1.	5	ug/kg	97		80-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	5	ug/kg	96		71-123		
Tetrachloroethene	N.D.	1.	5	ug/kg	107		78-126		
Toluene	N.D.	1.	5	ug/kg	105		80-120		
1,1,1-Trichloroethane	N.D.	1.	5	ug/kg	103		71-125		
1,1,2-Trichloroethane	N.D.	1.	5	ug/kg	103		80-120		
Trichloroethene	N.D.	1.	5	ug/kg	105		80-120		
Trichlorofluoromethane	N.D.	2.	5	ug/kg	114		58-133		
1,2,3-Trichloropropane	N.D.	1.	5	ug/kg	99		71-123		
Vinyl Chloride	N.D.	1.	5	ug/kg	102		53-120		
Xylene (Total)	N.D.	1.	5	ug/kg	107		80-120		

Batch number: C120802AA

Sample number(s): 6584373-6584374

Benzene	N.D.	0.1	0.5	ug/l	102	102	80-120	1	30
Benzyl Chloride	N.D.	0.1	0.5	ug/l	88	88	73-120	0	30
Bromobenzene	N.D.	0.1	0.5	ug/l	94	94	80-120	0	30
Bromodichloromethane	N.D.	0.1	0.5	ug/l	98	98	80-120	0	30
Bromoform	N.D.	0.1	0.5	ug/l	92	90	70-128	2	30
Bromomethane	N.D.	0.1	0.5	ug/l	92	90	66-124	2	30
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	108	106	74-133	2	30
Chlorobenzene	N.D.	0.1	0.5	ug/l	98	97	80-120	1	30
Chloroethane	N.D.	0.1	0.5	ug/l	86	86	67-124	1	30
Chloroform	N.D.	0.1	0.5	ug/l	103	102	80-120	2	30
Chloromethane	N.D.	0.2	0.5	ug/l	117	115	55-135	2	30
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	96	96	80-120	0	30
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	94	96	80-120	1	30
Dibromochloromethane	N.D.	0.1	0.5	ug/l	95	94	80-120	1	30
Dibromomethane	N.D.	0.1	0.5	ug/l	101	99	80-120	2	30
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	93	93	80-120	0	30
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	94	93	80-120	1	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1296319

Reported: 03/30/12 at 07:37 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	93	93	80-120	0	30
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	83	83	39-120	0	30
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	102	102	89-122	0	30
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	103	102	80-127	1	30
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	111	110	80-123	1	30
1,2-Dichloroethene (Total)	N.D.	0.1	0.5	ug/l	105	104	80-120	1	30
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	98	98	80-120	0	30
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	92	92	74-120	1	30
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	92	92	80-120	0	30
Ethylbenzene	N.D.	0.1	0.5	ug/l	100	98	80-120	1	30
Freon 113	N.D.	0.2	0.5	ug/l	118	117	78-132	1	30
Freon 123a	N.D.	0.2	0.5	ug/l	95	92	76-133	3	30
Methylene Chloride	N.D.	0.2	0.5	ug/l	103	101	80-120	1	30
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	99	97	80-120	2	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	87	86	80-125	1	30
Tetrachloroethene	N.D.	0.1	0.5	ug/l	105	103	80-120	2	30
Toluene	N.D.	0.1	0.5	ug/l	101	100	80-120	1	30
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	107	105	79-127	2	30
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	97	95	80-120	1	30
Trichloroethene	N.D.	0.1	0.5	ug/l	103	101	80-120	2	30
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	105	104	66-134	1	30
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	91	90	80-120	1	30
Vinyl Chloride	N.D.	0.1	0.5	ug/l	134*	131*	65-127	2	30
Xylene (Total)	N.D.	0.1	0.5	ug/l	100	99	80-120	1	30

Batch number: Q120861AA
Trichloroethene

Sample number(s): 6584371
N.D. 50. 250

ug/kg 93 97 80-120 3 30

Batch number: X120851AA

Sample number(s): 6584371-6584372

Benzene	N.D.	0.5	5	ug/kg	95	92	80-120	3	30
Benzyl Chloride	N.D.	1.	4	ug/kg	87	83	66-120	5	30
Bromobenzene	N.D.	1.	5	ug/kg	90	87	79-120	4	30
Bromodichloromethane	N.D.	1.	5	ug/kg	87	84	78-120	3	30
Bromoform	N.D.	1.	5	ug/kg	84	80	70-120	5	30
Bromomethane	N.D.	2.	5	ug/kg	46	45	32-162	1	30
Carbon Tetrachloride	N.D.	1.	5	ug/kg	88	84	69-122	4	30
Chlorobenzene	N.D.	1.	5	ug/kg	95	92	80-120	3	30
Chloroethane	N.D.	2.	5	ug/kg	45	46	37-154	3	30
Chloroform	N.D.	1.	5	ug/kg	91	89	80-120	3	30
Chloromethane	N.D.	2.	5	ug/kg	71	70	56-120	2	30
2-Chlorotoluene	N.D.	1.	5	ug/kg	91	88	78-120	4	30
4-Chlorotoluene	N.D.	1.	5	ug/kg	93	91	79-120	2	30
Dibromochloromethane	N.D.	1.	5	ug/kg	89	86	77-120	3	30
Dibromomethane	N.D.	1.	5	ug/kg	88	84	80-120	4	30
1,2-Dichlorobenzene	N.D.	1.	5	ug/kg	95	92	79-120	3	30
1,3-Dichlorobenzene	N.D.	1.	5	ug/kg	94	91	78-120	3	30
1,4-Dichlorobenzene	N.D.	1.	5	ug/kg	95	93	79-120	3	30
Dichlorodifluoromethane	N.D.	2.	5	ug/kg	69	65	20-120	6	30
1,1-Dichloroethane	N.D.	1.	5	ug/kg	93	94	80-120	1	30
1,2-Dichloroethane	N.D.	1.	5	ug/kg	89	87	71-129	3	30
1,1-Dichloroethene	N.D.	1.	5	ug/kg	95	90	73-129	5	30
1,2-Dichloroethene (Total)	N.D.	1.	5	ug/kg	94	91	80-120	3	30
1,2-Dichloropropane	N.D.	1.	5	ug/kg	94	92	77-120	3	30
cis-1,3-Dichloropropene	N.D.	1.	5	ug/kg	84	82	74-120	3	30
trans-1,3-Dichloropropene	N.D.	1.	5	ug/kg	86	85	77-120	1	30
Ethylbenzene	N.D.	1.	5	ug/kg	95	92	80-120	2	30
Freon 113	N.D.	2.	10	ug/kg	93	90	64-137	3	30
Freon 123a	N.D.	2.	5	ug/kg	91	91	61-127	0	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1296319

Reported: 03/30/12 at 07:37 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Methylene Chloride	N.D.	2.	5	ug/kg	95	92	76-124	3	30
1,1,1,2-Tetrachloroethane	N.D.	1.	5	ug/kg	91	90	80-120	2	30
1,1,2,2-Tetrachloroethane	N.D.	1.	5	ug/kg	97	92	71-123	5	30
Tetrachloroethene	N.D.	1.	5	ug/kg	109	101	78-126	7	30
Toluene	N.D.	1.	5	ug/kg	95	93	80-120	2	30
1,1,1-Trichloroethane	N.D.	1.	5	ug/kg	88	84	71-125	5	30
1,1,2-Trichloroethane	N.D.	1.	5	ug/kg	97	97	80-120	0	30
Trichloroethene	N.D.	1.	5	ug/kg	92	89	80-120	3	30
Trichlorofluoromethane	N.D.	2.	5	ug/kg	80	76	58-133	6	30
1,2,3-Trichloropropane	N.D.	1.	5	ug/kg	95	91	71-123	4	30
Vinyl Chloride	N.D.	1.	5	ug/kg	72	69	53-120	4	30
Xylene (Total)	N.D.	1.	5	ug/kg	96	95	80-120	2	30

Batch number: 12086049531A
TOC Solids/Sludges Combustion

Sample number(s): 6584361-6584362, 6584364
N.D. 100,000 300,000 ug/kg

96 22-139

Batch number: 12082820004B

Sample number(s): 6584361-6584372

Moisture
Moisture

100 99-101
100 99-101
100 99-101

Moisture Duplicate

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: A120811AA	Sample number(s): 6584361-6584367 UNSPK: 6584365								
Benzene	108	101	55-143	21	30				
Benzyl Chloride	91	83	30-130	23	30				
Bromobenzene	99	82	43-139	32*	30				
Bromodichloromethane	111	102	53-136	22	30				
Bromoform	103	97	38-124	20	30				
Bromomethane	105	106	42-168	13	30				
Carbon Tetrachloride	126	117	45-153	21	30				
Chlorobenzene	98	83	49-135	30	30				
Chloroethane	99	97	39-152	16	30				
Chloroform	116	109	61-142	21	30				
Chloromethane	82	83	51-163	13	30				
2-Chlorotoluene	92	73	42-146	37*	30				
4-Chlorotoluene	88	68	39-145	39*	30				
Dibromochloromethane	103	95	51-128	22	30				
Dibromomethane	114	107	57-130	20	30				
1,2-Dichlorobenzene	92	74	36-133	35*	30				
1,3-Dichlorobenzene	91	71	34-134	38*	30				
1,4-Dichlorobenzene	89	70	35-136	37*	30				
Dichlorodifluoromethane	90	89	26-151	15	30				
1,1-Dichloroethane	108	103	63-142	18	30				
1,2-Dichloroethane	125	120	68-131	18	30				
1,1-Dichloroethene	123	116	61-149	19	30				
1,2-Dichloroethene (Total)	116	109	59-139	20	30				
1,2-Dichloropropane	98	92	62-135	19	30				

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1296319

Reported: 03/30/12 at 07:37 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
cis-1,3-Dichloropropene	101	92	51-131	23	30				
trans-1,3-Dichloropropene	98	88	49-129	24	30				
Ethylbenzene	97	80	44-141	33*	30				
Freon 113	130	124	56-156	19	30				
Freon 123a	108	104	34-153	17	30				
Methylene Chloride	107	97	61-141	21	30				
1,1,1,2-Tetrachloroethane	104	92	52-130	26	30				
1,1,2,2-Tetrachloroethane	94	93	40-152	14	30				
Tetrachloroethene	117	100	42-149	29	30				
Toluene	100	88	50-146	26	30				
1,1,1-Trichloroethane	125	118	64-142	19	30				
1,1,2-Trichloroethane	106	101	54-139	18	30				
Trichloroethene	114	102	53-144	23	30				
Trichlorofluoromethane	129	130	47-163	13	30				
1,2,3-Trichloropropane	113	114	45-154	13	30				
Vinyl Chloride	99	98	50-154	14	30				
Xylene (Total)	96	79	44-136	33*	30				

Batch number: A120831AA

Sample number(s): 6584368-6584370 UNSPK: P584796

Benzene	97	104	55-143	4	30
Benzyl Chloride	91	99	30-130	5	30
Bromobenzene	95	102	43-139	3	30
Bromodichloromethane	92	96	53-136	2	30
Bromoform	82	87	38-124	3	30
Bromomethane	97	100	42-168	0	30
Carbon Tetrachloride	91	98	45-153	4	30
Chlorobenzene	95	99	49-135	1	30
Chloroethane	92	95	39-152	0	30
Chloroform	94	101	61-142	4	30
Chloromethane	86	90	51-163	2	30
2-Chlorotoluene	94	100	42-146	3	30
4-Chlorotoluene	93	99	39-145	3	30
Dibromochloromethane	88	93	51-128	3	30
Dibromomethane	92	98	57-130	3	30
1,2-Dichlorobenzene	94	99	36-133	3	30
1,3-Dichlorobenzene	95	101	34-134	3	30
1,4-Dichlorobenzene	94	99	35-136	2	30
Dichlorodifluoromethane	89	94	26-151	2	30
1,1-Dichloroethane	93	98	63-142	3	30
1,2-Dichloroethane	98	103	68-131	2	30
1,1-Dichloroethene	97	103	61-149	4	30
1,2-Dichloroethene (Total)	97	104	59-139	4	30
1,2-Dichloropropane	90	97	62-135	4	30
cis-1,3-Dichloropropene	90	96	51-131	4	30
trans-1,3-Dichloropropene	90	95	49-129	2	30
Ethylbenzene	100	105	44-141	2	30
Freon 113	97	104	56-156	4	30
Freon 123a	103	107	34-153	1	30
Methylene Chloride	96	104	61-141	5	30
1,1,1,2-Tetrachloroethane	90	94	52-130	1	30
1,1,2,2-Tetrachloroethane	99	108	40-152	6	30
Tetrachloroethene	101	104	42-149	0	30
Toluene	100	105	50-146	2	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1296319

Reported: 03/30/12 at 07:37 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
1,1,1-Trichloroethane	95	100	64-142	2	30				
1,1,2-Trichloroethane	98	103	54-139	2	30				
Trichloroethene	96	103	53-144	5	30				
Trichlorofluoromethane	117	121	47-163	1	30				
1,2,3-Trichloropropane	101	108	45-154	4	30				
Vinyl Chloride	100	105	50-154	2	30				
Xylene (Total)	99	105	44-136	2	30				

Batch number: X120851AA

Sample number(s): 6584371-6584372 UNSPK: P586512

Benzene	91		55-143						
Benzyl Chloride	85		30-130						
Bromobenzene	85		43-139						
Bromodichloromethane	80		53-136						
Bromoform	79		38-124						
Bromomethane	46		42-168						
Carbon Tetrachloride	85		45-153						
Chlorobenzene	89		49-135						
Chloroethane	47		39-152						
Chloroform	85		61-142						
Chloromethane	73		51-163						
2-Chlorotoluene	83		42-146						
4-Chlorotoluene	77		39-145						
Dibromochloromethane	81		51-128						
Dibromomethane	82		57-130						
1,2-Dichlorobenzene	81		36-133						
1,3-Dichlorobenzene	81		34-134						
1,4-Dichlorobenzene	84		35-136						
Dichlorodifluoromethane	68		26-151						
1,1-Dichloroethane	88		63-142						
1,2-Dichloroethane	81		68-131						
1,1-Dichloroethene	92		61-149						
1,2-Dichloroethene (Total)	88		59-139						
1,2-Dichloropropane	86		62-135						
cis-1,3-Dichloropropene	79		51-131						
trans-1,3-Dichloropropene	84		49-129						
Ethylbenzene	89		44-141						
Freon 113	90		56-156						
Freon 123a	94		34-153						
Methylene Chloride	87		61-141						
1,1,1,2-Tetrachloroethane	84		52-130						
1,1,2,2-Tetrachloroethane	93		40-152						
Tetrachloroethene	89		42-149						
Toluene	92		50-146						
1,1,1-Trichloroethane	85		64-142						
1,1,2-Trichloroethane	88		54-139						
Trichloroethene	86		53-144						
Trichlorofluoromethane	83		47-163						
1,2,3-Trichloropropane	90		45-154						
Vinyl Chloride	75		50-154						
Xylene (Total)	91		44-136						

Batch number: 12086049531A

Sample number(s): 6584361-6584362, 6584364 UNSPK: P588318 BKG: P588318

TOC Solids/Sludges Combustion

83 24-149 24,000,000 23,000,000 4

13

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1296319

Reported: 03/30/12 at 07:37 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 12082820004B	Sample number(s): 6584361-6584372 BKG: 6584365								
Moisture						4.8	4.7	2	15
Moisture						4.8	4.7	2	15
Moisture Duplicate						4.8	4.7	2	15

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL VOCs by 8260 (soil)

Batch number: A120811AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6584361	103	102	93	98
6584362	103	100	94	97
6584363	104	100	94	96
6584364	100	95	98	88
6584365	104	101	93	98
6584366	104	101	94	95
6584367	105	103	94	96
Blank	103	99	93	97
LCS	105	101	93	97
MS	104	101	94	95
MSD	105	103	94	96
Limits:	50-141	54-135	52-141	50-131

Analysis Name: TCL VOCs by 8260 (soil)

Batch number: A120831AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6584368	93	100	101	97
6584369	91	94	111	83
6584370	94	101	100	99
Blank	94	99	99	98
LCS	96	101	99	99
MS	96	101	100	99
MSD	95	102	99	97
Limits:	50-141	54-135	52-141	50-131

Analysis Name: EPA SW846/8260 (water-25ml) #1

Batch number: C120802AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6584373	104	102	97	94
6584374	105	103	97	94
Blank	103	104	98	97

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1296319

Reported: 03/30/12 at 07:37 PM

Surrogate Quality Control

LCS	102	101	100	101
LCSD	101	103	100	100

Limits:	77-114	74-113	77-110	78-110
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Analysis Name: TCL VOCs by 8260 (soil)

Batch number: Q120861AA

Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
----------------------	-----------------------	------------	----------------------

Blank	92	99	100	93
LCS	90	97	95	88
LCSD	95	98	100	93

Limits:	50-141	54-135	52-141	50-131
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Analysis Name: TCL VOCs by 8260 (soil)

Batch number: X120851AA

Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
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6584371	104	111	96	91
6584372	104	103	101	79
Blank	103	104	94	91
LCS	100	105	106	97
LCSD	97	104	106	98
MS	98	110	105	100

Limits:	50-141	54-135	52-141	50-131
---------	--------	--------	--------	--------

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Project Name: IBM - Kingston
LLI Group #: 1296319

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260B, GC/MS Volatiles**

Batch #: A120811AA (Sample number(s): 6584361-6584367 UNSPK: 6584365)

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside outside acceptance windows: Ethylbenzene, Bromobenzene, 2-Chlorotoluene, 4-Chlorotoluene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Xylene (Total)

Sample #s: 6584369

The GC/MS volatile internal standard peak areas were outside the QC limits. A re-analysis was performed, and the matrix effect was confirmed.

SW-846 8260B 25mL purge, GC/MS Volatiles

Batch #: C120802AA (Sample number(s): 6584373-6584374)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Vinyl Chloride



Lancaster
Laboratories

Acct. # 12694

For Lancaster Laboratories use only
Group # 126319 Sample # 6584361-74
Instructions on reverse side correspond with circled numbers.

IBM Chain of Custody

COC # 016010

1 Client Information				4 Matrix				5 Analyses Requested												For Lab Use Only 1 of 2							
Client <u>IBM</u>				☐ Sediment ☐ Ground ☐ Surface ☐ Potable ☐ NPDES ☐ Air				Preservation Code												SCR#							
Project Name/# <u>KINGSTON</u>																											
IBM PM <u>M. KOMINEK</u>				Project State <u>NEW YORK</u>				<u>SOIL ORGANIC DEMAND</u> <u>TOTAL ORGANIC CARBON</u> <u>GRAIN SIZE</u>												Preservation Codes H = HC T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other							
P.O. #				Sampler <u>D. GORMAN</u>																6 Remarks							
Check One: ☐ Routine Lab GW ☐ Routine GTF O&M ☐ Non-Routine Investigation ☐ Non-Routine Upgrades/Installs				OU: (Endicott Non-Routine only)																							
2 Sample Identification				3 Collected		3 Grab		Composite																			
				Date	Time			Soil	Water	Oil	Total # of Containers	VOCs	SOIL ORGANIC DEMAND	TOTAL ORGANIC CARBON	GRAIN SIZE												
SAB-SB-01-4.0-4.5				03/19/12	1115	X		X			7	X	X	X	X												
SAB-SB-01-20.0-20.5					1135	X		X			7	X	X	X	X												
SAB-SB-01-20.0-20.50					1135	X		X			4	X															
SAB-SB-01-24.0-24.5 24.5-25.0				03/19/12	1150	X		X			7	X	X	X	X	The sample IDs are updated per DG.											
SAB-SB-02-4.0-4.5					1230	X		X			4	X				NLM3/22/12											
SAB-SB-02-4.0-4.5MS					1235	X		X			4	X															
SAB-SB-02-4.0-4.5MSO					1240	X		X			4	X															
SAB-SB-02-19.0-19.5					1245	X		X			4	X															
SAB-SB-02-24.0-24.5					1250	X		X			4	X															
SAB-SB-03-4.0-4.5				03/19/12	1355	X		X			4	X															
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by				Date				Time				Received by				Date				Time			
Standard Rush				[Signature]				03/19/12				1:00				[Signature]				03/19/12				9:30			
(Rush TAT is subject to Lancaster Laboratories approval and surcharges.)				Relinquished by				Date				Time				Received by				Date				Time			
Date results are needed:				Relinquished by				Date				Time				Received by				Date				Time			
Rush results requested by (please circle) E-mail Phone				Relinquished by				Date				Time				Received by				Date				Time			
E-mail: CHEMINGWAY@GOLDFLON Phone: 9736951922				Relinquished by				Date				Time				Received by				Date				Time			
8 Data Package Options (please circle if required)				Relinquished by				Date				Time				Received by				Date				Time			
Type I (Validation/NJ Reg) TX TRRP-13 NY ASP A				Site-specific QC (MS/MSD/Dup)?				Yes No				Temperature upon receipt				1.5 °C											
Type III (Reduced NJ) MA MCP NY ASP B				(If yes, indicate QC sample and submit triplicate volume.)																							
Type VI (Raw Data Only) CT RCP																											
SDG Complete? Yes No																											



**Lancaster
Laboratories**

For Lancaster Laboratories use only

Acct. # 12694 Group # 1296319 Sample # 6584361-74

COC # 302121 *20F2*

Please print. Instructions on reverse side correspond with circled numbers.

For Lab Use Only

FSC: _____
SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate

$$N = \text{HNO}_3 \quad B = \text{NaOH}$$

S=H₂SO₄ **O**=Other

6

Temperature of samples

[illegible]

Nicole Maljovec

From: Gorman, Daniel [Daniel_Gorman@golder.com]
Sent: Thursday, March 22, 2012 6:44 AM
To: Nicole Maljovec
Subject: RE: Sample Depth Discrepancy between COC and Sample Labels

The correct sample IDs are as follows:

SAB-SB-01-24.5-25.0
SAB-SB-02-19.0-19.5
SAB-SB-02-24.0-24.5

From: Nicole Maljovec [mailto:nmaljovec@lancasterlabs.com]
Sent: Wednesday, March 21, 2012 1:02 PM
To: Gorman, Daniel
Subject: Sample Depth Discrepancy between COC and Sample Labels
Importance: High

Hi Dan,
Can you double check the depths on three samples?

SAB-SB-01-24.0-24.5 (COC) has a depth of 24.5-25.0 on the sample label
SAB-SB-02-19.0-19.5 (COC) has a depth of 20.0-20.5 on the sample label
SAB-SB-02-24.0-24.5 (COC) has a depth of 24.5-25.0 on the sample label

Please let me know if we should follow the COC or the bottle labels for the depths.

Thanks!
Nicole

3/22/2012

Environmental Sample Administration Receipt Documentation Log

Client/Project: 1Bm
Date of Receipt: 3-20-12
Time of Receipt: 930
Source Code: 50-1

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	9422	1.5	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 6

Paperwork Discrepancy/Unpacking Problems:

^{BB}
³⁻²⁰⁻¹² SAB-SB-01-24.0-24.5 Time 1150 ID on ^{label} table
Says - SAB-SB-01-24.5-25.0 Time 1150
SAB-SB-02-19.0-19.5 Time 1245 ID on ^{label} table
Says SAB-SB-02-20.0-20.5
SAB-SB-02-24.0-24.5 Time 1250 ID on ^{label} table
Says SAB-SB-02-24.5-25.0 ^{BB 3-20-12}

Unpacker Signature/Emp#: Burachy Barely ²²⁹⁹ Date/Time: 3-20-12 1019

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but $\geq$ IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

March 30, 2012

Project: IBM - Kingston

Submittal Date: 03/24/2012

Group Number: 1297526

SDG: IBK43

PO Number: 5003311252

Release Number: 083-87071

State of Sample Origin: NY

Client Sample DescriptionSAB-TW-01-12 Grab Water
SAB-TW-01-12MS Grab Water
SAB-TW-01-12MSD Grab Water
SAB-TW-02 Grab Water
SAB-TW-02D Grab Water
TB12044-032212 Water
RINSATE-032212 Grab WaterLancaster Labs (LLI) #6591078
6591079
6591080
6591081
6591082
6591083
6591084

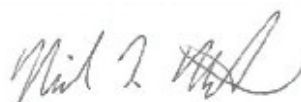
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC Golder Associates, Inc.
COPY TO
ELECTRONIC Golder Associates
COPY TO
1 COPY TO Data Package Group

Attn: Christopher Hemingway

Attn: Cindi Lucas-Youmans

Respectfully Submitted,



Nicole L. Maljovec
Senior Specialist Group Leader

(717) 556-7259

Sample Description: SAB-TW-01-12 Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591078
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 13:25 by JL

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/24/2012 09:25

Reported: 03/30/2012 11:18

TW112 SDG#: IBK43-01BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	1.4	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	6.1	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.1 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	18	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	4.0	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	2.1	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	2.0	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	1.9	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.7	0.1	0.5	1
02898	Trichloroethene	79-01-6	62	1.0	5.0	10
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-01-12 Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591078
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 13:25 by JL

IBM

8976 Wellington Road

Submitted: 03/24/2012 09:25

Manassas VA 20109

Reported: 03/30/2012 11:18

TW112 SDG#: IBK43-01BKG

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 13:22	Jason M Long	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 14:27	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120881AA	03/28/2012 13:22	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G120881AA	03/28/2012 14:27	Jason M Long	10

Sample Description: SAB-TW-01-12MS Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591079
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 13:25 by JL

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/24/2012 09:25

Reported: 03/30/2012 11:18

TW112 SDG#: IBK43-01MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	5.2	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	4.8	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.3	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.1	0.1	0.5	1
02898	Bromoform	75-25-2	4.8	0.1	0.5	1
02898	Bromomethane	74-83-9	5.9	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.1	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.2	0.1	0.5	1
02898	Chloroethane	75-00-3	6.4	0.1	0.5	1
02898	Chloroform	67-66-3	6.7	0.1	0.5	1
02898	Chloromethane	74-87-3	5.8	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.2	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.2	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	5.1	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.6	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.1	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.2	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.1	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.1	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	11	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.4	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	24	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	15	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.1	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.0	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.9	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.1	0.1	0.5	1
02898	Freon 113	76-13-1	7.7	0.2	0.5	1
02898	Freon 123a	354-23-4	4.4	0.2	0.5	1
02898	Methylene Chloride	75-09-2	5.6	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.0	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.4	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	6.9	0.1	0.5	1
02898	Toluene	108-88-3	5.2	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	7.1	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	6.2	0.1	0.5	1
02898	Trichloroethene	79-01-6	72	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.8	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.5	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	5.8	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-01-12MS Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591079
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 13:25 by JL

IBM

8976 Wellington Road

Submitted: 03/24/2012 09:25

Manassas VA 20109

Reported: 03/30/2012 11:18

TW112 SDG#: IBK43-01MS

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 13:44	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120881AA	03/28/2012 13:44	Jason M Long	1

Sample Description: SAB-TW-01-12MSD Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591080
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 13:25 by JL

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/24/2012 09:25

Reported: 03/30/2012 11:18

TW112 SDG#: IBK43-01MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	5.2	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	4.9	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.2	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.1	0.1	0.5	1
02898	Bromoform	75-25-2	4.8	0.1	0.5	1
02898	Bromomethane	74-83-9	5.9	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.1	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.2	0.1	0.5	1
02898	Chloroethane	75-00-3	6.4	0.1	0.5	1
02898	Chloroform	67-66-3	6.6	0.1	0.5	1
02898	Chloromethane	74-87-3	5.8	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.2	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.2	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	5.2	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.6	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.1	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.2	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.1	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	4.1	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	11	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.4	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	24	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	15	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.1	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.1	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	4.9	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.2	0.1	0.5	1
02898	Freon 113	76-13-1	7.5	0.2	0.5	1
02898	Freon 123a	354-23-4	4.5	0.2	0.5	1
02898	Methylene Chloride	75-09-2	5.6	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.1	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.4	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	7.0	0.1	0.5	1
02898	Toluene	108-88-3	5.2	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	7.0	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	6.1	0.1	0.5	1
02898	Trichloroethene	79-01-6	72	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.9	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.4	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	5.8	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-01-12MSD Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591080
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 13:25 by JL

IBM

8976 Wellington Road

Submitted: 03/24/2012 09:25

Manassas VA 20109

Reported: 03/30/2012 11:18

TW112 SDG#: IBK43-01MSD

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 14:05	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120881AA	03/28/2012 14:05	Jason M Long	1

Sample Description: SAB-TW-02 Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591081
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 15:07 by JL

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/24/2012 09:25

Reported: 03/30/2012 11:18

TW102 SDG#: IBK43-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.2	1.0	2
02898	Benzyl Chloride	100-44-7	N.D.	0.2	1.0	2
02898	Bromobenzene	108-86-1	N.D.	0.2	1.0	2
02898	Bromodichloromethane	75-27-4	N.D.	0.2	1.0	2
02898	Bromoform	75-25-2	N.D.	0.2	1.0	2
02898	Bromomethane	74-83-9	N.D.	0.2	1.0	2
02898	Carbon Tetrachloride	56-23-5	N.D.	0.2	1.0	2
02898	Chlorobenzene	108-90-7	N.D.	0.2	1.0	2
02898	Chloroethane	75-00-3	N.D.	0.2	1.0	2
02898	Chloroform	67-66-3	N.D.	0.2	1.0	2
02898	Chloromethane	74-87-3	N.D.	0.4	1.0	2
02898	2-Chlorotoluene	95-49-8	N.D.	0.2	1.0	2
02898	4-Chlorotoluene	106-43-4	N.D.	0.2	1.0	2
02898	Dibromochloromethane	124-48-1	N.D.	0.2	1.0	2
02898	Dibromomethane	74-95-3	N.D.	0.2	1.0	2
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	1.0	2
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	1.0	2
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	1.0	2
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.2	1.0	2
02898	1,1-Dichloroethane	75-34-3	34	0.2	1.0	2
02898	1,2-Dichloroethane	107-06-2	0.8 J	0.2	1.0	2
02898	1,1-Dichloroethene	75-35-4	38	0.2	1.0	2
02898	1,2-Dichloroethene (Total)	540-59-0	24	0.2	1.0	2
02898	1,2-Dichloropropane	78-87-5	N.D.	0.2	1.0	2
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.2	1.0	2
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.2	1.0	2
02898	Ethylbenzene	100-41-4	N.D.	0.2	1.0	2
02898	Freon 113	76-13-1	0.7 J	0.4	1.0	2
02898	Freon 123a	354-23-4	1.1	0.4	1.0	2
02898	Methylene Chloride	75-09-2	N.D.	0.4	1.0	2
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.2	1.0	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1.0	2
02898	Tetrachloroethene	127-18-4	N.D.	0.2	1.0	2
02898	Toluene	108-88-3	N.D.	0.2	1.0	2
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1.0	2
02898	1,1,2-Trichloroethane	79-00-5	0.3 J	0.2	1.0	2
02898	Trichloroethene	79-01-6	180	2.0	10	20
02898	Trichlorofluoromethane	75-69-4	N.D.	0.2	1.0	2
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.6	2.0	2
02898	Vinyl Chloride	75-01-4	0.5 J	0.2	1.0	2
02898	Xylene (Total)	1330-20-7	N.D.	0.2	1.0	2

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-02 Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591081
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 15:07 by JL

IBM

8976 Wellington Road

Submitted: 03/24/2012 09:25

Manassas VA 20109

Reported: 03/30/2012 11:18

TW102 SDG#: IBK43-02

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 14:48	Jason M Long	2
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 15:10	Jason M Long	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120881AA	03/28/2012 14:48	Jason M Long	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G120881AA	03/28/2012 15:10	Jason M Long	20

Sample Description: SAB-TW-02D Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591082
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 15:07 by JL

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/24/2012 09:25

Reported: 03/30/2012 11:18

T012D SDG#: IBK43-03FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.2	1.0	2
02898	Benzyl Chloride	100-44-7	N.D.	0.2	1.0	2
02898	Bromobenzene	108-86-1	N.D.	0.2	1.0	2
02898	Bromodichloromethane	75-27-4	N.D.	0.2	1.0	2
02898	Bromoform	75-25-2	N.D.	0.2	1.0	2
02898	Bromomethane	74-83-9	N.D.	0.2	1.0	2
02898	Carbon Tetrachloride	56-23-5	N.D.	0.2	1.0	2
02898	Chlorobenzene	108-90-7	N.D.	0.2	1.0	2
02898	Chloroethane	75-00-3	N.D.	0.2	1.0	2
02898	Chloroform	67-66-3	N.D.	0.2	1.0	2
02898	Chloromethane	74-87-3	N.D.	0.4	1.0	2
02898	2-Chlorotoluene	95-49-8	N.D.	0.2	1.0	2
02898	4-Chlorotoluene	106-43-4	N.D.	0.2	1.0	2
02898	Dibromochloromethane	124-48-1	N.D.	0.2	1.0	2
02898	Dibromomethane	74-95-3	N.D.	0.2	1.0	2
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	1.0	2
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	1.0	2
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	1.0	2
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.2	1.0	2
02898	1,1-Dichloroethane	75-34-3	36	0.2	1.0	2
02898	1,2-Dichloroethane	107-06-2	0.8 J	0.2	1.0	2
02898	1,1-Dichloroethene	75-35-4	38	0.2	1.0	2
02898	1,2-Dichloroethene (Total)	540-59-0	24	0.2	1.0	2
02898	1,2-Dichloropropane	78-87-5	N.D.	0.2	1.0	2
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.2	1.0	2
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.2	1.0	2
02898	Ethylbenzene	100-41-4	N.D.	0.2	1.0	2
02898	Freon 113	76-13-1	0.8 J	0.4	1.0	2
02898	Freon 123a	354-23-4	1.1	0.4	1.0	2
02898	Methylene Chloride	75-09-2	N.D.	0.4	1.0	2
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.2	1.0	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1.0	2
02898	Tetrachloroethene	127-18-4	N.D.	0.2	1.0	2
02898	Toluene	108-88-3	N.D.	0.2	1.0	2
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1.0	2
02898	1,1,2-Trichloroethane	79-00-5	0.3 J	0.2	1.0	2
02898	Trichloroethene	79-01-6	190	2.0	10	20
02898	Trichlorofluoromethane	75-69-4	N.D.	0.2	1.0	2
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.6	2.0	2
02898	Vinyl Chloride	75-01-4	0.5 J	0.2	1.0	2
02898	Xylene (Total)	1330-20-7	N.D.	0.2	1.0	2

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-02D Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591082
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 15:07 by JL

IBM

8976 Wellington Road

Submitted: 03/24/2012 09:25

Manassas VA 20109

Reported: 03/30/2012 11:18

T012D SDG#: IBK43-03FD

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 15:31	Jason M Long	2
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 15:52	Jason M Long	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120881AA	03/28/2012 15:31	Jason M Long	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G120881AA	03/28/2012 15:52	Jason M Long	20

Sample Description: TB12044-032212 Water
IBM - Kingston, NY

LLI Sample # WW 6591083
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012

IBM

Submitted: 03/24/2012 09:25

8976 Wellington Road

Reported: 03/30/2012 11:18

Manassas VA 20109

TB044 SDG#: IBK43-04TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: TB12044-032212 Water
IBM - Kingston, NY

LLI Sample # WW 6591083
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012

IBM

8976 Wellington Road

Submitted: 03/24/2012 09:25

Manassas VA 20109

Reported: 03/30/2012 11:18

TB044 SDG#: IBK43-04TB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 13:01	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120881AA	03/28/2012 13:01	Jason M Long	1

Sample Description: RINSATE-032212 Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591084
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 by JL

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/24/2012 09:25

Reported: 03/30/2012 11:18

RB322 SDG#: IBK43-05RB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: RINSATE-032212 Grab Water
IBM - Kingston, NY

LLI Sample # WW 6591084
LLI Group # 1297526
Account # 12694

Project Name: IBM - Kingston

Collected: 03/22/2012 by JL

IBM

8976 Wellington Road

Submitted: 03/24/2012 09:25

Manassas VA 20109

Reported: 03/30/2012 11:18

RB322 SDG#: IBK43-05RB*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120881AA	03/28/2012 16:14	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120881AA	03/28/2012 16:14	Jason M Long	1

Quality Control Summary

Client Name: IBM

Group Number: 1297526

Reported: 03/30/12 at 11:18 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: G120881AA	Sample number(s): 6591078-6591084								
Benzene	N.D.	0.1	0.5	ug/l	98		80-120		
Benzyl Chloride	N.D.	0.1	0.5	ug/l	100		73-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	102		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	101		70-128		
Bromomethane	N.D.	0.1	0.5	ug/l	114		66-124		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	94		74-133		
Chlorobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	122		67-124		
Chloroform	N.D.	0.1	0.5	ug/l	100		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	113		55-135		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	102		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	102		80-120		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	105		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	113		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	100		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	78		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	98		89-122		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	105		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	105		80-123		
1,2-Dichloroethene (Total)	N.D.	0.1	0.5	ug/l	103		80-120		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	99		80-120		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	100		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	101		80-120		
Ethylbenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	98		78-132		
Freon 123a	N.D.	0.2	0.5	ug/l	81		76-133		
Methylene Chloride	N.D.	0.2	0.5	ug/l	108		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	98		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	112		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	91		80-120		
Toluene	N.D.	0.1	0.5	ug/l	100		80-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	95		79-127		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	100		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	110		66-134		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	108		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	110		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	100		80-120		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM
Reported: 03/30/12 at 11:18 AM

Group Number: 1297526

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: G120881AA Sample number(s): 6591078-6591084 UNSPK: 6591078									
Benzene	103	103	87-126	0	30				
Benzyl Chloride	96	98	62-125	3	30				
Bromobenzene	107	105	80-123	2	30				
Bromodichloromethane	103	102	82-133	1	30				
Bromoform	97	95	60-138	1	30				
Bromomethane	117	118	69-135	0	30				
Carbon Tetrachloride	102	102	81-148	0	30				
Chlorobenzene	104	104	78-133	0	30				
Chloroethane	127	128	70-139	1	30				
Chloroform	105	104	86-136	1	30				
Chloromethane	116	116	55-152	0	30				
2-Chlorotoluene	104	105	81-120	1	30				
4-Chlorotoluene	103	104	82-119	1	30				
Dibromochloromethane	102	104	79-125	1	30				
Dibromomethane	113	111	83-126	1	30				
1,2-Dichlorobenzene	101	103	83-117	1	30				
1,3-Dichlorobenzene	103	104	81-118	0	30				
1,4-Dichlorobenzene	102	103	79-120	0	30				
Dichlorodifluoromethane	83	82	39-155	2	30				
1,1-Dichloroethane	104	100	88-136	2	30				
1,2-Dichloroethane	105	105	82-135	0	30				
1,1-Dichloroethene	121	111	83-150	2	30				
1,2-Dichloroethene (Total)	109	108	91-131	1	30				
1,2-Dichloropropane	103	103	91-126	0	30				
cis-1,3-Dichloropropene	101	101	74-132	0	30				
trans-1,3-Dichloropropene	98	98	71-128	1	30				
Ethylbenzene	102	103	80-140	1	30				
Freon 113	111	106	87-158	3	30				
Freon 123a	89	89	81-151	1	30				
Methylene Chloride	113	111	84-122	1	30				
1,1,1,2-Tetrachloroethane	100	101	87-126	1	30				
1,1,2,2-Tetrachloroethane	108	108	75-131	1	30				
Tetrachloroethene	98	99	63-156	1	30				
Toluene	104	105	83-127	0	30				
1,1,1-Trichloroethane	102	101	85-140	1	30				
1,1,2-Trichloroethane	110	107	85-129	2	30				
Trichloroethene	94 (2)	83 (2)	85-131	1	30				
Trichlorofluoromethane	116	117	67-161	1	30				
1,2,3-Trichloropropane	109	107	76-120	2	30				
Vinyl Chloride	116	115	65-151	1	30				
Xylene (Total)	104	104	81-137	0	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA SW846/8260 (water-25ml) #1

*- Outside of specification

**.-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM
Reported: 03/30/12 at 11:18 AM

Group Number: 1297526

Surrogate Quality Control

Batch number: G120881AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6591078	103	108	98	96
6591079	103	107	99	97
6591080	103	104	99	98
6591081	103	108	98	96
6591082	104	107	99	96
6591083	104	107	98	96
6591084	103	107	98	96
Blank	104	109	98	96
LCS	102	107	99	97
MS	103	107	99	97
MSD	103	104	99	98
Limits:	77-114	74-113	77-110	78-110

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Project Name: IBM - Kingston
LLI Group #: 1297526

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260B 25mL purge, GC/MS Volatiles**

Batch #: G120881AA (Sample number(s): 6591078-6591084 UNSPK: 6591078)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Trichloroethene

Environmental Analysis Request/Chain of Custody



**Lancaster
Laboratories**

For Lancaster Laboratories use only

Acct. # 12694 Group # 1297526 Sample # 6591078-84 **COC # 302122**

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>IBM</u> Acct. #: _____ Project Name/ #: <u>KINGSTON</u> PWSID #: _____ Project Manager: <u>M. KOMINEK</u> P.O. #: _____ Sampler: <u>J. LOGUS/D. GORMAN</u> Quote #: _____ Name of state where samples were collected: <u>NEW YORK</u>				4 Matrix ☐ Sediment ☒ Ground Surface ☐ Potable Water ☐ NPDES Other: <u>LAB DE</u>		5 Analyses Requested Preservation Codes H ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐										For Lab Use Only FSC: _____ SCR#: _____							
						Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																	
2 Sample Identification				3 Composite		Soil ☐ Water ☐ Other: <u>LAB DE</u>		Total # of Containers <u>1065</u>												6 Temperature of samples upon receipt (if requested)			
Date Collected				Time Collected		Grab		Composite												Remarks			
<u>SAB-TW-Q1-12</u>				<u>03/22/12</u>		<u>1325</u>		☒		3		☒											
<u>SAB-TW-Q1-12MS</u>				<u>03/22/12</u>		<u>1325</u>		☒		3		☒											
<u>SAB-TW-Q1-12MSO</u>				<u>03/22/12</u>		<u>1325</u>		☒		3		☒											
<u>SAB-TW-Q2</u>				<u>03/22/12</u>		<u>1507</u>		☒		3		☒											
<u>SAB-TW-Q2D</u>				<u>03/22/12</u>		<u>1507</u>		☒		3		☒											
<u>TB12044-032212</u>										1		☒											
<u>RINSATE-032212</u>				<u>03/22/12</u>						3		☒											

7 Turnaround Time Requested (TAT) (please circle): <u>Standard</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone E-mail Phone #: <u>9736451922</u> E-mail address: <u>CHEMINGWAY@GALDER.COM</u>				Relinquished by: <u>[Signature]</u> Date <u>3/22/12</u> Time <u>1445</u>		Received by: _____ Date _____ Time _____	
				Relinquished by: _____ Date _____ Time _____		Received by: _____ Date _____ Time _____	
				Relinquished by: _____ Date _____ Time _____		Received by: _____ Date _____ Time _____	
				Relinquished by: _____ Date _____ Time _____		Received by: _____ Date _____ Time _____	
8 Data Package Options (please circle if required) Type I (Validation/non-CLP) MA MCP CT RCP Yes No Type III (Reduced non-CLP) Type IV (CLP SOW) Type VI (Raw Data Only) TX TRRP-13				EDD Required? Yes No		Site-specific QC (MS/MSD/Dup)? Yes No (if yes, indicate QC sample and submit triplicate sample volume)	

Relinquished by: _____ Date _____ Time _____		Received by: <u>[Signature]</u> Date <u>3-24-12</u> Time <u>920</u>	
--	--	---	--

Environmental Sample Administration
Receipt Documentation LogClient/Project: IBMShipping Container Sealed: YES NODate of Receipt: 3-24-12Custody Seal Present * : YES NOTime of Receipt: 925* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 50-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	9422	0.4	TB	WI	Y	L	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

SAB-TW-02 = SAB-TW-02-22 TIME
150?SAB-TW-02D = SAB-TW-02-22D TIME 150?

Unpacker Signature/Emp#:

Brian D. Dancy 2249

Date/Time:

3-24-12 1210

Issued by Dept. 6042 Management

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but $\geq$ IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

April 13, 2012

Project: IBM - Kingston

Submittal Date: 03/30/2012

Group Number: 1299021

SDG: IBK48

PO Number: 5003311252

Release Number: 083-87071

State of Sample Origin: NY

Client Sample DescriptionLancaster Labs (LLI) #

TB12075-032912 Water	6599209
RINSATE02-032912 Grab Water	6599210
IWB1-SB-04-4.0-4.5 Grab Soil	6599211
IWB1-SB-04-9.0-9.5 Grab Soil	6599212
IWB1-SB-04-9.0-9.5D Grab Soil	6599213
IWB1-SB-04-23.0-23.5 Grab Soil	6599214
IWB1-SB-05-4.0-4.5 Grab Soil	6599215
IWB1-SB-05-11.0-11.5 Grab Soil	6599216
IWB1-SB-05-11.0-11.5 Matrix Spike Grab Soil	6599217
IWB1-SB-05-11.0-11.5 Matrix Spike Dup Grab Soil	6599218
SS-TW-27-15 Grab Water	6599219
SAB-TW-03-12 Grab Water	6599220
SAB-TW-04-22 Grab Water	6599221
IWB1-TW-10-12 Grab Water	6599222
IWB1-TW-10-12D Grab Water	6599223
IWB1-TW-11-18 Grab Water	6599224
IWB1-TW-11-18 Matrix Spike Grab Water	6599225
IWB1-TW-11-18 Matrix Spike Dup Grab Water	6599226
TB12075-032912 Water	6599227
RINSATE-032912 Grab Water	6599228
IWB1-SB-05-22.5-23.0 Grab Soil	6599229
IWB1-SB-06-4.0-4.5 Grab Soil	6599230
IWB1-SB-06-11.0-11.5 Grab Soil	6599231
IWB1-SB-06-23.0-23.5 Grab Soil	6599232

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO
ELECTRONIC COPY TO
1 COPY TO

Golder Associates, Inc.

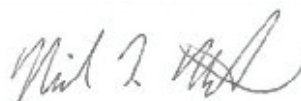
Golder Associates

Data Package Group

Attn: Christopher Hemingway

Attn: Cindi Lucas-Youmans

Respectfully Submitted,



Nicole L. Maljovec
Senior Specialist Group Leader

(717) 556-7259

Sample Description: TB12075-032912 Water
Kingston

LLI Sample # WW 6599209
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012

IBM

Submitted: 03/30/2012 09:30

8976 Wellington Road

Reported: 04/13/2012 08:30

Manassas VA 20109

TB-01 SDG#: IBK48-01TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: TB12075-032912 Water
Kingston

LLI Sample # WW 6599209
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

TB-01 SDG#: IBK48-01TB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 05:17	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 05:17	Angela D Sneeringer	1

Sample Description: RINSATE02-032912 Grab Water
Kingston

LLI Sample # WW 6599210
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 13:25 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

RB-02 SDG#: IBK48-02RB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: RINSATE02-032912 Grab Water
Kingston

LLI Sample # WW 6599210
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 13:25 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

RB-02 SDG#: IBK48-02RB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 05:38	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 05:38	Angela D Sneeringer	1

**Sample Description: IWB1-SB-04-4.0-4.5 Grab Soil
Kingston****LLI Sample # SW 6599211
LLI Group # 1299021
Account # 12694****Project Name: IBM - Kingston**

Collected: 03/29/2012 09:00 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

SB044 SDG#: IBK48-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	1.14
10237	Benzyl Chloride	100-44-7	N.D.	1	5	1.14
10237	Bromobenzene	108-86-1	N.D.	1	6	1.14
10237	Bromodichloromethane	75-27-4	N.D.	1	6	1.14
10237	Bromoform	75-25-2	N.D.	1	6	1.14
10237	Bromomethane	74-83-9	N.D.	2	6	1.14
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	1.14
10237	Chlorobenzene	108-90-7	N.D.	1	6	1.14
10237	Chloroethane	75-00-3	N.D.	2	6	1.14
10237	Chloroform	67-66-3	N.D.	1	6	1.14
10237	Chloromethane	74-87-3	N.D.	2	6	1.14
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	1.14
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	1.14
10237	Dibromochloromethane	124-48-1	N.D.	1	6	1.14
10237	Dibromomethane	74-95-3	N.D.	1	6	1.14
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	1.14
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	1.14
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	1.14
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	1.14
10237	1,1-Dichloroethane	75-34-3	N.D.	1	6	1.14
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	1.14
10237	1,1-Dichloroethene	75-35-4	N.D.	1	6	1.14
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	6	1.14
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	1.14
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	1.14
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	1.14
10237	Ethylbenzene	100-41-4	N.D.	1	6	1.14
10237	Freon 113	76-13-1	N.D.	2	12	1.14
10237	Freon 123a	354-23-4	N.D.	2	6	1.14
10237	Methylene Chloride	75-09-2	N.D.	2	6	1.14
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	1.14
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	1.14
10237	Tetrachloroethene	127-18-4	N.D.	1	6	1.14
10237	Toluene	108-88-3	N.D.	1	6	1.14
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	1.14
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	1.14
10237	Trichloroethene	79-01-6	2 J	1	6	1.14
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	1.14
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	1.14
10237	Vinyl Chloride	75-01-4	N.D.	1	6	1.14
10237	Xylene (Total)	1330-20-7	N.D.	1	6	1.14

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 1,1-dichloroethene.

Wet Chemistry	SM20 2540 G	%	%	%	
00111 Moisture	n.a.	5.7	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

*This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-04-4.0-4.5 Grab Soil
Kingston

LLI Sample # SW 6599211
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 09:00 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB044 SDG#: IBK48-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
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General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120921AA	04/01/2012 23:59	Andrea E Lando	1.14
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027207	03/30/2012 12:59	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027207	03/30/2012 12:59	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027207	03/30/2012 12:59	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-04-9.0-9.5 Grab Soil
Kingston**LLI Sample #** SW 6599212
LLI Group # 1299021
Account # 12694**Project Name:** IBM - Kingston**Collected:** 03/29/2012 09:12 by DG

IBM

8976 Wellington Road

Manassas VA 20109

Submitted: 03/30/2012 09:30**Reported:** 04/13/2012 08:30

SB049 SDG#: IBK48-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	0.96
10237	Benzyl Chloride	100-44-7	N.D.	1	5	0.96
10237	Bromobenzene	108-86-1	N.D.	1	6	0.96
10237	Bromodichloromethane	75-27-4	N.D.	1	6	0.96
10237	Bromoform	75-25-2	N.D.	1	6	0.96
10237	Bromomethane	74-83-9	N.D.	2	6	0.96
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	0.96
10237	Chlorobenzene	108-90-7	N.D.	1	6	0.96
10237	Chloroethane	75-00-3	N.D.	2	6	0.96
10237	Chloroform	67-66-3	N.D.	1	6	0.96
10237	Chloromethane	74-87-3	N.D.	2	6	0.96
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	0.96
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	0.96
10237	Dibromochloromethane	124-48-1	N.D.	1	6	0.96
10237	Dibromomethane	74-95-3	N.D.	1	6	0.96
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	0.96
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	0.96
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	0.96
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	0.96
10237	1,1-Dichloroethane	75-34-3	N.D.	1	6	0.96
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	0.96
10237	1,1-Dichloroethene	75-35-4	N.D.	1	6	0.96
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	6	0.96
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	0.96
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	0.96
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	0.96
10237	Ethylbenzene	100-41-4	N.D.	1	6	0.96
10237	Freon 113	76-13-1	N.D.	2	11	0.96
10237	Freon 123a	354-23-4	N.D.	2	6	0.96
10237	Methylene Chloride	75-09-2	N.D.	2	6	0.96
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	0.96
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	0.96
10237	Tetrachloroethene	127-18-4	N.D.	1	6	0.96
10237	Toluene	108-88-3	N.D.	1	6	0.96
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	0.96
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	0.96
10237	Trichloroethene	79-01-6	4 J	1	6	0.96
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	0.96
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	0.96
10237	Vinyl Chloride	75-01-4	N.D.	1	6	0.96
10237	Xylene (Total)	1330-20-7	N.D.	1	6	0.96

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 1,1-dichloroethene.

Wet Chemistry	SM20 2540 G	%	%	%	
00111 Moisture	n.a.	16.2	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

*This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-04-9.0-9.5 Grab Soil
Kingston

LLI Sample # SW 6599212
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 09:12 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB049 SDG#: IBK48-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
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General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120921AA	04/02/2012 00:22	Andrea E Lando	0.96
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027207	03/30/2012 13:01	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027207	03/30/2012 13:01	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027207	03/30/2012 13:01	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-04-9.0-9.5D Grab Soil
Kingston**LLI Sample #** SW 6599213
LLI Group # 1299021
Account # 12694**Project Name:** IBM - Kingston**Collected:** 03/29/2012 09:15 by DG

IBM

8976 Wellington Road

Manassas VA 20109

Submitted: 03/30/2012 09:30**Reported:** 04/13/2012 08:30

SB49D SDG#: IBK48-05FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	1.07
10237	Benzyl Chloride	100-44-7	N.D.	1	5	1.07
10237	Bromobenzene	108-86-1	N.D.	1	6	1.07
10237	Bromodichloromethane	75-27-4	N.D.	1	6	1.07
10237	Bromoform	75-25-2	N.D.	1	6	1.07
10237	Bromomethane	74-83-9	N.D.	3	6	1.07
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	1.07
10237	Chlorobenzene	108-90-7	N.D.	1	6	1.07
10237	Chloroethane	75-00-3	N.D.	3	6	1.07
10237	Chloroform	67-66-3	N.D.	1	6	1.07
10237	Chloromethane	74-87-3	N.D.	3	6	1.07
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	1.07
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	1.07
10237	Dibromochloromethane	124-48-1	N.D.	1	6	1.07
10237	Dibromomethane	74-95-3	N.D.	1	6	1.07
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	1.07
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	1.07
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	1.07
10237	Dichlorodifluoromethane	75-71-8	N.D.	3	6	1.07
10237	1,1-Dichloroethane	75-34-3	N.D.	1	6	1.07
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	1.07
10237	1,1-Dichloroethene	75-35-4	N.D.	1	6	1.07
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	6	1.07
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	1.07
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	1.07
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	1.07
10237	Ethylbenzene	100-41-4	N.D.	1	6	1.07
10237	Freon 113	76-13-1	N.D.	3	13	1.07
10237	Freon 123a	354-23-4	N.D.	3	6	1.07
10237	Methylene Chloride	75-09-2	N.D.	3	6	1.07
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	1.07
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	1.07
10237	Tetrachloroethene	127-18-4	N.D.	1	6	1.07
10237	Toluene	108-88-3	N.D.	1	6	1.07
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	1.07
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	1.07
10237	Trichloroethene	79-01-6	7	1	6	1.07
10237	Trichlorofluoromethane	75-69-4	N.D.	3	6	1.07
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	1.07
10237	Vinyl Chloride	75-01-4	N.D.	1	6	1.07
10237	Xylene (Total)	1330-20-7	N.D.	1	6	1.07

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 1,1-dichloroethene.

Wet Chemistry	SM20 2540 G	%	%	%	
00111 Moisture	n.a.	16.7	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

*This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-04-9.0-9.5D Grab Soil
Kingston

LLI Sample # SW 6599213
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 09:15 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB49D SDG#: IBK48-05FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
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General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120921AA	04/02/2012 00:45	Andrea E Lando	1.07
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027207	03/30/2012 13:03	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027207	03/30/2012 13:03	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027207	03/30/2012 13:03	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

Sample Description: IWB1-SB-04-23.0-23.5 Grab Soil
Kingston**LLI Sample #** SW 6599214
LLI Group # 1299021
Account # 12694**Project Name:** IBM - Kingston**Collected:** 03/29/2012 09:25 by DG

IBM

8976 Wellington Road
Manassas VA 20109**Submitted:** 03/30/2012 09:30**Reported:** 04/13/2012 08:30

SB042 SDG#: IBK48-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.5	5	0.85
10237	Benzyl Chloride	100-44-7	N.D.	1	4	0.85
10237	Bromobenzene	108-86-1	N.D.	1	5	0.85
10237	Bromodichloromethane	75-27-4	N.D.	1	5	0.85
10237	Bromoform	75-25-2	N.D.	1	5	0.85
10237	Bromomethane	74-83-9	N.D.	2	5	0.85
10237	Carbon Tetrachloride	56-23-5	N.D.	1	5	0.85
10237	Chlorobenzene	108-90-7	N.D.	1	5	0.85
10237	Chloroethane	75-00-3	N.D.	2	5	0.85
10237	Chloroform	67-66-3	N.D.	1	5	0.85
10237	Chloromethane	74-87-3	N.D.	2	5	0.85
10237	2-Chlorotoluene	95-49-8	N.D.	1	5	0.85
10237	4-Chlorotoluene	106-43-4	N.D.	1	5	0.85
10237	Dibromochloromethane	124-48-1	N.D.	1	5	0.85
10237	Dibromomethane	74-95-3	N.D.	1	5	0.85
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	0.85
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	0.85
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	0.85
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	5	0.85
10237	1,1-Dichloroethane	75-34-3	100	1	5	0.85
10237	1,2-Dichloroethane	107-06-2	N.D.	1	5	0.85
10237	1,1-Dichloroethene	75-35-4	190	1	5	0.85
10237	1,2-Dichloroethene (Total)	540-59-0	11	1	5	0.85
10237	1,2-Dichloropropane	78-87-5	N.D.	1	5	0.85
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	5	0.85
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	5	0.85
10237	Ethylbenzene	100-41-4	N.D.	1	5	0.85
10237	Freon 113	76-13-1	N.D.	2	11	0.85
10237	Freon 123a	354-23-4	N.D.	2	5	0.85
10237	Methylene Chloride	75-09-2	N.D.	2	5	0.85
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	5	0.85
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	0.85
10237	Tetrachloroethene	127-18-4	N.D.	1	5	0.85
10237	Toluene	108-88-3	N.D.	1	5	0.85
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	0.85
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	0.85
10237	Trichloroethene	79-01-6	22	1	5	0.85
10237	Trichlorofluoromethane	75-69-4	N.D.	2	5	0.85
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	0.85
10237	Vinyl Chloride	75-01-4	2 J	1	5	0.85
10237	Xylene (Total)	1330-20-7	N.D.	1	5	0.85

The GC/MS volatile internal standard peak areas were outside the QC limits. A re-analysis was performed, and the matrix effect was confirmed.

Wet Chemistry	SM20 2540 G	%	%	%	
00111 Moisture	n.a.	20.8	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

* = This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-04-23.0-23.5 Grab Soil
Kingston

LLI Sample # SW 6599214
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 09:25 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB042 SDG#: IBK48-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
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General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120931AA	04/02/2012 13:18	Emily R Styer	0.85
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027207	03/30/2012 13:05	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027207	03/30/2012 13:05	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027207	03/30/2012 13:05	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-05-4.0-4.5 Grab Soil
Kingston

LLI Sample # SW 6599215
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 10:46 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB054 SDG#: IBK48-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.5	5	1.04
10237	Benzyl Chloride	100-44-7	N.D.	1	4	1.04
10237	Bromobenzene	108-86-1	N.D.	1	5	1.04
10237	Bromodichloromethane	75-27-4	N.D.	1	5	1.04
10237	Bromoform	75-25-2	N.D.	1	5	1.04
10237	Bromomethane	74-83-9	N.D.	2	5	1.04
10237	Carbon Tetrachloride	56-23-5	N.D.	1	5	1.04
10237	Chlorobenzene	108-90-7	N.D.	1	5	1.04
10237	Chloroethane	75-00-3	N.D.	2	5	1.04
10237	Chloroform	67-66-3	N.D.	1	5	1.04
10237	Chloromethane	74-87-3	N.D.	2	5	1.04
10237	2-Chlorotoluene	95-49-8	N.D.	1	5	1.04
10237	4-Chlorotoluene	106-43-4	N.D.	1	5	1.04
10237	Dibromochloromethane	124-48-1	N.D.	1	5	1.04
10237	Dibromomethane	74-95-3	N.D.	1	5	1.04
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	1.04
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	1.04
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	1.04
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	5	1.04
10237	1,1-Dichloroethane	75-34-3	N.D.	1	5	1.04
10237	1,2-Dichloroethane	107-06-2	N.D.	1	5	1.04
10237	1,1-Dichloroethene	75-35-4	N.D.	1	5	1.04
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	5	1.04
10237	1,2-Dichloropropane	78-87-5	N.D.	1	5	1.04
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	5	1.04
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	5	1.04
10237	Ethylbenzene	100-41-4	N.D.	1	5	1.04
10237	Freon 113	76-13-1	N.D.	2	11	1.04
10237	Freon 123a	354-23-4	N.D.	2	5	1.04
10237	Methylene Chloride	75-09-2	N.D.	2	5	1.04
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	5	1.04
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	1.04
10237	Tetrachloroethene	127-18-4	N.D.	1	5	1.04
10237	Toluene	108-88-3	N.D.	1	5	1.04
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	1.04
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	1.04
10237	Trichloroethene	79-01-6	N.D.	1	5	1.04
10237	Trichlorofluoromethane	75-69-4	N.D.	2	5	1.04
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1.04
10237	Vinyl Chloride	75-01-4	N.D.	1	5	1.04
10237	Xylene (Total)	1330-20-7	N.D.	1	5	1.04

Wet Chemistry

SM20 2540 G

00111 **Moisture**

n.a.

5.3

0.50

0.50

1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: IWB1-SB-05-4.0-4.5 Grab Soil
Kingston

LLI Sample # SW 6599215
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 10:46 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB054 SDG#: IBK48-07

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120931AA	04/02/2012 13:41	Emily R Styer	1.04
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027207	03/30/2012 13:08	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027207	03/30/2012 13:08	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027207	03/30/2012 13:08	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

Sample Description: IWB1-SB-05-11.0-11.5 Grab Soil
Kingston**LLI Sample #** SW 6599216
LLI Group # 1299021
Account # 12694**Project Name:** IBM - Kingston**Collected:** 03/29/2012 11:05 by DG

IBM

8976 Wellington Road
Manassas VA 20109**Submitted:** 03/30/2012 09:30**Reported:** 04/13/2012 08:30**SB051** SDG#: IBK48-08BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.5	5	0.84
10237	Benzyl Chloride	100-44-7	N.D.	1	4	0.84
10237	Bromobenzene	108-86-1	N.D.	1	5	0.84
10237	Bromodichloromethane	75-27-4	N.D.	1	5	0.84
10237	Bromoform	75-25-2	N.D.	1	5	0.84
10237	Bromomethane	74-83-9	N.D.	2	5	0.84
10237	Carbon Tetrachloride	56-23-5	N.D.	1	5	0.84
10237	Chlorobenzene	108-90-7	N.D.	1	5	0.84
10237	Chloroethane	75-00-3	N.D.	2	5	0.84
10237	Chloroform	67-66-3	N.D.	1	5	0.84
10237	Chloromethane	74-87-3	N.D.	2	5	0.84
10237	2-Chlorotoluene	95-49-8	N.D.	1	5	0.84
10237	4-Chlorotoluene	106-43-4	N.D.	1	5	0.84
10237	Dibromochloromethane	124-48-1	N.D.	1	5	0.84
10237	Dibromomethane	74-95-3	N.D.	1	5	0.84
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	0.84
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	0.84
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	0.84
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	5	0.84
10237	1,1-Dichloroethane	75-34-3	1	J	5	0.84
10237	1,2-Dichloroethane	107-06-2	N.D.	1	5	0.84
10237	1,1-Dichloroethene	75-35-4	3	J	5	0.84
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	5	0.84
10237	1,2-Dichloropropane	78-87-5	N.D.	1	5	0.84
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	5	0.84
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	5	0.84
10237	Ethylbenzene	100-41-4	N.D.	1	5	0.84
10237	Freon 113	76-13-1	N.D.	2	11	0.84
10237	Freon 123a	354-23-4	N.D.	2	5	0.84
10237	Methylene Chloride	75-09-2	N.D.	2	5	0.84
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	5	0.84
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	0.84
10237	Tetrachloroethene	127-18-4	1	J	5	0.84
10237	Toluene	108-88-3	N.D.	1	5	0.84
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	0.84
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	0.84
10237	Trichloroethene	79-01-6	33		5	0.84
10237	Trichlorofluoromethane	75-69-4	N.D.	2	5	0.84
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	0.84
10237	Vinyl Chloride	75-01-4	N.D.	1	5	0.84
10237	Xylene (Total)	1330-20-7	N.D.	1	5	0.84

Wet Chemistry**SM20 2540 G**

00111	Moisture	n.a.	21.1	0.50	0.50	1
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"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: IWB1-SB-05-11.0-11.5 Grab Soil
Kingston

LLI Sample # SW 6599216
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 11:05 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB051 SDG#: IBK48-08BKG

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120931AA	04/02/2012 14:04	Emily R Styer	0.84
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027207	03/30/2012 13:10	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027207	03/30/2012 13:10	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027207	03/30/2012 13:10	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

Sample Description: IWB1-SB-05-11.0-11.5 Matrix Spike Grab Soil
Kingston

LLI Sample # SW 6599217
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 11:07 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

SB051 SDG#: IBK48-08MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	25	0.6	6	0.88
10237	Benzyl Chloride	100-44-7	21	1	4	0.88
10237	Bromobenzene	108-86-1	23	1	6	0.88
10237	Bromodichloromethane	75-27-4	22	1	6	0.88
10237	Bromoform	75-25-2	23	1	6	0.88
10237	Bromomethane	74-83-9	15	2	6	0.88
10237	Carbon Tetrachloride	56-23-5	22	1	6	0.88
10237	Chlorobenzene	108-90-7	24	1	6	0.88
10237	Chloroethane	75-00-3	16	2	6	0.88
10237	Chloroform	67-66-3	22	1	6	0.88
10237	Chloromethane	74-87-3	21	2	6	0.88
10237	2-Chlorotoluene	95-49-8	23	1	6	0.88
10237	4-Chlorotoluene	106-43-4	23	1	6	0.88
10237	Dibromochloromethane	124-48-1	23	1	6	0.88
10237	Dibromomethane	74-95-3	22	1	6	0.88
10237	1,2-Dichlorobenzene	95-50-1	22	1	6	0.88
10237	1,3-Dichlorobenzene	541-73-1	22	1	6	0.88
10237	1,4-Dichlorobenzene	106-46-7	22	1	6	0.88
10237	Dichlorodifluoromethane	75-71-8	18	2	6	0.88
10237	1,1-Dichloroethane	75-34-3	26	1	6	0.88
10237	1,2-Dichloroethane	107-06-2	22	1	6	0.88
10237	1,1-Dichloroethene	75-35-4	26	1	6	0.88
10237	1,2-Dichloroethene (Total)	540-59-0	48	1	6	0.88
10237	1,2-Dichloropropane	78-87-5	25	1	6	0.88
10237	cis-1,3-Dichloropropene	10061-01-5	21	1	6	0.88
10237	trans-1,3-Dichloropropene	10061-02-6	21	1	6	0.88
10237	Ethylbenzene	100-41-4	24	1	6	0.88
10237	Freon 113	76-13-1	25	2	11	0.88
10237	Freon 123a	354-23-4	23	2	6	0.88
10237	Methylene Chloride	75-09-2	24	2	6	0.88
10237	1,1,1,2-Tetrachloroethane	630-20-6	24	1	6	0.88
10237	1,1,2,2-Tetrachloroethane	79-34-5	25	1	6	0.88
10237	Tetrachloroethene	127-18-4	26	1	6	0.88
10237	Toluene	108-88-3	24	1	6	0.88
10237	1,1,1-Trichloroethane	71-55-6	22	1	6	0.88
10237	1,1,2-Trichloroethane	79-00-5	24	1	6	0.88
10237	Trichloroethene	79-01-6	57	1	6	0.88
10237	Trichlorofluoromethane	75-69-4	23	2	6	0.88
10237	1,2,3-Trichloropropane	96-18-4	25	1	6	0.88
10237	Vinyl Chloride	75-01-4	21	1	6	0.88
10237	Xylene (Total)	1330-20-7	71	1	6	0.88

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-05-11.0-11.5 Matrix Spike Grab Soil
Kingston

LLI Sample # SW 6599217
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 11:07 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB051 SDG#: IBK48-08MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry						
00118	Moisture	SM20 2540 G n.a.	% 21.1	% 0.50	% 0.50	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120931AA	04/02/2012 14:26	Emily R Styer	0.88
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027207	03/30/2012 13:14	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027207	03/30/2012 13:15	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027207	03/30/2012 13:14	Stephanie A Sanchez	n.a.
00118	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-05-11.0-11.5 Matrix Spike Dup Grab Soil
Kingston

LLI Sample # SW 6599218
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 11:10 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

SB051 SDG#: IBK48-08MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	28	0.6	6	0.95
10237	Benzyl Chloride	100-44-7	25	1	5	0.95
10237	Bromobenzene	108-86-1	26	1	6	0.95
10237	Bromodichloromethane	75-27-4	25	1	6	0.95
10237	Bromoform	75-25-2	26	1	6	0.95
10237	Bromomethane	74-83-9	16	2	6	0.95
10237	Carbon Tetrachloride	56-23-5	25	1	6	0.95
10237	Chlorobenzene	108-90-7	27	1	6	0.95
10237	Chloroethane	75-00-3	17	2	6	0.95
10237	Chloroform	67-66-3	25	1	6	0.95
10237	Chloromethane	74-87-3	23	2	6	0.95
10237	2-Chlorotoluene	95-49-8	26	1	6	0.95
10237	4-Chlorotoluene	106-43-4	26	1	6	0.95
10237	Dibromochloromethane	124-48-1	27	1	6	0.95
10237	Dibromomethane	74-95-3	25	1	6	0.95
10237	1,2-Dichlorobenzene	95-50-1	25	1	6	0.95
10237	1,3-Dichlorobenzene	541-73-1	25	1	6	0.95
10237	1,4-Dichlorobenzene	106-46-7	26	1	6	0.95
10237	Dichlorodifluoromethane	75-71-8	19	2	6	0.95
10237	1,1-Dichloroethane	75-34-3	31	1	6	0.95
10237	1,2-Dichloroethane	107-06-2	25	1	6	0.95
10237	1,1-Dichloroethene	75-35-4	30	1	6	0.95
10237	1,2-Dichloroethene (Total)	540-59-0	55	1	6	0.95
10237	1,2-Dichloropropane	78-87-5	29	1	6	0.95
10237	cis-1,3-Dichloropropene	10061-01-5	24	1	6	0.95
10237	trans-1,3-Dichloropropene	10061-02-6	25	1	6	0.95
10237	Ethylbenzene	100-41-4	27	1	6	0.95
10237	Freon 113	76-13-1	28	2	12	0.95
10237	Freon 123a	354-23-4	24	2	6	0.95
10237	Methylene Chloride	75-09-2	27	2	6	0.95
10237	1,1,1,2-Tetrachloroethane	630-20-6	27	1	6	0.95
10237	1,1,2,2-Tetrachloroethane	79-34-5	29	1	6	0.95
10237	Tetrachloroethene	127-18-4	29	1	6	0.95
10237	Toluene	108-88-3	28	1	6	0.95
10237	1,1,1-Trichloroethane	71-55-6	24	1	6	0.95
10237	1,1,2-Trichloroethane	79-00-5	29	1	6	0.95
10237	Trichloroethene	79-01-6	62	1	6	0.95
10237	Trichlorofluoromethane	75-69-4	24	2	6	0.95
10237	1,2,3-Trichloropropane	96-18-4	29	1	6	0.95
10237	Vinyl Chloride	75-01-4	22	1	6	0.95
10237	Xylene (Total)	1330-20-7	82	1	6	0.95

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-05-11.0-11.5 Matrix Spike Dup Grab Soil
Kingston

LLI Sample # SW 6599218
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 11:10 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB051 SDG#: IBK48-08MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry						
		SM20 2540 G	%	%	%	
00118	Moisture	n.a.	21.1	0.50	0.50	1
00121	Moisture Duplicate	n.a.	21.6	0.50	0.50	1
The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.						

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120931AA	04/02/2012 14:48	Emily R Styer	0.95
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027207	03/30/2012 13:22	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027207	03/30/2012 13:24	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027207	03/30/2012 13:17	Stephanie A Sanchez	n.a.
00118	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1
00121	Moisture Duplicate	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SS-TW-27-15 Grab Water
Kingston

LLI Sample # WW 6599219
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 08:26 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

T2715 SDG#: IBK48-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	1.0	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	15	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.2 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	26	1.0	5.0	10
02898	1,2-Dichloroethene (Total)	540-59-0	5.8	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	2.2	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	3.3	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	2.7	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.8	0.1	0.5	1
02898	Trichloroethene	79-01-6	97	1.0	5.0	10
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SS-TW-27-15 Grab Water
Kingston

LLI Sample # WW 6599219
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 08:26 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T2715 SDG#: IBK48-09

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 09:12	Angela D Sneeringer	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 09:34	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 09:12	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G120961AA	04/05/2012 09:34	Angela D Sneeringer	10

Sample Description: SAB-TW-03-12 Grab Water
Kingston

LLI Sample # WW 6599220
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 09:18 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

T0312 SDG#: IBK48-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	1.7	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	4.2	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.1 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	10	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	2.5	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	1.9	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	1.8	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	2.3	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.6	0.1	0.5	1
02898	Trichloroethene	79-01-6	42	1.0	5.0	10
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-03-12 Grab Water
Kingston

LLI Sample # WW 6599220
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 09:18 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T0312 SDG#: IBK48-10

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 09:55	Angela D Sneeringer	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 10:16	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 09:55	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G120961AA	04/05/2012 10:16	Angela D Sneeringer	10

Sample Description: **SAB-TW-04-22 Grab Water**
Kingston

LLI Sample # **WW 6599221**
LLI Group # **1299021**
Account # **12694**

Project Name: **IBM - Kingston**

Collected: 03/29/2012 12:03 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

T0422 SDG#: IBK48-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	20	0.5	2.5	5
02898	1,2-Dichloroethane	107-06-2	0.4	J 0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	21	0.5	2.5	5
02898	1,2-Dichloroethene (Total)	540-59-0	8.1	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	0.6	0.2	0.5	1
02898	Freon 123a	354-23-4	0.8	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.1	J 0.1	0.5	1
02898	Trichloroethene	79-01-6	54	0.5	2.5	5
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	0.6	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC Miscellaneous	SW-846 8015B modified	ug/l	ug/l	ug/l		
07105	Methane	74-82-8	50	5.0	15	1
Metals	SW-846 6010B	ug/l	ug/l	ug/l		

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-04-22 Grab Water
Kingston

LLI Sample # WW 6599221
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 12:03 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

T0422 SDG#: IBK48-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals						
	SW-846 6010B		ug/l	ug/l	ug/l	
07044	Antimony	7440-36-0	N.D.	5.8	20.0	1
07035	Arsenic	7440-38-2	30.1	5.1	20.0	1
07046	Barium	7440-39-3	457	0.26	5.0	1
07049	Cadmium	7440-43-9	2.1 J	0.27	5.0	1
01750	Calcium	7440-70-2	611,000	353	1,000	5
07051	Chromium	7440-47-3	66.2	1.1	15.0	1
07053	Copper	7440-50-8	126	0.94	10.0	1
01754	Iron	7439-89-6	224,000	14.1	200	1
07055	Lead	7439-92-1	155	2.2	15.0	1
01757	Magnesium	7439-95-4	102,000	6.7	100	1
07058	Manganese	7439-96-5	21,400	2.2	25.0	5
01762	Potassium	7440-09-7	7,300	87.4	500	1
07036	Selenium	7782-49-2	N.D.	6.9	20.0	1
01767	Sodium	7440-23-5	63,700	64.7	1,000	1
Wet Chemistry						
	EPA 300.0		ug/l	ug/l	ug/l	
00224	Chloride	16887-00-6	76,800	4,000	8,000	20
01504	Fluoride	16984-48-8	N.D.	400	500	5
00228	Sulfate	14808-79-8	65,100	1,500	5,000	5
	EPA 353.2		ug/l	ug/l	ug/l	
00220	Nitrate Nitrogen	14797-55-8	N.D.	40	100	1
00219	Nitrite Nitrogen	14797-65-0	42 J	15	50	1
	EPA 365.1		ug/l	ug/l	ug/l	
00227	Total Phosphorus as P (water)	7723-14-0	1,700	80	100	1
	SM20 5310 C		ug/l	ug/l	ug/l	
00273	Total Organic Carbon	n.a.	1,800	500	1,000	1
	EPA 410.4		ug/l	ug/l	ug/l	
04001	Chemical Oxygen Demand	n.a.	282,000 J	128,000	500,000	10
Reporting limits were raised due to interference from the sample matrix.						
	SM20 2320 B		ug/l as CaCO3	ug/l as CaCO3	ug/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	157,000	460	2,000	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	2,000	1
	SM20 2540 C		ug/l	ug/l	ug/l	
00212	Total Dissolved Solids	n.a.	514,000	19,400	60,000	1
	SM20 2540 D		ug/l	ug/l	ug/l	

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-04-22 Grab Water
Kingston

LLI Sample # WW 6599221
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 12:03 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T0422 SDG#: IBK48-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry						
00206	Total Suspended Solids	SM20 2540 D n.a.	ug/l 27,100,000	ug/l 375,000	ug/l 1,500,000	1
01333	Sulfide	SM20 4500 S2 F 18496-25-8	ug/l N.D.	ug/l 4,800	ug/l 16,000	8
Reporting limits were raised due to interference from the sample matrix.						
00221	Ammonia Nitrogen	SM20 4500NH3 B/C modified 7664-41-7	ug/l 430 J	ug/l 200	ug/l 600	1
00235	Biochemical Oxygen Demand	SM20 5210 B n.a.	ug/l 4,600	ug/l 800	ug/l 3,000	1

General Sample Comments

State of New York Certification No. 10670
State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 10:38	Angela D Sneeringer	5
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120971AA	04/06/2012 08:20	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 10:38	Angela D Sneeringer	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C120971AA	04/06/2012 08:20	Angela D Sneeringer	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	120940036A	04/04/2012 12:51	Elizabeth J Marin	1
07044	Antimony	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
07035	Arsenic	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	120901848005	04/11/2012 19:23	John P Hook	5
07051	Chromium	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
07053	Copper	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
01754	Iron	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
07058	Manganese	SW-846 6010B	1	120901848005	04/11/2012 19:23	John P Hook	5
01762	Potassium	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-04-22 Grab Water
Kingston

LLI Sample # WW 6599221
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 12:03 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T0422 SDG#: IBK48-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07036	Selenium	SW-846 6010B	1	120901848005	04/12/2012 20:47	John P Hook	1
01767	Sodium	SW-846 6010B	1	120901848005	04/09/2012 20:59	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	120901848005	04/01/2012 22:00	Annamaria Stipkovits	1
00224	Chloride	EPA 300.0	1	12101987121B	04/11/2012 03:18	Clinton M Wilson	20
01504	Fluoride	EPA 300.0	1	12101987121B	04/11/2012 03:03	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	12101987121B	04/11/2012 03:03	Clinton M Wilson	5
00220	Nitrate Nitrogen	EPA 353.2	1	12093106101A	04/02/2012 21:15	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	12090105102A	03/30/2012 19:40	Joseph E McKenzie	1
00227	Total Phosphorus as P (water)	EPA 365.1	1	12093109101A	04/03/2012 19:12	Venia B McFadden	1
00273	Total Organic Carbon	SM20 5310 C	1	12094049501A	04/03/2012 08:46	James S Mathiot	1
08263	Total Phos as P Prep (water)	EPA 365.1	1	12093109101A	04/02/2012 19:45	Carolyn M Mastropietro	1
04001	Chemical Oxygen Demand	EPA 410.4	1	12094400101B	04/03/2012 07:20	Susan A Engle	10
00202	Alkalinity to pH 4.5	SM20 2320 B	1	12095020201A	04/04/2012 09:10	Hannah M Royer	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	12095020201A	04/04/2012 09:10	Hannah M Royer	1
00212	Total Dissolved Solids	SM20 2540 C	1	12094021201B	04/03/2012 09:14	Yolunder Y Bunch	1
00206	Total Suspended Solids	SM20 2540 D	2	12096020602A	04/05/2012 14:26	Yolunder Y Bunch	1
01333	Sulfide	SM20 4500 S2 F	1	12094133302A	04/03/2012 14:00	Susan E Hibner	8
00221	Ammonia Nitrogen	SM20 4500NH3 B/C modified	1	12090022101A	03/30/2012 14:30	Luz M Groff	1
00235	Biochemical Oxygen Demand	SM20 5210 B	1	12090023501A	03/30/2012 11:58	Susan E Hibner	1

Sample Description: IWB1-TW-10-12 Grab Water
Kingston

LLI Sample # WW 6599222
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 14:30 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

T1012 SDG#: IBK48-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	1.1	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	3.4	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.1 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	11	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	1.8	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	1.1	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	1.4	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	2.2	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.4 J	0.1	0.5	1
02898	Trichloroethene	79-01-6	26	2.0	10	20
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-10-12 Grab Water
Kingston

LLI Sample # WW 6599222
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 14:30 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T1012 SDG#: IBK48-12

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 11:42	Angela D Sneeringer	20
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120971AA	04/06/2012 08:41	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 11:42	Angela D Sneeringer	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C120971AA	04/06/2012 08:41	Angela D Sneeringer	1

Sample Description: IWB1-TW-10-12D Grab Water
Kingston

LLI Sample # WW 6599223
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 14:30 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T112D SDG#: IBK48-13FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	1.1	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	3.1	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	8.4	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	1.9	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	0.8	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	1.2	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	1.8	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.5 J	0.1	0.5	1
02898	Trichloroethene	79-01-6	33	1.0	5.0	10
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-10-12D Grab Water
Kingston

LLI Sample # WW 6599223
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 14:30 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T112D SDG#: IBK48-13FD

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 12:04	Angela D Sneeringer	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 12:25	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 12:04	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G120961AA	04/05/2012 12:25	Angela D Sneeringer	10

Sample Description: IWB1-TW-11-18 Grab Water
Kingston

LLI Sample # WW 6599224
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 15:30 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

T1118 SDG#: IBK48-14BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	0.4 J	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	20	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.3 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	35	1.0	5.0	10
02898	1,2-Dichloroethene (Total)	540-59-0	5.5	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	1.8	0.2	0.5	1
02898	Freon 123a	354-23-4	0.2 J	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	1.2	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	3.8	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.7	0.1	0.5	1
02898	Trichloroethene	79-01-6	100	1.0	5.0	10
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	0.1 J	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-11-18 Grab Water
Kingston

LLI Sample # WW 6599224
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 15:30 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T1118 SDG#: IBK48-14BKG

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 06:42	Angela D Sneeringer	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 07:46	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 06:42	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G120961AA	04/05/2012 07:46	Angela D Sneeringer	10

Sample Description: IWB1-TW-11-18 Matrix Spike Grab Water
Kingston

LLI Sample # WW 6599225
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 15:30 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

T1118 SDG#: IBK48-14MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	5.3	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	4.7	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.2	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.4	0.1	0.5	1
02898	Bromoform	75-25-2	4.6	0.1	0.5	1
02898	Bromomethane	74-83-9	5.2	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.2	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.3	0.1	0.5	1
02898	Chloroethane	75-00-3	5.3	0.1	0.5	1
02898	Chloroform	67-66-3	5.9	0.1	0.5	1
02898	Chloromethane	74-87-3	4.7	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.2	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.3	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	5.1	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.8	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.1	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.2	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.1	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	3.7	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	25	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.9	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	50	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	17	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.5	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.1	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	5.2	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.4	0.1	0.5	1
02898	Freon 113	76-13-1	7.1	0.2	0.5	1
02898	Freon 123a	354-23-4	6.1	0.2	0.5	1
02898	Methylene Chloride	75-09-2	5.7	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.0	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.7	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	6.0	0.1	0.5	1
02898	Toluene	108-88-3	5.4	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	9.1	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	6.4	0.1	0.5	1
02898	Trichloroethene	79-01-6	120	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.5	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.6	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	5.1	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-11-18 Matrix Spike Grab Water
Kingston

LLI Sample # WW 6599225
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 15:30 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T1118 SDG#: IBK48-14MS

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 07:03	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 07:03	Angela D Sneeringer	1

Sample Description: IWB1-TW-11-18 Matrix Spike Dup Grab Water
Kingston

LLI Sample # WW 6599226
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 15:30 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

T1118 SDG#: IBK48-14MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	5.4	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	4.8	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.3	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.4	0.1	0.5	1
02898	Bromoform	75-25-2	4.7	0.1	0.5	1
02898	Bromomethane	74-83-9	5.3	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.3	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.3	0.1	0.5	1
02898	Chloroethane	75-00-3	5.4	0.1	0.5	1
02898	Chloroform	67-66-3	5.9	0.1	0.5	1
02898	Chloromethane	74-87-3	4.7	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.3	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.3	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	5.2	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.8	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.2	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.2	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.2	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	3.7	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	24	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	5.9	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	48	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	16	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.5	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.2	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	5.3	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.5	0.1	0.5	1
02898	Freon 113	76-13-1	7.2	0.2	0.5	1
02898	Freon 123a	354-23-4	6.2	0.2	0.5	1
02898	Methylene Chloride	75-09-2	5.7	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.1	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	5.8	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.9	0.1	0.5	1
02898	Toluene	108-88-3	5.5	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	9.0	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	6.4	0.1	0.5	1
02898	Trichloroethene	79-01-6	120	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	5.4	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.6	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	5.0	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	16	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-11-18 Matrix Spike Dup Grab Water
Kingston

LLI Sample # WW 6599226
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 15:30 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

T1118 SDG#: IBK48-14MSD

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 07:24	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 07:24	Angela D Sneeringer	1

Sample Description: TB12075-032912 Water
Kingston

LLI Sample # WW 6599227
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012

IBM

Submitted: 03/30/2012 09:30

8976 Wellington Road

Reported: 04/13/2012 08:30

Manassas VA 20109

TB-02 SDG#: IBK48-15TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: TB12075-032912 Water
Kingston

LLI Sample # WW 6599227
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

TB-02 SDG#: IBK48-15TB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 05:59	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 05:59	Angela D Sneeringer	1

Sample Description: RINSATE-032912 Grab Water
Kingston

LLI Sample # WW 6599228
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 10:30 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

RB-01 SDG#: IBK48-16RB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: RINSATE-032912 Grab Water
Kingston

LLI Sample # WW 6599228
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 10:30 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

RB-01 SDG#: IBK48-16RB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G120961AA	04/05/2012 06:21	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G120961AA	04/05/2012 06:21	Angela D Sneeringer	1

Sample Description: IWB1-SB-05-22.5-23.0 Grab Soil
Kingston**LLI Sample #** SW 6599229
LLI Group # 1299021
Account # 12694**Project Name:** IBM - Kingston**Collected:** 03/29/2012 11:20 by DG

IBM

8976 Wellington Road
Manassas VA 20109**Submitted:** 03/30/2012 09:30**Reported:** 04/13/2012 08:30

SB052 SDG#: IBK48-17

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.5	5	0.83
10237	Benzyl Chloride	100-44-7	N.D.	1	4	0.83
10237	Bromobenzene	108-86-1	N.D.	1	5	0.83
10237	Bromodichloromethane	75-27-4	N.D.	1	5	0.83
10237	Bromoform	75-25-2	N.D.	1	5	0.83
10237	Bromomethane	74-83-9	N.D.	2	5	0.83
10237	Carbon Tetrachloride	56-23-5	N.D.	1	5	0.83
10237	Chlorobenzene	108-90-7	N.D.	1	5	0.83
10237	Chloroethane	75-00-3	N.D.	2	5	0.83
10237	Chloroform	67-66-3	N.D.	1	5	0.83
10237	Chloromethane	74-87-3	N.D.	2	5	0.83
10237	2-Chlorotoluene	95-49-8	N.D.	1	5	0.83
10237	4-Chlorotoluene	106-43-4	N.D.	1	5	0.83
10237	Dibromochloromethane	124-48-1	N.D.	1	5	0.83
10237	Dibromomethane	74-95-3	N.D.	1	5	0.83
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	0.83
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	0.83
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	0.83
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	5	0.83
10237	1,1-Dichloroethane	75-34-3	N.D.	1	5	0.83
10237	1,2-Dichloroethane	107-06-2	N.D.	1	5	0.83
10237	1,1-Dichloroethene	75-35-4	N.D.	1	5	0.83
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	5	0.83
10237	1,2-Dichloropropane	78-87-5	N.D.	1	5	0.83
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	5	0.83
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	5	0.83
10237	Ethylbenzene	100-41-4	N.D.	1	5	0.83
10237	Freon 113	76-13-1	N.D.	2	11	0.83
10237	Freon 123a	354-23-4	N.D.	2	5	0.83
10237	Methylene Chloride	75-09-2	N.D.	2	5	0.83
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	5	0.83
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	0.83
10237	Tetrachloroethene	127-18-4	N.D.	1	5	0.83
10237	Toluene	108-88-3	N.D.	1	5	0.83
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	0.83
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	0.83
10237	Trichloroethene	79-01-6	N.D.	1	5	0.83
10237	Trichlorofluoromethane	75-69-4	N.D.	2	5	0.83
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	0.83
10237	Vinyl Chloride	75-01-4	N.D.	1	5	0.83
10237	Xylene (Total)	1330-20-7	N.D.	1	5	0.83

The GC/MS volatile internal standard peak areas were outside the QC limits. A re-analysis was performed, and the matrix effect was confirmed.

Wet Chemistry	SM20 2540 G	%	%	%	
00111	Moisture	n.a.	22.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

*This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-05-22.5-23.0 Grab Soil
Kingston

LLI Sample # SW 6599229
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 11:20 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB052 SDG#: IBK48-17

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120931AA	04/02/2012 15:11	Emily R Styer	0.83
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027208	03/30/2012 13:26	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027208	03/30/2012 13:27	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027208	03/30/2012 13:26	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

Sample Description: IWB1-SB-06-4.0-4.5 Grab Soil
Kingston

LLI Sample # SW 6599230
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 13:05 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

SB064 SDG#: IBK48-18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.5	5	1.04
10237	Benzyl Chloride	100-44-7	N.D.	1	4	1.04
10237	Bromobenzene	108-86-1	N.D.	1	5	1.04
10237	Bromodichloromethane	75-27-4	N.D.	1	5	1.04
10237	Bromoform	75-25-2	N.D.	1	5	1.04
10237	Bromomethane	74-83-9	N.D.	2	5	1.04
10237	Carbon Tetrachloride	56-23-5	N.D.	1	5	1.04
10237	Chlorobenzene	108-90-7	N.D.	1	5	1.04
10237	Chloroethane	75-00-3	N.D.	2	5	1.04
10237	Chloroform	67-66-3	N.D.	1	5	1.04
10237	Chloromethane	74-87-3	N.D.	2	5	1.04
10237	2-Chlorotoluene	95-49-8	N.D.	1	5	1.04
10237	4-Chlorotoluene	106-43-4	N.D.	1	5	1.04
10237	Dibromochloromethane	124-48-1	N.D.	1	5	1.04
10237	Dibromomethane	74-95-3	N.D.	1	5	1.04
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	1.04
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	1.04
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	1.04
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	5	1.04
10237	1,1-Dichloroethane	75-34-3	N.D.	1	5	1.04
10237	1,2-Dichloroethane	107-06-2	N.D.	1	5	1.04
10237	1,1-Dichloroethene	75-35-4	N.D.	1	5	1.04
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	5	1.04
10237	1,2-Dichloropropane	78-87-5	N.D.	1	5	1.04
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	5	1.04
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	5	1.04
10237	Ethylbenzene	100-41-4	N.D.	1	5	1.04
10237	Freon 113	76-13-1	N.D.	2	11	1.04
10237	Freon 123a	354-23-4	N.D.	2	5	1.04
10237	Methylene Chloride	75-09-2	N.D.	2	5	1.04
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	5	1.04
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	1.04
10237	Tetrachloroethene	127-18-4	N.D.	1	5	1.04
10237	Toluene	108-88-3	N.D.	1	5	1.04
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	1.04
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	1.04
10237	Trichloroethene	79-01-6	N.D.	1	5	1.04
10237	Trichlorofluoromethane	75-69-4	N.D.	2	5	1.04
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1.04
10237	Vinyl Chloride	75-01-4	N.D.	1	5	1.04
10237	Xylene (Total)	1330-20-7	N.D.	1	5	1.04

Wet Chemistry

SM20 2540 G

00111 **Moisture**

%
n.a. **3.4**

%
0.50

%
0.50

1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: IWB1-SB-06-4.0-4.5 Grab Soil
Kingston

LLI Sample # SW 6599230
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 13:05 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB064 SDG#: IBK48-18

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120931AA	04/02/2012 15:33	Emily R Styer	1.04
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027208	03/30/2012 13:28	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027208	03/30/2012 13:28	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027208	03/30/2012 13:28	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

Sample Description: IWB1-SB-06-11.0-11.5 Grab Soil
Kingston

LLI Sample # SW 6599231
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 13:15 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

SB061 SDG#: IBK48-19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	0.85
10237	Benzyl Chloride	100-44-7	N.D.	1	4	0.85
10237	Bromobenzene	108-86-1	N.D.	1	6	0.85
10237	Bromodichloromethane	75-27-4	N.D.	1	6	0.85
10237	Bromoform	75-25-2	N.D.	1	6	0.85
10237	Bromomethane	74-83-9	N.D.	2	6	0.85
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	0.85
10237	Chlorobenzene	108-90-7	N.D.	1	6	0.85
10237	Chloroethane	75-00-3	N.D.	2	6	0.85
10237	Chloroform	67-66-3	N.D.	1	6	0.85
10237	Chloromethane	74-87-3	N.D.	2	6	0.85
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	0.85
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	0.85
10237	Dibromochloromethane	124-48-1	N.D.	1	6	0.85
10237	Dibromomethane	74-95-3	N.D.	1	6	0.85
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	0.85
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	0.85
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	0.85
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	0.85
10237	1,1-Dichloroethane	75-34-3	N.D.	1	6	0.85
10237	1,2-Dichloroethane	107-06-2	N.D.	1	6	0.85
10237	1,1-Dichloroethene	75-35-4	N.D.	1	6	0.85
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	6	0.85
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	0.85
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	0.85
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	0.85
10237	Ethylbenzene	100-41-4	N.D.	1	6	0.85
10237	Freon 113	76-13-1	N.D.	2	11	0.85
10237	Freon 123a	354-23-4	N.D.	2	6	0.85
10237	Methylene Chloride	75-09-2	N.D.	2	6	0.85
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	0.85
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	0.85
10237	Tetrachloroethene	127-18-4	N.D.	1	6	0.85
10237	Toluene	108-88-3	N.D.	1	6	0.85
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	0.85
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	0.85
10237	Trichloroethene	79-01-6	7	1	6	0.85
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	0.85
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	0.85
10237	Vinyl Chloride	75-01-4	N.D.	1	6	0.85
10237	Xylene (Total)	1330-20-7	N.D.	1	6	0.85

Wet Chemistry

SM20 2540 G

00111 **Moisture**

n.a.

22.5

0.50

0.50

1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: IWB1-SB-06-11.0-11.5 Grab Soil
Kingston

LLI Sample # SW 6599231
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 13:15 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 03/30/2012 09:30

Reported: 04/13/2012 08:30

SB061 SDG#: IBK48-19

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120931AA	04/02/2012 15:56	Emily R Styer	0.85
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027208	03/30/2012 13:30	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027208	03/30/2012 13:30	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027208	03/30/2012 13:30	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

Sample Description: IWB1-SB-06-23.0-23.5 Grab Soil
Kingston**LLI Sample #** SW 6599232
LLI Group # 1299021
Account # 12694**Project Name:** IBM - Kingston**Collected:** 03/29/2012 13:26 by DG

IBM

8976 Wellington Road
Manassas VA 20109**Submitted:** 03/30/2012 09:30**Reported:** 04/13/2012 08:30

SB062 SDG#: IBK48-20*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.5	5	0.86
10237	Benzyl Chloride	100-44-7	N.D.	1	4	0.86
10237	Bromobenzene	108-86-1	N.D.	1	5	0.86
10237	Bromodichloromethane	75-27-4	N.D.	1	5	0.86
10237	Bromoform	75-25-2	N.D.	1	5	0.86
10237	Bromomethane	74-83-9	N.D.	2	5	0.86
10237	Carbon Tetrachloride	56-23-5	N.D.	1	5	0.86
10237	Chlorobenzene	108-90-7	N.D.	1	5	0.86
10237	Chloroethane	75-00-3	N.D.	2	5	0.86
10237	Chloroform	67-66-3	N.D.	1	5	0.86
10237	Chloromethane	74-87-3	N.D.	2	5	0.86
10237	2-Chlorotoluene	95-49-8	N.D.	1	5	0.86
10237	4-Chlorotoluene	106-43-4	N.D.	1	5	0.86
10237	Dibromochloromethane	124-48-1	N.D.	1	5	0.86
10237	Dibromomethane	74-95-3	N.D.	1	5	0.86
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	0.86
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	0.86
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	0.86
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	5	0.86
10237	1,1-Dichloroethane	75-34-3	N.D.	1	5	0.86
10237	1,2-Dichloroethane	107-06-2	N.D.	1	5	0.86
10237	1,1-Dichloroethene	75-35-4	N.D.	1	5	0.86
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	1	5	0.86
10237	1,2-Dichloropropane	78-87-5	N.D.	1	5	0.86
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	5	0.86
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	5	0.86
10237	Ethylbenzene	100-41-4	N.D.	1	5	0.86
10237	Freon 113	76-13-1	N.D.	2	11	0.86
10237	Freon 123a	354-23-4	N.D.	2	5	0.86
10237	Methylene Chloride	75-09-2	N.D.	2	5	0.86
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	5	0.86
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	0.86
10237	Tetrachloroethene	127-18-4	N.D.	1	5	0.86
10237	Toluene	108-88-3	N.D.	1	5	0.86
10237	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	0.86
10237	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	0.86
10237	Trichloroethene	79-01-6	1 J	1	5	0.86
10237	Trichlorofluoromethane	75-69-4	N.D.	2	5	0.86
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	0.86
10237	Vinyl Chloride	75-01-4	N.D.	1	5	0.86
10237	Xylene (Total)	1330-20-7	N.D.	1	5	0.86

The GC/MS volatile internal standard peak areas were outside the QC limits. A re-analysis was performed, and the matrix effect was confirmed.

Wet Chemistry	SM20 2540 G	%	%	%	
00111 Moisture	n.a.	22.1	0.50	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

* = This limit was used in the evaluation of the final result

Sample Description: IWB1-SB-06-23.0-23.5 Grab Soil
Kingston

LLI Sample # SW 6599232
LLI Group # 1299021
Account # 12694

Project Name: IBM - Kingston

Collected: 03/29/2012 13:26 by DG

IBM

8976 Wellington Road

Submitted: 03/30/2012 09:30

Manassas VA 20109

Reported: 04/13/2012 08:30

SB062 SDG#: IBK48-20*

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X120931AA	04/02/2012 16:18	Emily R Styer	0.86
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201209027208	03/30/2012 13:31	Stephanie A Sanchez	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201209027208	03/30/2012 13:32	Stephanie A Sanchez	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201209027208	03/30/2012 13:31	Stephanie A Sanchez	n.a.
00111	Moisture	SM20 2540 G	1	12094820001A	04/03/2012 18:26	Scott W Freisher	1

Quality Control Summary

Client Name: IBM

Group Number: 1299021

Reported: 04/13/12 at 08:30 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: C120971AA	Sample number(s): 6599221-6599222								
Benzene	N.D.	0.1	0.5	ug/l	107		80-120		
Benzyl Chloride	N.D.	0.1	0.5	ug/l	87		73-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	93		80-120		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	98		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	84		70-128		
Bromomethane	N.D.	0.1	0.5	ug/l	104		66-124		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	108		74-133		
Chlorobenzene	N.D.	0.1	0.5	ug/l	104		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	106		67-124		
Chloroform	N.D.	0.1	0.5	ug/l	106		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	94		55-135		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	102		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	101		80-120		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	92		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	99		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	99		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	99		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	98		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	99		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	106		89-122		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	107		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	110		80-123		
1,2-Dichloroethene (Total)	N.D.	0.1	0.5	ug/l	107		80-120		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	103		80-120		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	83		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	92		80-120		
Ethylbenzene	N.D.	0.1	0.5	ug/l	108		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	126		78-132		
Freon 123a	N.D.	0.2	0.5	ug/l	121		76-133		
Methylene Chloride	N.D.	0.2	0.5	ug/l	105		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	100		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	90		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	107		80-120		
Toluene	N.D.	0.1	0.5	ug/l	110		80-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	110		79-127		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	100		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	123		66-134		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	93		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	106		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	109		80-120		
Batch number: G120961AA	Sample number(s): 6599209-6599210, 6599219-6599228								
Benzene	N.D.	0.1	0.5	ug/l	95		80-120		
Benzyl Chloride	N.D.	0.1	0.5	ug/l	90		73-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	97		80-120		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1299021

Reported: 04/13/12 at 08:30 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Bromodichloromethane	N.D.	0.1	0.5	ug/l	100		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	92		70-128		
Bromomethane	N.D.	0.1	0.5	ug/l	96		66-124		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	88		74-133		
Chlorobenzene	N.D.	0.1	0.5	ug/l	96		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	99		67-124		
Chloroform	N.D.	0.1	0.5	ug/l	98		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	88		55-135		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	96		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	98		80-120		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	99		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	108		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	95		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	95		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	95		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	64		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	98		89-122		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	108		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	94		80-123		
1,2-Dichloroethene (Total)	N.D.	0.1	0.5	ug/l	97		80-120		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	100		80-120		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	99		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	101		80-120		
Ethylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	89		78-132		
Freon 123a	N.D.	0.2	0.5	ug/l	104		76-133		
Methylene Chloride	N.D.	0.2	0.5	ug/l	104		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	92		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	114		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	82		80-120		
Toluene	N.D.	0.1	0.5	ug/l	97		80-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	91		79-127		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	107		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	95		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	94		66-134		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	110		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	87		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	95		80-120		

Batch number: X120921AA

Sample number(s): 6599211-6599213

Benzene	N.D.	0.5	5	ug/kg	98	95	80-120	3	30
Benzyl Chloride	N.D.	1.	4	ug/kg	93	89	66-120	5	30
Bromobenzene	N.D.	1.	5	ug/kg	98	95	79-120	3	30
Bromodichloromethane	N.D.	1.	5	ug/kg	90	88	78-120	3	30
Bromoform	N.D.	1.	5	ug/kg	95	93	70-120	3	30
Bromomethane	N.D.	2.	5	ug/kg	61	61	32-162	1	30
Carbon Tetrachloride	N.D.	1.	5	ug/kg	85	81	69-122	5	30
Chlorobenzene	N.D.	1.	5	ug/kg	103	103	80-120	0	30
Chloroethane	N.D.	2.	5	ug/kg	65	65	37-154	1	30
Chloroform	N.D.	1.	5	ug/kg	92	89	80-120	4	30
Chloromethane	N.D.	2.	5	ug/kg	87	87	56-120	1	30
2-Chlorotoluene	N.D.	1.	5	ug/kg	101	97	78-120	5	30
4-Chlorotoluene	N.D.	1.	5	ug/kg	102	97	79-120	5	30
Dibromochloromethane	N.D.	1.	5	ug/kg	97	96	77-120	0	30
Dibromomethane	N.D.	1.	5	ug/kg	89	86	80-120	4	30
1,2-Dichlorobenzene	N.D.	1.	5	ug/kg	102	96	79-120	6	30
1,3-Dichlorobenzene	N.D.	1.	5	ug/kg	101	96	78-120	5	30
1,4-Dichlorobenzene	N.D.	1.	5	ug/kg	102	98	79-120	4	30

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1299021

Reported: 04/13/12 at 08:30 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Dichlorodifluoromethane	N.D.	2.	5	ug/kg	68	65	20-120	5	30
1,1-Dichloroethane	N.D.	1.	5	ug/kg	99	96	80-120	3	30
1,2-Dichloroethane	N.D.	1.	5	ug/kg	89	86	71-129	3	30
1,1-Dichloroethene	N.D.	1.	5	ug/kg	73	70*	73-129	5	30
1,2-Dichloroethene (Total)	N.D.	1.	5	ug/kg	90	87	80-120	4	30
1,2-Dichloropropane	N.D.	1.	5	ug/kg	107	103	77-120	4	30
cis-1,3-Dichloropropene	N.D.	1.	5	ug/kg	91	89	74-120	2	30
trans-1,3-Dichloropropene	N.D.	1.	5	ug/kg	95	95	77-120	0	30
Ethylbenzene	N.D.	1.	5	ug/kg	103	102	80-120	1	30
Freon 113	N.D.	2.	10	ug/kg	76	71	64-137	6	30
Freon 123a	N.D.	2.	5	ug/kg	89	87	61-127	2	30
Methylene Chloride	N.D.	2.	5	ug/kg	90	86	76-124	5	30
1,1,1,2-Tetrachloroethane	N.D.	1.	5	ug/kg	100	100	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	1.	5	ug/kg	108	100	71-123	7	30
Tetrachloroethene	N.D.	1.	5	ug/kg	99	97	78-126	2	30
Toluene	N.D.	1.	5	ug/kg	103	102	80-120	0	30
1,1,1-Trichloroethane	N.D.	1.	5	ug/kg	86	83	71-125	4	30
1,1,2-Trichloroethane	N.D.	1.	5	ug/kg	100	103	80-120	3	30
Trichloroethene	N.D.	1.	5	ug/kg	90	89	80-120	2	30
Trichlorofluoromethane	N.D.	2.	5	ug/kg	87	84	58-133	4	30
1,2,3-Trichloropropane	N.D.	1.	5	ug/kg	99	91	71-123	8	30
Vinyl Chloride	N.D.	1.	5	ug/kg	84	83	53-120	2	30
Xylene (Total)	N.D.	1.	5	ug/kg	104	103	80-120	1	30

Batch number: X120931AA

Sample number(s): 6599214-6599218, 6599229-6599232

Benzene	N.D.	0.5	5	ug/kg	105		80-120		
Benzyl Chloride	N.D.	1.	4	ug/kg	99		66-120		
Bromobenzene	N.D.	1.	5	ug/kg	100		79-120		
Bromodichloromethane	N.D.	1.	5	ug/kg	92		78-120		
Bromoform	N.D.	1.	5	ug/kg	99		70-120		
Bromomethane	N.D.	2.	5	ug/kg	61		32-162		
Carbon Tetrachloride	N.D.	1.	5	ug/kg	89		69-122		
Chlorobenzene	N.D.	1.	5	ug/kg	105		80-120		
Chloroethane	N.D.	2.	5	ug/kg	64		37-154		
Chloroform	N.D.	1.	5	ug/kg	95		80-120		
Chloromethane	N.D.	2.	5	ug/kg	90		56-120		
2-Chlorotoluene	N.D.	1.	5	ug/kg	101		78-120		
4-Chlorotoluene	N.D.	1.	5	ug/kg	104		79-120		
Dibromochloromethane	N.D.	1.	5	ug/kg	98		77-120		
Dibromomethane	N.D.	1.	5	ug/kg	94		80-120		
1,2-Dichlorobenzene	N.D.	1.	5	ug/kg	100		79-120		
1,3-Dichlorobenzene	N.D.	1.	5	ug/kg	101		78-120		
1,4-Dichlorobenzene	N.D.	1.	5	ug/kg	104		79-120		
Dichlorodifluoromethane	N.D.	2.	5	ug/kg	68		20-120		
1,1-Dichloroethane	N.D.	1.	5	ug/kg	107		80-120		
1,2-Dichloroethane	N.D.	1.	5	ug/kg	95		71-129		
1,1-Dichloroethene	N.D.	1.	5	ug/kg	97		73-129		
1,2-Dichloroethene (Total)	N.D.	1.	5	ug/kg	98		80-120		
1,2-Dichloropropane	N.D.	1.	5	ug/kg	109		77-120		
cis-1,3-Dichloropropene	N.D.	1.	5	ug/kg	93		74-120		
trans-1,3-Dichloropropene	N.D.	1.	5	ug/kg	98		77-120		
Ethylbenzene	N.D.	1.	5	ug/kg	103		80-120		
Freon 113	N.D.	2.	10	ug/kg	95		64-137		
Freon 123a	N.D.	2.	5	ug/kg	63		61-127		
Methylene Chloride	N.D.	2.	5	ug/kg	102		76-124		
1,1,1,2-Tetrachloroethane	N.D.	1.	5	ug/kg	102		80-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	5	ug/kg	113		71-123		
Tetrachloroethene	N.D.	1.	5	ug/kg	103		78-126		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1299021

Reported: 04/13/12 at 08:30 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Toluene	N.D.	1.	5	ug/kg	104		80-120		
1,1,1-Trichloroethane	N.D.	1.	5	ug/kg	88		71-125		
1,1,2-Trichloroethane	N.D.	1.	5	ug/kg	107		80-120		
Trichloroethene	N.D.	1.	5	ug/kg	96		80-120		
Trichlorofluoromethane	N.D.	2.	5	ug/kg	85		58-133		
1,2,3-Trichloropropane	N.D.	1.	5	ug/kg	106		71-123		
Vinyl Chloride	N.D.	1.	5	ug/kg	87		53-120		
Xylene (Total)	N.D.	1.	5	ug/kg	105		80-120		

Batch number: 120940036A
MethaneSample number(s): 6599221
N.D. 5.0 15

ug/l 98 97 80-120 2 20

Batch number: 120901848005

Sample number(s): 6599221

Antimony	N.D.	5.8	20.0	ug/l	106		88-111		
Arsenic	N.D.	5.1	20.0	ug/l	111		80-120		
Barium	0.39 J	0.26	5.0	ug/l	104		90-110		
Cadmium	0.42 J	0.27	5.0	ug/l	105		90-112		
Calcium	N.D.	70.5	200	ug/l	102		90-110		
Chromium	N.D.	1.1	15.0	ug/l	99		90-110		
Copper	N.D.	0.94	10.0	ug/l	104		90-112		
Iron	N.D.	14.1	200	ug/l	102		90-112		
Lead	N.D.	2.2	15.0	ug/l	107		88-110		
Magnesium	N.D.	6.7	100	ug/l	98		90-110		
Manganese	N.D.	0.44	5.0	ug/l	103		90-110		
Potassium	N.D.	87.4	500	ug/l	98		85-115		
Selenium	N.D.	6.9	20.0	ug/l	95		80-120		
Sodium	N.D.	64.7	1,000	ug/l	100		87-114		

Batch number: 12090105102A
Nitrite NitrogenSample number(s): 6599221
N.D. 15. 50

ug/l 98 90-110

Batch number: 12093106101A
Nitrate NitrogenSample number(s): 6599221
N.D. 40. 100

ug/l 104 90-110

Batch number: 12093109101A
Total Phosphorus as P (water)Sample number(s): 6599221
N.D. 80. 100

ug/l 110 90-110

Batch number: 12094049501A
Total Organic CarbonSample number(s): 6599221
N.D. 500. 1,000

ug/l 103 91-113

Batch number: 12101987121B
Chloride
Fluoride
SulfateSample number(s): 6599221
N.D. 200. 400
N.D. 80. 100
N.D. 300. 1,000ug/l 97 90-110
ug/l 97 90-110
ug/l 98 90-110Batch number: 12090022101A
Ammonia NitrogenSample number(s): 6599221
N.D. 200. 600

ug/l 96 95 85-105 1 5

Batch number: 12090023501A
Biochemical Oxygen Demand

Sample number(s): 6599221

98 85-115

Batch number: 12094021201B
Total Dissolved SolidsSample number(s): 6599221
N.D. 9,700. 30,000

ug/l 97 80-120

Batch number: 12094133302A
SulfideSample number(s): 6599221
N.D. 600. 2,000

ug/l 96 80-120

Batch number: 12094400101B

Sample number(s): 6599221

*- Outside of specification

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1299021

Reported: 04/13/12 at 08:30 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Chemical Oxygen Demand					103		94-110		
Batch number: 12095020201A	Sample number(s): 6599221								
Alkalinity to pH 4.5	N.D.	460.	2,000	ug/l as CaCO3	99		98-103		
Batch number: 12096020602A	Sample number(s): 6599221								
Total Suspended Solids	N.D.	3,000.	12,000	ug/l	83		80-105		
Batch number: 12094820001A	Sample number(s): 6599211-6599218,6599229-6599232								
Moisture					100		99-101		
Moisture					100		99-101		
Moisture Duplicate					100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: C120971AA	Sample number(s): 6599221-6599222 UNSPK: P602133								
Benzene	115	119	87-126	3	30				
Benzyl Chloride	91	95	62-125	4	30				
Bromobenzene	99	101	80-123	2	30				
Bromodichloromethane	103	106	82-133	2	30				
Bromoform	83	83	60-138	0	30				
Bromomethane	111	111	69-135	0	30				
Carbon Tetrachloride	122	124	81-148	1	30				
Chlorobenzene	109	111	78-133	3	30				
Chloroethane	113	114	70-139	1	30				
Chloroform	105	105	86-136	0	30				
Chloromethane	103	106	55-152	2	30				
2-Chlorotoluene	106	110	81-120	4	30				
4-Chlorotoluene	105	108	82-119	3	30				
Dibromochloromethane	95	96	79-125	1	30				
Dibromomethane	102	106	83-126	3	30				
1,2-Dichlorobenzene	102	105	83-117	3	30				
1,3-Dichlorobenzene	103	106	81-118	3	30				
1,4-Dichlorobenzene	103	104	79-120	1	30				
Dichlorodifluoromethane	113	114	39-155	1	30				
1,1-Dichloroethane	114	118	88-136	3	30				
1,2-Dichloroethane	112	113	82-135	1	30				
1,1-Dichloroethene	124	130	83-150	4	30				
1,2-Dichloroethene (Total)	115	120	91-131	4	30				
1,2-Dichloropropane	109	114	91-126	5	30				
cis-1,3-Dichloropropene	86	91	74-132	6	30				
trans-1,3-Dichloropropene	94	97	71-128	3	30				
Ethylbenzene	115	118	80-140	2	30				
Freon 113	147	149	87-158	1	30				
Freon 123a	138	132	81-151	4	30				
Methylene Chloride	113	115	84-122	2	30				
1,1,1,2-Tetrachloroethane	104	107	87-126	3	30				
1,1,2,2-Tetrachloroethane	94	96	75-131	3	30				

*- Outside of specification

**.-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM
Reported: 04/13/12 at 08:30 AM

Group Number: 1299021

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Tetrachloroethene	117	119	63-156	2	30				
Toluene	117	119	83-127	1	30				
1,1,1-Trichloroethane	123	125	85-140	2	30				
1,1,2-Trichloroethane	103	106	85-129	2	30				
Trichlorofluoromethane	138	136	67-161	2	30				
1,2,3-Trichloropropane	93	97	76-120	4	30				
Vinyl Chloride	118	124	65-151	5	30				
Xylene (Total)	115	118	81-137	2	30				

Batch number: G120961AA	Sample number(s): 6599209-6599210, 6599219-6599228 UNSPK: 6599224								
Benzene	106	107	87-126	1	30				
Benzyl Chloride	93	95	62-125	2	30				
Bromobenzene	104	106	80-123	2	30				
Bromodichloromethane	108	107	82-133	0	30				
Bromoform	92	94	60-138	2	30				
Bromomethane	104	105	69-135	1	30				
Carbon Tetrachloride	104	106	81-148	1	30				
Chlorobenzene	106	106	78-133	0	30				
Chloroethane	107	109	70-139	2	30				
Chloroform	109	109	86-136	0	30				
Chloromethane	95	95	55-152	0	30				
2-Chlorotoluene	104	106	81-120	2	30				
4-Chlorotoluene	106	107	82-119	0	30				
Dibromochloromethane	103	104	79-125	1	30				
Dibromomethane	115	117	83-126	1	30				
1,2-Dichlorobenzene	101	104	83-117	3	30				
1,3-Dichlorobenzene	104	104	81-118	0	30				
1,4-Dichlorobenzene	102	103	79-120	1	30				
Dichlorodifluoromethane	75	74	39-155	1	30				
1,1-Dichloroethane	105	94	88-136	2	30				
1,2-Dichloroethane	112	113	82-135	1	30				
1,1-Dichloroethene	104 (2)	57 (2)	83-150	5	30				
1,2-Dichloroethene (Total)	110	108	91-131	1	30				
1,2-Dichloropropane	109	110	91-126	1	30				
cis-1,3-Dichloropropene	103	104	74-132	2	30				
trans-1,3-Dichloropropene	104	106	71-128	2	30				
Ethylbenzene	108	109	80-140	1	30				
Freon 113	107	108	87-158	1	30				
Freon 123a	117	119	81-151	2	30				
Methylene Chloride	114	114	84-122	0	30				
1,1,1,2-Tetrachloroethane	100	101	87-126	1	30				
1,1,2,2-Tetrachloroethane	114	116	75-131	1	30				
Tetrachloroethene	96	94	63-156	2	30				
Toluene	108	110	83-127	1	30				
1,1,1-Trichloroethane	106	104	85-140	1	30				
1,1,2-Trichloroethane	112	113	85-129	1	30				
Trichloroethene	43 (2)	-83 (2)	85-131	5	30				
Trichlorofluoromethane	109	109	67-161	0	30				
1,2,3-Trichloropropane	112	113	76-120	1	30				
Vinyl Chloride	99	98	65-151	1	30				
Xylene (Total)	106	107	81-137	1	30				

Batch number: X120921AA

Sample number(s): 6599211-6599213 UNSPK: P598388

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1299021

Reported: 04/13/12 at 08:30 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Benzene	96		55-143						
Benzyl Chloride	92		30-130						
Bromobenzene	90		43-139						
Bromodichloromethane	90		53-136						
Bromoform	99		38-124						
Bromomethane	56		42-168						
Carbon Tetrachloride	84		45-153						
Chlorobenzene	95		49-135						
Chloroethane	54		39-152						
Chloroform	91		61-142						
Chloromethane	82		51-163						
2-Chlorotoluene	88		42-146						
4-Chlorotoluene	87		39-145						
Dibromochloromethane	99		51-128						
Dibromomethane	96		57-130						
1,2-Dichlorobenzene	84		36-133						
1,3-Dichlorobenzene	83		34-134						
1,4-Dichlorobenzene	86		35-136						
Dichlorodifluoromethane	71		26-151						
1,1-Dichloroethane	96		63-142						
1,2-Dichloroethane	93		68-131						
1,1-Dichloroethene	68		61-149						
1,2-Dichloroethene (Total)	87		59-139						
1,2-Dichloropropane	105		62-135						
cis-1,3-Dichloropropene	88		51-131						
trans-1,3-Dichloropropene	90		49-129						
Ethylbenzene	93		44-141						
Freon 113	76		56-156						
Freon 123a	80		34-153						
Methylene Chloride	90		61-141						
1,1,1,2-Tetrachloroethane	95		52-130						
1,1,2,2-Tetrachloroethane	120		40-152						
Tetrachloroethene	97		42-149						
Toluene	100		50-146						
1,1,1-Trichloroethane	85		64-142						
1,1,2-Trichloroethane	102		54-139						
Trichloroethene	88		53-144						
Trichlorofluoromethane	86		47-163						
1,2,3-Trichloropropane	119		45-154						
Vinyl Chloride	83		50-154						
Xylene (Total)	94		44-136						

Batch number: X120931AA

Sample number(s): 6599214-6599218, 6599229-6599232 UNSPK: 6599216

Benzene	111	114	55-143	11	30
Benzyl Chloride	95	104	30-130	16	30
Bromobenzene	102	107	43-139	13	30
Bromodichloromethane	98	103	53-136	13	30
Bromoform	101	108	38-124	14	30
Bromomethane	66	66	42-168	8	30
Carbon Tetrachloride	98	103	45-153	13	30
Chlorobenzene	109	114	49-135	13	30
Chloroethane	71	70	39-152	7	30
Chloroform	101	105	61-142	12	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1299021

Reported: 04/13/12 at 08:30 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Chloromethane	95	97	51-163	10	30				
2-Chlorotoluene	104	108	42-146	12	30				
4-Chlorotoluene	102	108	39-145	14	30				
Dibromochloromethane	105	111	51-128	14	30				
Dibromomethane	99	104	57-130	14	30				
1,2-Dichlorobenzene	101	105	36-133	12	30				
1,3-Dichlorobenzene	99	105	34-134	14	30				
1,4-Dichlorobenzene	101	106	35-136	14	30				
Dichlorodifluoromethane	81	78	26-151	5	30				
1,1-Dichloroethane	112	121	63-142	14	30				
1,2-Dichloroethane	101	105	68-131	12	30				
1,1-Dichloroethene	105	112	61-149	13	30				
1,2-Dichloroethene (Total)	108	114	59-139	13	30				
1,2-Dichloropropane	113	119	62-135	14	30				
cis-1,3-Dichloropropene	96	99	51-131	12	30				
trans-1,3-Dichloropropene	96	105	49-129	16	30				
Ethylbenzene	107	112	44-141	13	30				
Freon 113	112	116	56-156	11	30				
Freon 123a	103	99	34-153	4	30				
Methylene Chloride	110	112	61-141	10	30				
1,1,1,2-Tetrachloroethane	106	112	52-130	13	30				
1,1,2,2-Tetrachloroethane	114	121	40-152	14	30				
Tetrachloroethene	113	117	42-149	11	30				
Toluene	109	116	50-146	14	30				
1,1,1-Trichloroethane	99	101	64-142	11	30				
1,1,2-Trichloroethane	109	120	54-139	18	30				
Trichloroethene	107	120	53-144	9	30				
Trichlorofluoromethane	101	99	47-163	6	30				
1,2,3-Trichloropropane	111	118	45-154	14	30				
Vinyl Chloride	95	93	50-154	6	30				
Xylene (Total)	107	113	44-136	13	30				

Batch number: 120901848005

Sample number(s): 6599221 UNSPK: P599457 BKG: P599457

Antimony	112	112	87-122	0	20	8.7	J	N.D.		200* (1)	20
Arsenic	120	119	81-123	1	20	7.5	J	13.3	J	55* (1)	20
Barium	99	100	78-118	1	20	198		200		1	20
Cadmium	96	96	83-116	0	20	N.D.		N.D.		0 (1)	20
Calcium	-263	-130	81-118	1	20	726,000		712,000		2	20
	(2)	(2)									
Chromium	97	99	81-120	2	20	3.8	J	3.6	J	7 (1)	20
Copper	106	108	86-122	1	20	2.5	J	2.7	J	9 (1)	20
Iron	107 (2)	93 (2)	75-125	1	20	9,010		9,040		0	20
Lead	96	97	75-125	1	20	N.D.		N.D.		0 (1)	20
Magnesium	37 (2)	125 (2)	75-125	1	20	282,000		279,000		1	20
Manganese	102	104	75-125	1	20	938		950		1	20
Potassium	115	115	83-123	0	20	5,300		5,410		2	20
Selenium	95	96	75-125	2	20	N.D.		N.D.		0 (1)	20
Sodium	79 (2)	-602	75-125	6	20	1,090,000		1,090,000		1	20
		(2)									

Batch number: 12090105102A

Sample number(s): 6599221 UNSPK: P598963 BKG: P598963

Nitrite Nitrogen	96		90-110		120			120		0 (1)	20
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*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1299021

Reported: 04/13/12 at 08:30 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>BKG</u> <u>MAX</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Batch number: 12093106101A Nitrate Nitrogen	97		90-110	UNSPK: P597999	BKG: P597999	N.D. N.D.	0 (1)	2
Batch number: 12093109101A Total Phosphorus as P (water)	115*		90-110	UNSPK: P600452	BKG: P600452	N.D. N.D.	0 (1)	4
Batch number: 12094049501A Total Organic Carbon	137		63-142	UNSPK: P592713	BKG: P592713	648,000 663,000	2	3
Batch number: 12101987121B Chloride	72*		90-110	UNSPK: P597867	BKG: P597867	55,700 56,100	1	20
Fluoride	118*		90-110		N.D. N.D.	N.D. N.D.	0 (1)	20
Sulfate	120*		90-110		12,000 11,700	11,700	3 (1)	20
Batch number: 12090022101A Ammonia Nitrogen				BKG: P597480		37,800 38,300	1	6
Batch number: 12090023501A Biochemical Oxygen Demand	113	113	75-139	1	8	325,000 281,000	15	15
Batch number: 12094021201B Total Dissolved Solids	114	115	62-135	0	12	514,000 539,000	5	9
Batch number: 12094133302A Sulfide	96	98	86-111	2	3	N.D. N.D.	0 (1)	20
Batch number: 12094400101B Chemical Oxygen Demand	99		90-110	UNSPK: P599920	BKG: P599920	39,600 J 35,000 J	12* (1)	5
Batch number: 12095020201A Alkalinity to pH 4.5	98	99	73-121	0	5	239,000 N.D.	2	5
Alkalinity to pH 8.3						N.D. N.D.	0 (1)	5
Batch number: 12096020602A Total Suspended Solids				BKG: P603122		724,000 608,000	17*	10
Batch number: 12094820001A Moisture				Sample number(s): 6599211-6599218, 6599229-6599232	BKG: 6599216	21.1 21.6	2	15
Moisture						21.1 21.6	2	15
Moisture Duplicate						21.1 21.6	2	15

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA SW846/8260 (water-25ml) #1

Batch number: C120971AA

Dibromofluoromethane

1,2-Dichloroethane-d4

Toluene-d8

4-Bromofluorobenzene

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM
Reported: 04/13/12 at 08:30 AM

Group Number: 1299021

Surrogate Quality Control

6599221	104	100	96	93
6599222	105	100	96	93
Blank	105	100	95	92
LCS	96	101	104	103
MS	98	103	103	103
MSD	97	98	103	104

Limits:	77-114	74-113	77-110	78-110
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Analysis Name: EPA SW846/8260 (water-25ml) #1

Batch number: G120961AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6599209	103	108	101	99
6599210	104	106	100	98
6599219	104	108	100	98
6599220	104	107	100	98
6599223	104	107	101	98
6599224	104	107	101	99
6599225	101	105	102	100
6599226	101	103	102	101
6599227	103	107	100	98
6599228	104	107	100	98
Blank	103	107	100	99
LCS	101	106	101	101
MS	101	105	102	100
MSD	101	103	102	101

Limits:	77-114	74-113	77-110	78-110
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Analysis Name: PPL/TCL Volatiles

Batch number: X120921AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6599211	101	106	95	89
6599212	102	108	98	91
6599213	103	108	93	84
Blank	100	103	93	88
LCS	97	106	109	95
LCSD	95	104	109	96
MS	97	109	108	94

Limits:	50-141	54-135	52-141	50-131
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Analysis Name: PPL/TCL Volatiles

Batch number: X120931AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6599214	102	104	107	71
6599215	100	107	94	90
6599216	103	107	92	85
6599217	97	108	108	94
6599218	97	108	108	94
6599229	105	106	105	73
6599230	103	108	99	91
6599231	103	110	94	90

*- Outside of specification

**.-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1299021

Reported: 04/13/12 at 08:30 AM

Surrogate Quality Control

6599232	114	103	124	55
Blank	100	106	94	90
LCS	96	108	106	96
MS	97	108	108	94
MSD	97	108	108	94

Limits:	50-141	54-135	52-141	50-131
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Analysis Name: Volatile Headspace Hydrocarbon

Batch number: 120940036A

Propene

6599221	55
Blank	80
LCS	103
LCSD	101

Limits: 42-131

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Project Name: IBM - Kingston
LLI Group #: 1299021

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260B, GC/MS Volatiles**

Batch #: X120921AA (Sample number(s): 6599211-6599213 UNSPK: P598388)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window: 1,1-Dichloroethene

Sample #s: 6599214, 6599229, 6599232

The GC/MS volatile internal standard peak areas were outside the QC limits. A re-analysis was performed, and the matrix effect was confirmed.

Sample #s: 6599211, 6599212, 6599213

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 1,1-dichloroethene.

SW-846 8260B 25mL purge, GC/MS Volatiles

Batch #: G120961AA (Sample number(s): 6599209-6599210, 6599219-6599228 UNSPK: 6599224)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: 1,1-Dichloroethene, Trichloroethene

SW-846 6010B, Metals

Batch #: 120901848005 (Sample number(s): 6599221 UNSPK: P599457 BKG: P599457)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Calcium, Sodium, Magnesium

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Arsenic, Antimony

EPA 300.0, Wet Chemistry

Batch #: 12101987121B (Sample number(s): 6599221 UNSPK: P597867 BKG: P597867)

The recovery(ies) for the following analyte(s) in the MS was outside the acceptance window: Chloride, Sulfate, Fluoride

EPA 365.1, Wet Chemistry

Batch #: 12093109101A (Sample number(s): 6599221 UNSPK: P600452 BKG: P600452)

The recovery(ies) for the following analyte(s) in the MS was outside the acceptance window: Total Phosphorus as P (water)

EPA 410.4, Wet Chemistry

Batch #: 12094400101B (Sample number(s): 6599221 UNSPK: P599920 BKG: P599920)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Chemical Oxygen Demand

Sample #s: 6599221

Reporting limits were raised due to interference from the sample matrix.

SM20 2540 D, Wet Chemistry

Batch #: 12096020602A (Sample number(s): 6599221 BKG: P603122)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Total Suspended Solids

SM20 4500 S2 F, Wet Chemistry

Sample #s: 6599221

Reporting limits were raised due to interference from the sample matrix.



**Lancaster
Laboratories**

Acct. # 12694

For Lancaster Laboratories use only
Group # 1299021 Sample # 6599209-32
Instructions on reverse side correspond with circled numbers.

COC # 016041

① Client Information				④ Matrix		⑤ Analyses Requested										For Lab Use Only 1 of 2														
Client IBM						Preservation Code										SCR#														
Project Name## KINGSTON																Preservation Codes H = HC T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other														
IBM PM M. KOMINEK																														
P.O.#																														
Project State NEW YORK																Remarks														
Sampler D. GORMAN																														
Check One: ☐ Routine Lab GW ☐ Routine GTF O&M ☐ Non-Routine Investigation ☐ Non-Routine Upgrades/Installs																														
OU: _____ (Endicott Non-Routine only)																														
② Sample Identification			Collected		③ Grab	Composite	Soil	Sediment	Ground	Surface	Potable	Water	NPDES	Air	Oil	Total # of Containers														
TB12075-032912																														
RINSTATE 02-032912			3/29/12 1335																											
IWB1-SB-04-9.0-4.5			0900		X		X																							
IWB1-SB-04-9.0-9.5			0912		X		X																							
IWB1-SB-04-9.0-9.5D			0915		X		V																							
IWB1-SB-04-23.0-23.5			0925		X		X																							
IWB1-SB-05-9.0-9.5			1046		X		X																							
IWB1-SB-05-11.0-11.5			1105		X		X																							
IWB1-SB-05-11.0-11.5MS			1107		X		X																							
IWB1-SB-05-11.0-11.5MSD			3/29/12 1110		X		X																							
⑦ Turnaround Time Requested (TAT) (please circle) Standard Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharges.) Date results are needed: _____ Rush results requested by (please circle) E-mail Phone E-mail: CHEMINGWAY@GOLDIER.COM Phone: 9736451922																	Relinquished by [Signature]			Date 03/29/12		Time 1600		Received by			Date		Time	
																	Relinquished by			Date		Time		Received by			Date		Time	
																	Relinquished by			Date										

**Lancaster
Laboratories**

Acct. # 12694

For Lancaster Laboratories use only
Group # 1299021 Sample # 6599209-32
Instructions on reverse side correspond with circled numbers.

COC # 016005

20F3

[illegible]



Lancaster
Laboratories

Acct. # 12694

For Lancaster Laboratories use only
Group # 1299021 Sample # 6599209-32
Instructions on reverse side correspond with circled numbers.

IBM Chain of Custody

COC # 016043

For Lab Use Only

3 of 3

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks							
Client		Acct#		Sediment		Ground		Surface		Preservation Code												SCR#					
Project Name/#		Project State		Potable		NPDES		Air														Preservation Codes					
IBM PM		Sampler		Soil		Water		Oil														H = HC T = Thiosulfate					
P.O. #				Composite																		N = HNO ₃ B = NaOH					
Check One:																						S = H ₂ SO ₄ O = Other					
☐ Routine Lab GW		☐ Routine GTF O&M																									
☐ Non-Routine Investigation		☐ Non-Routine Upgrades/Installs																									
OU: _____		(Endicott Non-Routine only)																									
2 Sample Identification				3 Collected		Grab		Total # of Containers																			
Date		Time																									
IWB1-SB-05-22.5-23.0		3/29/12 1120		X		X		4		X																	
IWB1-SB-06-40-4.5		1305		X		X		4		X																	
IWB1-SB-06-11.0-11.5		1315		X		X		4		X																	
IWB1-SB-06-23.0-23.5		3/29/12 1326		X		Y		4		X																	
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by				Date				Time				Received by				Date				Time			
(Rush TAT is subject to Lancaster Laboratories approval and surcharges.)				D. [Signature]				03/29/12				1600															
Date results are needed:				Relinquished by				Date				Time				Received by				Date				Time			
Rush results requested by (please circle) E-mail Phone				Relinquished by				Date				Time				Received by				Date				Time			
E-mail CHEM@GLW.COM Phone: 973-695-1922				Relinquished by				Date				Time				Received by				Date				Time			
8 Data Package Options (please circle if required)				Relinquished by				Date				Time				Received by				Date				Time			
Type I (Validation/NJ Reg)		TX TRRP-13		NY ASP A																							
Type III (Reduced NJ)		MA MCP		NY ASP B																							
Type VI (Raw Data Only)		CT RCP																									
SDG Complete?		Yes		No																							
Site-specific QC (MS/MSD/Dup)?				Yes				No												Temperature upon receipt 0.7 - 0.9°C							
(If yes, indicate QC sample and submit triplicate volume.)																											

Environmental Sample Administration
Receipt Documentation LogClient/Project: 1 BM.Shipping Container Sealed: YES NODate of Receipt: 3-30-12Custody Seal Present *: YES NOTime of Receipt: 930* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 50-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	2783	0.7	TB	WI	Y	L	
2	↓	0.9	↓	↓	↓	↓	
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Rec 4 TB Date on label says MAR 27 2012
Rec 3 Encore for 1WBI-SB-04-4.0-4.5 label
ID says 1WBI-SB-04-4.5-5.0
Rec 1 vials for SAB-Tw-04-22 Time 1203
(methane) Empty.

Unpacker Signature/Emp#:

Brenely Barely²²⁹⁹

Date/Time:

3-30-12 10:34

Environmental Sample Administration
Receipt Documentation Log
(continuation page)Client/Project: IBMDate of Receipt: 3-30-12Unpacker Emp. No.: 2299**Additional Paperwork Discrepancy/Unpacking Problems:**Rec 3 vials for Rinsate-032912
Time = 800 coc has 1030Rec 3 vials for Sab-Tw-03-12
Time = 0928Rec 1 moisture for IWB1-SB-06-23.0-235
ID on label says IWB1-SB-06All discrepancies listed were addressed with the sampler and the
COC information is correct as is. N/A 4/9/12

Nicole Maljovec

From: Gorman, Daniel [Daniel_Gorman@golder.com]

Sent: Thursday, April 05, 2012 7:47 AM

To: Nicole Maljovec

Subject: RE: Sample ID Question & Cooler update

Nicole-

For Sample IWB1-SB-04, the correct ID should be 4.0-4.5: IWB1-SB-04-4.0-4.5.

Also, all sample times are correct on the COC; if there were discrepancies between the COC and the sample labels, please follow the COC for the sample times (as you have).

Thanks-
Daniel

From: Nicole Maljovec [mailto:nmaljovec@lancasterlabs.com]

Sent: Wednesday, April 04, 2012 3:12 PM

To: Gorman, Daniel

Subject: Sample ID Question & Cooler update

Hi Daniel,

I received your voicemail just now and tracked the cooler. It looks like it was just delivered around 2:00. Let me know if haven't received it yet. Also I noticed that only 1 cooler was delivered instead of 3. Let me know where to deliver the other 2 coolers and I'll place the order. Sorry about that one.

On the attached COC, there were a few time discrepancies between the COC and the bottle labels. We followed the COC for entry. If we should follow the labels for the time, let me know and I'll update the group.

For sample IWB1-SB-04-4.0-4.5 (from COC), the encore labels have a depth of 4.5-5.0. Should we enter the depth from the COC or labels?

Thanks!
Nicole

Nicole Maljovec
Senior Project Manager/ Group Leader, Env. Client Services

Lancaster Laboratories, Inc.
2425 New Holland Pike
Lancaster, PA 17601 USA
Phone: 717-556-7259
Fax: 717-656-6766

Website: www.LancasterLabsEnv.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but $\geq$ IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

April 20, 2012

Project: IBM - Kingston

Submittal Date: 04/10/2012

Group Number: 1301104

SDG: IBK49

PO Number: 5003311252

Release Number: 083-87071

State of Sample Origin: NY

Client Sample DescriptionRINSATE-040912 Grab Water
TB12075-040912 Water
SS-TW-28-28 Grab Water
IWB1-TW-12-25 Grab Water
SAB-TW-05-12 Grab Water
SAB-TW-05-12MS Grab Water
SAB-TW-05-12MSD Grab Water
SAB-TW-06-21 Grab Water
SAB-TW-67-21 Grab Water
SS-TW-29-27 Grab WaterLancaster Labs (LLI) #6611191
6611192
6611193
6611194
6611195
6611196
6611197
6611198
6611199
6611200

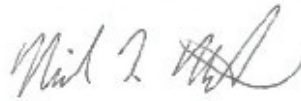
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC Golder Associates, Inc.
COPY TO
ELECTRONIC Golder Associates
COPY TO
1 COPY TO Data Package Group

Attn: Christopher Hemingway

Attn: Cindi Lucas-Youmans

Respectfully Submitted,



Nicole L. Maljovec
Senior Specialist Group Leader

(717) 556-7259

Sample Description: RINSATE-040912 Grab Water

LLI Sample # WW 6611191

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 10:10

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS01 SDG#: IBK49-01RB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: RINSATE-040912 Grab Water

LLI Sample # WW 6611191

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 10:10

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS01 **SDG#:** IBK49-01RB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 05:08	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 05:08	Angela D Sneeringer	1

Sample Description: TB12075-040912 Water

LLI Sample # WW 6611192

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS02 SDG#: IBK49-02TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: TB12075-040912 Water

LLI Sample # WW 6611192

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS02 SDG#: IBK49-02TB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 05:30	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 05:30	Angela D Sneeringer	1

Sample Description: SS-TW-28-28 Grab Water

LLI Sample # WW 6611193

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 10:47

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS03 SDG#: IBK49-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	0.2 J	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	160	1.0	5.0	10
02898	1,2-Dichloroethane	107-06-2	0.9	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	17	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	0.1 J	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.1 J	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	0.2 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.1 J	0.1	0.5	1
02898	Trichloroethene	79-01-6	0.2 J	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	0.4 J	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SS-TW-28-28 Grab Water

LLI Sample # WW 6611193

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 10:47

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS03 SDG#: IBK49-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 06:58	Angela D Sneeringer	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 07:20	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 06:58	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C121041AA	04/13/2012 07:20	Angela D Sneeringer	10

Sample Description: IWB1-TW-12-25 Grab Water

LLI Sample # WW 6611194

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 12:05

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS04 SDG#: IBK49-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.2	1.0	2
02898	Benzyl Chloride	100-44-7	N.D.	0.2	1.0	2
02898	Bromobenzene	108-86-1	N.D.	0.2	1.0	2
02898	Bromodichloromethane	75-27-4	N.D.	0.2	1.0	2
02898	Bromoform	75-25-2	N.D.	0.2	1.0	2
02898	Bromomethane	74-83-9	N.D.	0.2	1.0	2
02898	Carbon Tetrachloride	56-23-5	N.D.	0.2	1.0	2
02898	Chlorobenzene	108-90-7	N.D.	0.2	1.0	2
02898	Chloroethane	75-00-3	N.D.	0.2	1.0	2
02898	Chloroform	67-66-3	N.D.	0.2	1.0	2
02898	Chloromethane	74-87-3	N.D.	0.4	1.0	2
02898	2-Chlorotoluene	95-49-8	N.D.	0.2	1.0	2
02898	4-Chlorotoluene	106-43-4	N.D.	0.2	1.0	2
02898	Dibromochloromethane	124-48-1	N.D.	0.2	1.0	2
02898	Dibromomethane	74-95-3	N.D.	0.2	1.0	2
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	1.0	2
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	1.0	2
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	1.0	2
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.2	1.0	2
02898	1,1-Dichloroethane	75-34-3	51	2.0	10	20
02898	1,2-Dichloroethane	107-06-2	0.5 J	0.2	1.0	2
02898	1,1-Dichloroethene	75-35-4	53	2.0	10	20
02898	1,2-Dichloroethene (Total)	540-59-0	6.3	0.2	1.0	2
02898	1,2-Dichloropropane	78-87-5	N.D.	0.2	1.0	2
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.2	1.0	2
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.2	1.0	2
02898	Ethylbenzene	100-41-4	N.D.	0.2	1.0	2
02898	Freon 113	76-13-1	N.D.	0.4	1.0	2
02898	Freon 123a	354-23-4	N.D.	0.4	1.0	2
02898	Methylene Chloride	75-09-2	N.D.	0.4	1.0	2
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.2	1.0	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1.0	2
02898	Tetrachloroethene	127-18-4	N.D.	0.2	1.0	2
02898	Toluene	108-88-3	0.2 J	0.2	1.0	2
02898	1,1,1-Trichloroethane	71-55-6	0.4 J	0.2	1.0	2
02898	1,1,2-Trichloroethane	79-00-5	0.4 J	0.2	1.0	2
02898	Trichloroethene	79-01-6	130	2.0	10	20
02898	Trichlorofluoromethane	75-69-4	N.D.	0.2	1.0	2
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.6	2.0	2
02898	Vinyl Chloride	75-01-4	0.6 J	0.2	1.0	2
02898	Xylene (Total)	1330-20-7	0.7 J	0.2	1.0	2

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-12-25 Grab Water

LLI Sample # WW 6611194

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 12:05

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS04 SDG#: IBK49-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 07:42	Angela D Sneeringer	2
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 08:03	Angela D Sneeringer	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 07:42	Angela D Sneeringer	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C121041AA	04/13/2012 08:03	Angela D Sneeringer	20

Sample Description: SAB-TW-05-12 Grab Water

LLI Sample # WW 6611195

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 12:30

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS05 SDG#: IBK49-05BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	1.5	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	2.8	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.1 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	9.8	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	2.4	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	2.8	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	1.9	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	2.0	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.5 J	0.1	0.5	1
02898	Trichloroethene	79-01-6	38	1.0	5.0	10
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-05-12 Grab Water

LLI Sample # WW 6611195

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 12:30

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS05 SDG#: IBK49-05BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 05:52	Angela D Sneeringer	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121072AA	04/16/2012 23:30	Sara E Johnson	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 05:52	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G121072AA	04/16/2012 23:30	Sara E Johnson	10

Sample Description: SAB-TW-05-12MS Grab Water

LLI Sample # WW 6611196

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 12:32

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS05 SDG#: IBK49-05MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	6.2	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	4.9	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.2	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	6.0	0.1	0.5	1
02898	Bromoform	75-25-2	4.7	0.1	0.5	1
02898	Bromomethane	74-83-9	6.4	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	7.1	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.7	0.1	0.5	1
02898	Chloroethane	75-00-3	6.4	0.1	0.5	1
02898	Chloroform	67-66-3	8.1	0.1	0.5	1
02898	Chloromethane	74-87-3	5.8	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.4	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.5	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	5.2	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.9	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.5	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.4	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.4	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	5.6	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	9.2	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	6.9	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	16	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	15	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	6.0	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.1	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	5.3	0.1	0.5	1
02898	Ethylbenzene	100-41-4	6.1	0.1	0.5	1
02898	Freon 113	76-13-1	10	0.2	0.5	1
02898	Freon 123a	354-23-4	7.4	0.2	0.5	1
02898	Methylene Chloride	75-09-2	5.9	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.7	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	4.7	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	8.4	0.1	0.5	1
02898	Toluene	108-88-3	6.0	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	9.2	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.8	0.1	0.5	1
02898	Trichloroethene	79-01-6	64	E 0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	7.8	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	5.1	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	6.4	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	18	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-05-12MS Grab Water

LLI Sample # WW 6611196

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 12:32

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS05 SDG#: IBK49-05MS

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 06:14	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 06:14	Angela D Sneeringer	1

Sample Description: SAB-TW-05-12MSD Grab Water

LLI Sample # WW 6611197

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 12:35

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS05 SDG#: IBK49-05MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	5.9	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	4.7	0.1	0.5	1
02898	Bromobenzene	108-86-1	5.0	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	5.6	0.1	0.5	1
02898	Bromoform	75-25-2	4.5	0.1	0.5	1
02898	Bromomethane	74-83-9	6.3	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	6.8	0.1	0.5	1
02898	Chlorobenzene	108-90-7	5.5	0.1	0.5	1
02898	Chloroethane	75-00-3	6.3	0.1	0.5	1
02898	Chloroform	67-66-3	7.6	0.1	0.5	1
02898	Chloromethane	74-87-3	5.9	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	5.3	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	5.2	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	5.1	0.1	0.5	1
02898	Dibromomethane	74-95-3	5.6	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	5.2	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	5.2	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	5.2	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	5.7	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	8.8	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	6.5	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	15	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	14	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	5.8	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	5.0	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	5.2	0.1	0.5	1
02898	Ethylbenzene	100-41-4	5.8	0.1	0.5	1
02898	Freon 113	76-13-1	9.8	0.2	0.5	1
02898	Freon 123a	354-23-4	7.1	0.2	0.5	1
02898	Methylene Chloride	75-09-2	5.7	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	5.5	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	4.6	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	8.0	0.1	0.5	1
02898	Toluene	108-88-3	5.9	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	8.6	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	5.6	0.1	0.5	1
02898	Trichloroethene	79-01-6	59	E 0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	7.6	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	4.8	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	6.5	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	17	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-05-12MSD Grab Water

LLI Sample # WW 6611197

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 12:35

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS05 SDG#: IBK49-05MSD

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 06:36	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 06:36	Angela D Sneeringer	1

Sample Description: SAB-TW-06-21 Grab Water

LLI Sample # WW 6611198

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 13:10

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS06 SDG#: IBK49-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.2	1.0	2
02898	Benzyl Chloride	100-44-7	N.D.	0.2	1.0	2
02898	Bromobenzene	108-86-1	N.D.	0.2	1.0	2
02898	Bromodichloromethane	75-27-4	N.D.	0.2	1.0	2
02898	Bromoform	75-25-2	N.D.	0.2	1.0	2
02898	Bromomethane	74-83-9	N.D.	0.2	1.0	2
02898	Carbon Tetrachloride	56-23-5	N.D.	0.2	1.0	2
02898	Chlorobenzene	108-90-7	N.D.	0.2	1.0	2
02898	Chloroethane	75-00-3	N.D.	0.2	1.0	2
02898	Chloroform	67-66-3	0.7 J	0.2	1.0	2
02898	Chloromethane	74-87-3	N.D.	0.4	1.0	2
02898	2-Chlorotoluene	95-49-8	N.D.	0.2	1.0	2
02898	4-Chlorotoluene	106-43-4	N.D.	0.2	1.0	2
02898	Dibromochloromethane	124-48-1	N.D.	0.2	1.0	2
02898	Dibromomethane	74-95-3	N.D.	0.2	1.0	2
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	1.0	2
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	1.0	2
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	1.0	2
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.2	1.0	2
02898	1,1-Dichloroethane	75-34-3	32	0.2	1.0	2
02898	1,2-Dichloroethane	107-06-2	0.4 J	0.2	1.0	2
02898	1,1-Dichloroethene	75-35-4	36	0.2	1.0	2
02898	1,2-Dichloroethene (Total)	540-59-0	6.8	0.2	1.0	2
02898	1,2-Dichloropropane	78-87-5	N.D.	0.2	1.0	2
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.2	1.0	2
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.2	1.0	2
02898	Ethylbenzene	100-41-4	N.D.	0.2	1.0	2
02898	Freon 113	76-13-1	1.5	0.4	1.0	2
02898	Freon 123a	354-23-4	N.D.	0.4	1.0	2
02898	Methylene Chloride	75-09-2	N.D.	0.4	1.0	2
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.2	1.0	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1.0	2
02898	Tetrachloroethene	127-18-4	1.9	0.2	1.0	2
02898	Toluene	108-88-3	N.D.	0.2	1.0	2
02898	1,1,1-Trichloroethane	71-55-6	2.6	0.2	1.0	2
02898	1,1,2-Trichloroethane	79-00-5	1 J	0.2	1.0	2
02898	Trichloroethene	79-01-6	84	2.0	10	20
02898	Trichlorofluoromethane	75-69-4	N.D.	0.2	1.0	2
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.6	2.0	2
02898	Vinyl Chloride	75-01-4	0.3 J	0.2	1.0	2
02898	Xylene (Total)	1330-20-7	N.D.	0.2	1.0	2

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-06-21 Grab Water

LLI Sample # WW 6611198

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 13:10

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS06 SDG#: IBK49-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 08:25	Angela D Sneeringer	2
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 08:47	Angela D Sneeringer	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 08:25	Angela D Sneeringer	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C121041AA	04/13/2012 08:47	Angela D Sneeringer	20

Sample Description: SAB-TW-67-21 Grab Water

LLI Sample # WW 6611199

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 13:45

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS07 SDG#: IBK49-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.2	1.0	2
02898	Benzyl Chloride	100-44-7	N.D.	0.2	1.0	2
02898	Bromobenzene	108-86-1	N.D.	0.2	1.0	2
02898	Bromodichloromethane	75-27-4	N.D.	0.2	1.0	2
02898	Bromoform	75-25-2	N.D.	0.2	1.0	2
02898	Bromomethane	74-83-9	N.D.	0.2	1.0	2
02898	Carbon Tetrachloride	56-23-5	N.D.	0.2	1.0	2
02898	Chlorobenzene	108-90-7	N.D.	0.2	1.0	2
02898	Chloroethane	75-00-3	N.D.	0.2	1.0	2
02898	Chloroform	67-66-3	N.D.	0.2	1.0	2
02898	Chloromethane	74-87-3	N.D.	0.4	1.0	2
02898	2-Chlorotoluene	95-49-8	N.D.	0.2	1.0	2
02898	4-Chlorotoluene	106-43-4	N.D.	0.2	1.0	2
02898	Dibromochloromethane	124-48-1	N.D.	0.2	1.0	2
02898	Dibromomethane	74-95-3	N.D.	0.2	1.0	2
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	1.0	2
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	1.0	2
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	1.0	2
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.2	1.0	2
02898	1,1-Dichloroethane	75-34-3	50	2.0	10	20
02898	1,2-Dichloroethane	107-06-2	1.3	0.2	1.0	2
02898	1,1-Dichloroethene	75-35-4	50	2.0	10	20
02898	1,2-Dichloroethene (Total)	540-59-0	22	0.2	1.0	2
02898	1,2-Dichloropropane	78-87-5	N.D.	0.2	1.0	2
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.2	1.0	2
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.2	1.0	2
02898	Ethylbenzene	100-41-4	N.D.	0.2	1.0	2
02898	Freon 113	76-13-1	1 J	0.4	1.0	2
02898	Freon 123a	354-23-4	1.4	0.4	1.0	2
02898	Methylene Chloride	75-09-2	N.D.	0.4	1.0	2
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.2	1.0	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1.0	2
02898	Tetrachloroethene	127-18-4	N.D.	0.2	1.0	2
02898	Toluene	108-88-3	N.D.	0.2	1.0	2
02898	1,1,1-Trichloroethane	71-55-6	0.4 J	0.2	1.0	2
02898	1,1,2-Trichloroethane	79-00-5	0.4 J	0.2	1.0	2
02898	Trichloroethene	79-01-6	150	2.0	10	20
02898	Trichlorofluoromethane	75-69-4	N.D.	0.2	1.0	2
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.6	2.0	2
02898	Vinyl Chloride	75-01-4	0.6 J	0.2	1.0	2
02898	Xylene (Total)	1330-20-7	N.D.	0.2	1.0	2

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SAB-TW-67-21 Grab Water

LLI Sample # WW 6611199

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 13:45

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS07 SDG#: IBK49-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 09:10	Angela D Sneeringer	2
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 09:31	Angela D Sneeringer	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 09:10	Angela D Sneeringer	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C121041AA	04/13/2012 09:31	Angela D Sneeringer	20

Sample Description: SS-TW-29-27 Grab Water

LLI Sample # WW 6611200

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 14:45

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS08 SDG#: IBK49-08*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	0.2 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SS-TW-29-27 Grab Water

LLI Sample # WW 6611200

Project Name: IBM - Kingston

LLI Group # 1301104

Account # 12694

Collected: 04/09/2012 14:45

IBM

Submitted: 04/10/2012 09:35

8976 Wellington Road

Reported: 04/20/2012 15:06

Manassas VA 20109

KGS08 **SDG#:** IBK49-08*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C121041AA	04/13/2012 09:53	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C121041AA	04/13/2012 09:53	Angela D Sneeringer	1

Quality Control Summary

Client Name: IBM

Group Number: 1301104

Reported: 04/20/12 at 03:06 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: C121041AA	Sample number(s): 6611191-6611200								
Benzene	N.D.	0.1	0.5	ug/l	114		80-120		
Benzyl Chloride	N.D.	0.1	0.5	ug/l	101		73-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	102		80-120		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	115		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	97		70-128		
Bromomethane	N.D.	0.1	0.5	ug/l	115		66-124		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	125		74-133		
Chlorobenzene	N.D.	0.1	0.5	ug/l	109		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	115		67-124		
Chloroform	N.D.	0.1	0.5	ug/l	120		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	106		55-135		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	104		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	103		80-120		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	105		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	113		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	106		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	105		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	88		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	117		89-122		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	127		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	116		80-123		
1,2-Dichloroethene (Total)	N.D.	0.1	0.5	ug/l	113		80-120		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	114		80-120		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	103		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	109		80-120		
Ethylbenzene	N.D.	0.1	0.5	ug/l	114		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	120		78-132		
Freon 123a	N.D.	0.2	0.5	ug/l	125		76-133		
Methylene Chloride	N.D.	0.2	0.5	ug/l	113		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	98		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	118		80-120		
Toluene	N.D.	0.1	0.5	ug/l	114		80-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	127		79-127		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	109		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	113		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	126		66-134		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	102		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	116		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	113		80-120		
Batch number: G121072AA	Sample number(s): 6611195								
Trichloroethene	N.D.	0.1	0.5	ug/l	100		80-120		

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1301104

Reported: 04/20/12 at 03:06 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: C121041AA Sample number(s): 6611191-6611200 UNSPK: 6611195									
Benzene	125	119	87-126	5	30				
Benzyl Chloride	98	94	62-125	4	30				
Bromobenzene	104	101	80-123	3	30				
Bromodichloromethane	120	113	82-133	6	30				
Bromoform	93	90	60-138	3	30				
Bromomethane	128	125	69-135	2	30				
Carbon Tetrachloride	143	135	81-148	6	30				
Chlorobenzene	114	109	78-133	4	30				
Chloroethane	128	126	70-139	2	30				
Chloroform	130	121	86-136	6	30				
Chloromethane	115	117	55-152	2	30				
2-Chlorotoluene	109	106	81-120	3	30				
4-Chlorotoluene	109	105	82-119	4	30				
Dibromochloromethane	105	101	79-125	3	30				
Dibromomethane	119	112	83-126	6	30				
1,2-Dichlorobenzene	109	104	83-117	5	30				
1,3-Dichlorobenzene	108	104	81-118	4	30				
1,4-Dichlorobenzene	108	104	79-120	4	30				
Dichlorodifluoromethane	112	114	39-155	2	30				
1,1-Dichloroethane	127	119	88-136	4	30				
1,2-Dichloroethane	135	127	82-135	6	30				
1,1-Dichloroethene	125	109	83-150	5	30				
1,2-Dichloroethene (Total)	127	120	91-131	5	30				
1,2-Dichloropropane	121	115	91-126	5	30				
cis-1,3-Dichloropropene	103	99	74-132	3	30				
trans-1,3-Dichloropropene	106	105	71-128	1	30				
Ethylbenzene	121	117	80-140	4	30				
Freon 113	147	139	87-158	4	30				
Freon 123a	148	142	81-151	4	30				
Methylene Chloride	118	114	84-122	4	30				
1,1,1,2-Tetrachloroethane	115	110	87-126	4	30				
1,1,2,2-Tetrachloroethane	95	92	75-131	3	30				
Tetrachloroethene	130	122	63-156	5	30				
Toluene	121	117	83-127	3	30				
1,1,1-Trichloroethane	143*	132	85-140	6	30				
1,1,2-Trichloroethane	106	104	85-129	2	30				
Trichloroethene	118 (2)	24 (2)	85-131	8	30				
Trichlorofluoromethane	157	152	67-161	3	30				
1,2,3-Trichloropropane	102	97	76-120	5	30				
Vinyl Chloride	129	129	65-151	0	30				
Xylene (Total)	120	116	81-137	4	30				
Batch number: G121072AA Sample number(s): 6611195 UNSPK: P612681									
Trichloroethene	103	95	85-131	3	30				

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM
Reported: 04/20/12 at 03:06 PM

Group Number: 1301104

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: C121041AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6611191	107	108	98	97
6611192	107	105	95	95
6611193	108	106	98	95
6611194	108	107	96	96
6611195	110	106	97	95
6611196	104	102	102	103
6611197	101	100	101	102
6611198	110	106	96	93
6611199	111	106	96	94
6611200	113	109	93	92
Blank	106	108	95	96
LCS	101	102	102	104
MS	104	102	102	103
MSD	101	100	101	102
Limits:	77-114	74-113	77-110	78-110

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: G121072AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	103	105	98	99
LCS	101	103	99	100
MS	101	103	100	100
MSD	102	103	99	99
Limits:	77-114	74-113	77-110	78-110

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Project Name: IBM - Kingston
LLI Group #: 1301104

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260B 25mL purge, GC/MS Volatiles**

Batch #: C121041AA (Sample number(s): 6611191-6611200 UNSPK: 6611195)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Trichloroethene, 1,1,1-Trichloroethane



Lancaster
Laboratories

Acct. # 12694

For Lancaster Laboratories use only
Group # 1381104 Sample # 6611191-200
Instructions on reverse side correspond with circled numbers.

IBM Chain of Custody

COC # 016048

1 Client Information				4 Matrix				5 Analyses Requested												For Lab Use Only									
Client <u>IBM</u>								Preservation Code												SCR# <u>120207</u>									
Project Name/# <u>KINGSTON</u>																													
IBM PM <u>M. KOMINEK</u>				Project State <u>NEW YORK</u>																									
P.O. #				Sampler <u>D. GORMAN</u>																									
Check One: ☐ Routine Lab GW ☐ Routine GTF O&M ☐ Non-Routine Investigation ☐ Non-Routine Upgrades/Installs																													
OU: _____ (Endicott Non-Routine only)																													
2 Sample Identification				3 Collected		3 Composite		Soil				Water				Oil				Total # of Containers				Vol's				6 Remarks	
				Date		Time		Grab		Composite																			
<u>LINSATE-040912</u>				<u>04/09/12</u>		<u>1010</u>		<u>X</u>				<u>DI H₂O</u>								<u>3</u>				<u>X</u>					
<u>TB12075-040912</u>												<u>LAB DI</u>								<u>2</u>				<u>X</u>					
<u>SS-TW-28-28</u>				<u>04/09/12</u>		<u>1047</u>		<u>X</u>				<u>X</u>								<u>3</u>				<u>X</u>					
<u>IWB1-TW-12-25</u>						<u>1205</u>		<u>X</u>				<u>Y</u>								<u>3</u>				<u>X</u>					
<u>SAB-TW-05-12</u>						<u>1230</u>		<u>Y</u>				<u>X</u>								<u>3</u>				<u>X</u>					
<u>SAB-TW-05-12MS</u>						<u>1232</u>		<u>Y</u>				<u>X</u>								<u>3</u>				<u>X</u>					
<u>SAB-TW-05-12MSD</u>						<u>1235</u>		<u>Y</u>				<u>X</u>								<u>3</u>				<u>X</u>					
<u>SAB-TW-06-21</u>						<u>1310</u>		<u>X</u>				<u>X</u>								<u>3</u>				<u>X</u>					
<u>SAB-TW-07-21</u>						<u>1345</u>		<u>Y</u>				<u>Y</u>								<u>3</u>				<u>X</u>					
<u>SS-TW-29-27</u>				<u>04/09/12</u>		<u>1445</u>		<u>X</u>				<u>X</u>								<u>3</u>				<u>X</u>					
7 Turnaround Time Requested (TAT) (please circle) <u>Standard</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharges.) Date results are needed: _____ Rush results requested by (please circle) E-mail Phone E-mail: <u>CHEHINWAY@GOLDOER.COM</u> Phone: <u>9736451922</u>				Relinquished by <u>[Signature]</u> Date <u>04/09/2012</u>				Date <u>3-31-12</u>				Time <u>1000</u>				Received by <u>[Signature]</u> Date <u>04/04/2012</u>				Time <u>1430</u>				9					
				Relinquished by <u>[Signature]</u> Date <u>04/09/2012</u>				Date <u>04/09/2012</u>				Time <u>1600</u>				Received by <u>[Signature]</u> Date <u>04/09/2012</u>				Time <u>1600</u>									
				Relinquished by <u>[Signature]</u> Date <u>04/09/2012</u>				Date <u>04/09/2012</u>				Time <u>1600</u>				Received by <u>[Signature]</u> Date <u>04/09/2012</u>				Time <u>1600</u>									
8 Data Package Options (please circle if required) Type I (Validation/NJ Reg) TX TRRP-13 NY ASP A Type III (Reduced NJ) MA MCP NY ASP B Type VI (Raw Data Only) CT RCP SDG Complete? Yes No				Relinquished by <u>[Signature]</u> Date <u>04/09/2012</u>				Date <u>04/09/2012</u>				Time <u>1600</u>				Received by <u>[Signature]</u> Date <u>04/09/2012</u>				Time <u>1600</u>									
				Site-specific QC (MS/MSD/Dup)? <u>Yes</u> No (If yes, indicate QC sample and submit triplicate volume.)												Temperature upon receipt <u>28</u> °C													

Environmental Sample Administration
Receipt Documentation LogClient/Project: IBMShipping Container Sealed: YES NODate of Receipt: 4.10.12Custody Seal Present * : YES NOTime of Receipt: 935* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 50-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	2783	0.8	TB	WI	Y	L	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: Baruch Baruch 2299 Date/Time: 4.10.12 11:47

Issued by Dept. 6042 Management

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but $\geq$ IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

IBM
8976 Wellington Road
Manassas VA 20109

April 24, 2012

Project: IBM - Kingston

Submittal Date: 04/13/2012

Group Number: 1302007

SDG: IBK52

PO Number: 5003311252

Release Number: 083-87071

State of Sample Origin: NY

Client Sample DescriptionLancaster Labs (LLI) #

RINSATE-041112 Grab Water	6615335
SAB/SS/IWB1-WC-DECON/PURGE Composite Water	6615336
IWB1-TW-13-12 Grab Water	6615337
IWB1-TW-14-19 Grab Water	6615338
IWB1-TW-15-23 Grab Water	6615339
IWB1-TW-16-13 Grab Water	6615340
IWB1-TW-17-19 Grab Water	6615341
IWB1-TW-18-25 Grab Water	6615342
TB12086 Water	6615343
SAB/SS/IWB1-WC-SOIL-LO Composite Soil	6615344
SAB/SS/IWB1-WC-SOIL-HI Composite Soil	6615345

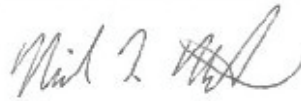
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC	Golder Associates, Inc.
COPY TO	
ELECTRONIC	Golder Associates
COPY TO	
1 COPY TO	Data Package Group

Attn: Christopher Hemingway

Attn: Cindi Lucas-Youmans

Respectfully Submitted,



Nicole L. Maljovec
Senior Specialist Group Leader

(717) 556-7259

Sample Description: RINSATE-041112 Grab Water
IBM - Kingston

LLI Sample # WW 6615335
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 08:00 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

RIN11 SDG#: IBK52-01RB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: RINSATE-041112 Grab Water
IBM - Kingston

LLI Sample # WW 6615335
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 08:00 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

RIN11 SDG#: IBK52-01RB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121072AA	04/17/2012 04:29	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G121072AA	04/17/2012 04:29	Sara E Johnson	1

Sample Description: SAB/SS/IWBL-WC-DECON/PURGE Composite Water
IBM - Kingston

LLI Sample # WW 6615336
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 08:45 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

DECPG SDG#: IBK52-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	20	100	200
02898	Benzyl Chloride	100-44-7	N.D.	20	100	200
02898	Bromobenzene	108-86-1	N.D.	20	100	200
02898	Bromodichloromethane	75-27-4	N.D.	20	100	200
02898	Bromoform	75-25-2	N.D.	20	100	200
02898	Bromomethane	74-83-9	N.D.	20	100	200
02898	Carbon Tetrachloride	56-23-5	N.D.	20	100	200
02898	Chlorobenzene	108-90-7	N.D.	20	100	200
02898	Chloroethane	75-00-3	N.D.	20	100	200
02898	Chloroform	67-66-3	N.D.	20	100	200
02898	Chloromethane	74-87-3	N.D.	40	100	200
02898	2-Chlorotoluene	95-49-8	N.D.	20	100	200
02898	4-Chlorotoluene	106-43-4	N.D.	20	100	200
02898	Dibromochloromethane	124-48-1	N.D.	20	100	200
02898	Dibromomethane	74-95-3	N.D.	20	100	200
02898	1,2-Dichlorobenzene	95-50-1	N.D.	20	100	200
02898	1,3-Dichlorobenzene	541-73-1	N.D.	20	100	200
02898	1,4-Dichlorobenzene	106-46-7	N.D.	20	100	200
02898	Dichlorodifluoromethane	75-71-8	N.D.	20	100	200
02898	1,1-Dichloroethane	75-34-3	220	20	100	200
02898	1,2-Dichloroethane	107-06-2	N.D.	20	100	200
02898	1,1-Dichloroethene	75-35-4	200	20	100	200
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	20	100	200
02898	1,2-Dichloropropane	78-87-5	N.D.	20	100	200
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	20	100	200
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	20	100	200
02898	Ethylbenzene	100-41-4	N.D.	20	100	200
02898	Freon 113	76-13-1	N.D.	40	100	200
02898	Freon 123a	354-23-4	N.D.	40	100	200
02898	Methylene Chloride	75-09-2	N.D.	40	100	200
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	20	100	200
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	20	100	200
02898	Tetrachloroethene	127-18-4	N.D.	20	100	200
02898	Toluene	108-88-3	N.D.	20	100	200
02898	1,1,1-Trichloroethane	71-55-6	32,000	200	1,000	2000
02898	1,1,2-Trichloroethane	79-00-5	80 J	20	100	200
02898	Trichloroethene	79-01-6	56 J	20	100	200
02898	Trichlorofluoromethane	75-69-4	N.D.	20	100	200
02898	1,2,3-Trichloropropane	96-18-4	N.D.	60	200	200
02898	Vinyl Chloride	75-01-4	N.D.	20	100	200
02898	Xylene (Total)	1330-20-7	N.D.	20	100	200

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SAB/SS/IWBL-WC-DECON/PURGE Composite Water
IBM - Kingston

LLI Sample # WW 6615336
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 08:45 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

DECPG SDG#: IBK52-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121081AA	04/17/2012 15:02	Jason M Long	200
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121081AA	04/17/2012 15:23	Jason M Long	2000
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G121081AA	04/17/2012 15:02	Jason M Long	200
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G121081AA	04/17/2012 15:23	Jason M Long	2000

Sample Description: IWB1-TW-13-12 Grab Water
IBM - Kingston

LLI Sample # WW 6615337
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 12:18 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

13-12 SDG#: IBK52-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	1.4	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.6	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.1 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	12	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	6.1	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	1.0	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	3.0	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	1.9	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.5	0.1	0.5	1
02898	Trichloroethene	79-01-6	81	1.0	5.0	10
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-13-12 Grab Water
IBM - Kingston

LLI Sample # WW 6615337
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 12:18 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

13-12 SDG#: IBK52-03

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121081AA	04/17/2012 10:43	Jason M Long	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121081AA	04/17/2012 11:27	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G121081AA	04/17/2012 10:43	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G121081AA	04/17/2012 11:27	Jason M Long	10

Sample Description: IWB1-TW-14-19 Grab Water
IBM - Kingston

LLI Sample # WW 6615338
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 12:53 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

14-19 SDG#: IBK52-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	0.2 J	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	26	1.0	5.0	10
02898	1,2-Dichloroethane	107-06-2	0.5	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	24	1.0	5.0	10
02898	1,2-Dichloroethene (Total)	540-59-0	24	1.0	5.0	10
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	0.7	0.2	0.5	1
02898	Freon 123a	354-23-4	1.8	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	0.1 J	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	0.6	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.3 J	0.1	0.5	1
02898	Trichloroethene	79-01-6	47	1.0	5.0	10
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	0.5 J	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

Sample Description: IWB1-TW-14-19 Grab Water
IBM - Kingston

LLI Sample # WW 6615338
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 12:53 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

14-19 SDG#: IBK52-04

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121081AA	04/17/2012 11:05	Jason M Long	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121081AA	04/17/2012 11:49	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G121081AA	04/17/2012 11:05	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G121081AA	04/17/2012 11:49	Jason M Long	10

Sample Description: IWB1-TW-15-23 Grab Water
IBM - Kingston

LLI Sample # WW 6615339
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 13:28 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

15-23 SDG#: IBK52-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	0.2 J	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	0.3 J	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	0.1 J	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.1 J	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	0.2 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	1.1	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-15-23 Grab Water
IBM - Kingston

LLI Sample # WW 6615339
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 13:28 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

15-23 SDG#: IBK52-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121081AA	04/17/2012 13:15	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G121081AA	04/17/2012 13:15	Jason M Long	1

Sample Description: IWB1-TW-16-13 Grab Water
IBM - Kingston

LLI Sample # WW 6615340
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 14:08 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

16-13 SDG#: IBK52-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	13	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	0.1 J	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	0.6	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	1	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	0.2 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	19	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-16-13 Grab Water
IBM - Kingston

LLI Sample # WW 6615340
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 14:08 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

16-13 SDG#: IBK52-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121081AA	04/17/2012 13:36	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G121081AA	04/17/2012 13:36	Jason M Long	1

Sample Description: IWB1-TW-17-19 Grab Water
IBM - Kingston

LLI Sample # WW 6615341
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 14:43 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

17-19 SDG#: IBK52-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	0.3 J	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	3.1	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	6.0	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.1 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	13	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	3.5	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	0.6	0.2	0.5	1
02898	Freon 123a	354-23-4	0.2 J	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	0.8	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	0.9	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	0.1 J	0.1	0.5	1
02898	Trichloroethene	79-01-6	49	1.0	5.0	10
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-17-19 Grab Water
IBM - Kingston

LLI Sample # WW 6615341
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 14:43 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

17-19 SDG#: IBK52-07

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121072AA	04/17/2012 06:37	Sara E Johnson	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121081AA	04/17/2012 15:44	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G121072AA	04/17/2012 06:37	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G121081AA	04/17/2012 15:44	Jason M Long	10

Sample Description: IWB1-TW-18-25 Grab Water
IBM - Kingston

LLI Sample # WW 6615342
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 15:18 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

18-25 SDG#: IBK52-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.2	1.0	2
02898	Benzyl Chloride	100-44-7	N.D.	0.2	1.0	2
02898	Bromobenzene	108-86-1	N.D.	0.2	1.0	2
02898	Bromodichloromethane	75-27-4	N.D.	0.2	1.0	2
02898	Bromoform	75-25-2	N.D.	0.2	1.0	2
02898	Bromomethane	74-83-9	N.D.	0.2	1.0	2
02898	Carbon Tetrachloride	56-23-5	N.D.	0.2	1.0	2
02898	Chlorobenzene	108-90-7	N.D.	0.2	1.0	2
02898	Chloroethane	75-00-3	N.D.	0.2	1.0	2
02898	Chloroform	67-66-3	N.D.	0.2	1.0	2
02898	Chloromethane	74-87-3	N.D.	0.4	1.0	2
02898	2-Chlorotoluene	95-49-8	N.D.	0.2	1.0	2
02898	4-Chlorotoluene	106-43-4	N.D.	0.2	1.0	2
02898	Dibromochloromethane	124-48-1	N.D.	0.2	1.0	2
02898	Dibromomethane	74-95-3	N.D.	0.2	1.0	2
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	1.0	2
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	1.0	2
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	1.0	2
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.2	1.0	2
02898	1,1-Dichloroethane	75-34-3	6.4	0.2	1.0	2
02898	1,2-Dichloroethane	107-06-2	N.D.	0.2	1.0	2
02898	1,1-Dichloroethene	75-35-4	8.2	0.2	1.0	2
02898	1,2-Dichloroethene (Total)	540-59-0	9.2	0.2	1.0	2
02898	1,2-Dichloropropane	78-87-5	N.D.	0.2	1.0	2
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.2	1.0	2
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.2	1.0	2
02898	Ethylbenzene	100-41-4	N.D.	0.2	1.0	2
02898	Freon 113	76-13-1	0.5 J	0.4	1.0	2
02898	Freon 123a	354-23-4	6.0	0.4	1.0	2
02898	Methylene Chloride	75-09-2	N.D.	0.4	1.0	2
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.2	1.0	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1.0	2
02898	Tetrachloroethene	127-18-4	N.D.	0.2	1.0	2
02898	Toluene	108-88-3	16	0.2	1.0	2
02898	1,1,1-Trichloroethane	71-55-6	8.7	0.2	1.0	2
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1.0	2
02898	Trichloroethene	79-01-6	300	2.0	10	20
02898	Trichlorofluoromethane	75-69-4	N.D.	0.2	1.0	2
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.6	2.0	2
02898	Vinyl Chloride	75-01-4	0.4 J	0.2	1.0	2
02898	Xylene (Total)	1330-20-7	N.D.	0.2	1.0	2

*=This limit was used in the evaluation of the final result

Sample Description: IWB1-TW-18-25 Grab Water
IBM - Kingston

LLI Sample # WW 6615342
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012 15:18 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

18-25 SDG#: IBK52-08

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121072AA	04/17/2012 06:58	Sara E Johnson	2
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121072AA	04/17/2012 07:20	Sara E Johnson	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G121072AA	04/17/2012 06:58	Sara E Johnson	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G121072AA	04/17/2012 07:20	Sara E Johnson	20

Sample Description: TB12086 Water
IBM - Kingston

LLI Sample # WW 6615343
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

TB086 SDG#: IBK52-09TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B 25mL	ug/l	ug/l	ug/l	
	purge					
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
02898	4-Chlorotoluene	106-43-4	N.D.	0.1	0.5	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
02898	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
02898	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
02898	Dichlorodifluoromethane	75-71-8	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	1,2-Dichloroethene (Total)	540-59-0	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Freon 113	76-13-1	N.D.	0.2	0.5	1
02898	Freon 123a	354-23-4	N.D.	0.2	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,3-Trichloropropane	96-18-4	N.D.	0.3	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: TB12086 Water
IBM - Kingston

LLI Sample # WW 6615343
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/11/2012

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

TB086 SDG#: IBK52-09TB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G121072AA	04/17/2012 07:41	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G121072AA	04/17/2012 07:41	Sara E Johnson	1

Sample Description: SAB/SS/IWB1-WC-SOIL-LO Composite Soil
IBM - Kingston

LLI Sample # SW 6615344
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/12/2012 08:30 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

SL-LO SDG#: IBK52-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	0.6	6	0.9
10237	Benzyl Chloride	100-44-7	N.D.	1	4	0.9
10237	Bromobenzene	108-86-1	N.D.	1	6	0.9
10237	Bromodichloromethane	75-27-4	N.D.	1	6	0.9
10237	Bromoform	75-25-2	N.D.	1	6	0.9
10237	Bromomethane	74-83-9	N.D.	2	6	0.9
10237	Carbon Tetrachloride	56-23-5	N.D.	1	6	0.9
10237	Chlorobenzene	108-90-7	N.D.	1	6	0.9
10237	Chloroethane	75-00-3	N.D.	2	6	0.9
10237	Chloroform	67-66-3	N.D.	1	6	0.9
10237	Chloromethane	74-87-3	N.D.	2	6	0.9
10237	2-Chlorotoluene	95-49-8	N.D.	1	6	0.9
10237	4-Chlorotoluene	106-43-4	N.D.	1	6	0.9
10237	Dibromochloromethane	124-48-1	N.D.	1	6	0.9
10237	Dibromomethane	74-95-3	N.D.	1	6	0.9
10237	1,2-Dichlorobenzene	95-50-1	N.D.	1	6	0.9
10237	1,3-Dichlorobenzene	541-73-1	N.D.	1	6	0.9
10237	1,4-Dichlorobenzene	106-46-7	N.D.	1	6	0.9
10237	Dichlorodifluoromethane	75-71-8	N.D.	2	6	0.9
10237	1,1-Dichloroethane	75-34-3	190	1	6	0.9
10237	1,2-Dichloroethane	107-06-2	5 J	1	6	0.9
10237	1,1-Dichloroethene	75-35-4	170	1	6	0.9
10237	1,2-Dichloroethene (Total)	540-59-0	5 J	1	6	0.9
10237	1,2-Dichloropropane	78-87-5	N.D.	1	6	0.9
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	6	0.9
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	6	0.9
10237	Ethylbenzene	100-41-4	N.D.	1	6	0.9
10237	Freon 113	76-13-1	N.D.	2	11	0.9
10237	Freon 123a	354-23-4	N.D.	2	6	0.9
10237	Methylene Chloride	75-09-2	N.D.	2	6	0.9
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	6	0.9
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	0.9
10237	Tetrachloroethene	127-18-4	N.D.	1	6	0.9
10237	Toluene	108-88-3	N.D.	1	6	0.9
10237	1,1,1-Trichloroethane	71-55-6	130	1	6	0.9
10237	1,1,2-Trichloroethane	79-00-5	8	1	6	0.9
10237	Trichloroethene	79-01-6	22	1	6	0.9
10237	Trichlorofluoromethane	75-69-4	N.D.	2	6	0.9
10237	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	0.9
10237	Vinyl Chloride	75-01-4	N.D.	1	6	0.9
10237	Xylene (Total)	1330-20-7	N.D.	1	6	0.9

Wet Chemistry

SM20 2540 G

00111 **Moisture**

n.a.

19.0

0.50

0.50

1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

Sample Description: SAB/SS/IWBL-WC-SOIL-LO Composite Soil
IBM - Kingston

LLI Sample # SW 6615344
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/12/2012 08:30 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

SL-LO SDG#: IBK52-10

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	X121081AA	04/17/2012 16:03	Chelsea B Eastep	0.9
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201210427363	04/13/2012 21:05	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201210427363	04/13/2012 21:06	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201210427363	04/13/2012 21:05	Lois E Hiltz	n.a.
00111	Moisture	SM20 2540 G	1	12107820004B	04/16/2012 11:30	William C Schwebel	1

Sample Description: SAB/SS/IWBI-WC-SOIL-HI Composite Soil
IBM - Kingston

LLI Sample # SW 6615345
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/12/2012 08:35 by DG

IBM

8976 Wellington Road
Manassas VA 20109

Submitted: 04/13/2012 09:30

Reported: 04/24/2012 20:01

SL-HI SDG#: IBK52-11*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/kg	ug/kg	ug/kg	
10237	Benzene	71-43-2	N.D.	2,600	26,000	4244.48
10237	Benzyl Chloride	100-44-7	N.D.	5,200	21,000	4244.48
10237	Bromobenzene	108-86-1	N.D.	5,200	26,000	4244.48
10237	Bromodichloromethane	75-27-4	N.D.	5,200	26,000	4244.48
10237	Bromoform	75-25-2	N.D.	5,200	26,000	4244.48
10237	Bromomethane	74-83-9	N.D.	10,000	26,000	4244.48
10237	Carbon Tetrachloride	56-23-5	N.D.	5,200	26,000	4244.48
10237	Chlorobenzene	108-90-7	N.D.	5,200	26,000	4244.48
10237	Chloroethane	75-00-3	N.D.	10,000	26,000	4244.48
10237	Chloroform	67-66-3	N.D.	5,200	26,000	4244.48
10237	Chloromethane	74-87-3	N.D.	10,000	26,000	4244.48
10237	2-Chlorotoluene	95-49-8	N.D.	5,200	26,000	4244.48
10237	4-Chlorotoluene	106-43-4	N.D.	5,200	26,000	4244.48
10237	Dibromochloromethane	124-48-1	N.D.	5,200	26,000	4244.48
10237	Dibromomethane	74-95-3	N.D.	5,200	26,000	4244.48
10237	1,2-Dichlorobenzene	95-50-1	N.D.	5,200	26,000	4244.48
10237	1,3-Dichlorobenzene	541-73-1	N.D.	5,200	26,000	4244.48
10237	1,4-Dichlorobenzene	106-46-7	N.D.	5,200	26,000	4244.48
10237	Dichlorodifluoromethane	75-71-8	N.D.	10,000	26,000	4244.48
10237	1,1-Dichloroethane	75-34-3	N.D.	5,200	26,000	4244.48
10237	1,2-Dichloroethane	107-06-2	N.D.	5,200	26,000	4244.48
10237	1,1-Dichloroethene	75-35-4	59,000	5,200	26,000	4244.48
10237	1,2-Dichloroethene (Total)	540-59-0	N.D.	5,200	26,000	4244.48
10237	1,2-Dichloropropane	78-87-5	N.D.	5,200	26,000	4244.48
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	5,200	26,000	4244.48
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	5,200	26,000	4244.48
10237	Ethylbenzene	100-41-4	N.D.	5,200	26,000	4244.48
10237	Freon 113	76-13-1	N.D.	10,000	52,000	4244.48
10237	Freon 123a	354-23-4	N.D.	10,000	26,000	4244.48
10237	Methylene Chloride	75-09-2	N.D.	10,000	26,000	4244.48
10237	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	5,200	26,000	4244.48
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	5,200	26,000	4244.48
10237	Tetrachloroethene	127-18-4	11,000	5,200	26,000	4244.48
			J			
10237	Toluene	108-88-3	N.D.	5,200	26,000	4244.48
10237	1,1,1-Trichloroethane	71-55-6	9,200,000	100,000	520,000	84889.64
10237	1,1,2-Trichloroethane	79-00-5	8,100	5,200	26,000	4244.48
			J			
10237	Trichloroethene	79-01-6	19,000	5,200	26,000	4244.48
			J			
10237	Trichlorofluoromethane	75-69-4	N.D.	10,000	26,000	4244.48
10237	1,2,3-Trichloropropane	96-18-4	N.D.	5,200	26,000	4244.48
10237	Vinyl Chloride	75-01-4	N.D.	5,200	26,000	4244.48
10237	Xylene (Total)	1330-20-7	N.D.	5,200	26,000	4244.48
Wet Chemistry	SM20 2540 G		%	%	%	
00111	Moisture	n.a.	17.9	0.50	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: SAB/SS/IWBL-WC-SOIL-HI Composite Soil
IBM - Kingston

LLI Sample # SW 6615345
LLI Group # 1302007
Account # 12694

Project Name: IBM - Kingston

Collected: 04/12/2012 08:35 by DG

IBM

8976 Wellington Road

Submitted: 04/13/2012 09:30

Manassas VA 20109

Reported: 04/24/2012 20:01

SL-HI SDG#: IBK52-11*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	SM20 2540 G		%	%	%	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						

General Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	Volatiles by 8260B	SW-846 8260B	1	Q121141AA	04/23/2012 13:06	Kerri E Legerlotz	4244.48
10237	Volatiles by 8260B	SW-846 8260B	1	Q121141AA	04/23/2012 20:31	Kerri E Legerlotz	84889.64
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201210427363	04/13/2012 21:08	Lois E Hiltz	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201210427363	04/13/2012 21:09	Lois E Hiltz	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201210427363	04/13/2012 21:07	Lois E Hiltz	n.a.
00111	Moisture	SM20 2540 G	1	12107820004B	04/16/2012 11:30	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: IBM

Group Number: 1302007

Reported: 04/24/12 at 08:01 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: G121072AA	Sample number(s): 6615335,6615341-6615343								
Benzene	N.D.	0.1	0.5	ug/l	96		80-120		
Benzyl Chloride	N.D.	0.1	0.5	ug/l	97		73-120		
Bromobenzene	N.D.	0.1	0.5	ug/l	102		80-120		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	98		80-120		
Bromoform	N.D.	0.1	0.5	ug/l	85		70-128		
Bromomethane	N.D.	0.1	0.5	ug/l	97		66-124		
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	95		74-133		
Chlorobenzene	N.D.	0.1	0.5	ug/l	99		80-120		
Chloroethane	N.D.	0.1	0.5	ug/l	91		67-124		
Chloroform	N.D.	0.1	0.5	ug/l	98		80-120		
Chloromethane	N.D.	0.2	0.5	ug/l	80		55-135		
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	100		80-120		
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	100		80-120		
Dibromochloromethane	N.D.	0.1	0.5	ug/l	95		80-120		
Dibromomethane	N.D.	0.1	0.5	ug/l	110		80-120		
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	101		80-120		
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	99		80-120		
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	99		80-120		
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	69		39-120		
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	96		89-122		
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	101		80-127		
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	102		80-123		
1,2-Dichloroethene (Total)	N.D.	0.1	0.5	ug/l	100		80-120		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	101		80-120		
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	97		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	94		80-120		
Ethylbenzene	N.D.	0.1	0.5	ug/l	97		80-120		
Freon 113	N.D.	0.2	0.5	ug/l	100		78-132		
Freon 123a	N.D.	0.2	0.5	ug/l	103		76-133		
Methylene Chloride	N.D.	0.2	0.5	ug/l	105		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	97		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	109		80-125		
Tetrachloroethene	N.D.	0.1	0.5	ug/l	93		80-120		
Toluene	N.D.	0.1	0.5	ug/l	98		80-120		
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	96		79-127		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	104		80-120		
Trichloroethene	N.D.	0.1	0.5	ug/l	100		80-120		
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	96		66-134		
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	106		80-120		
Vinyl Chloride	N.D.	0.1	0.5	ug/l	88		65-127		
Xylene (Total)	N.D.	0.1	0.5	ug/l	98		80-120		
Batch number: G121081AA	Sample number(s): 6615336-6615341								
Benzene	N.D.	0.1	0.5	ug/l	98	99	80-120	1	30
Benzyl Chloride	N.D.	0.1	0.5	ug/l	96	100	73-120	4	30

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1302007

Reported: 04/24/12 at 08:01 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Bromobenzene	N.D.	0.1	0.5	ug/l	103	105	80-120	2	30
Bromodichloromethane	N.D.	0.1	0.5	ug/l	100	101	80-120	1	30
Bromoform	N.D.	0.1	0.5	ug/l	84	84	70-128	0	30
Bromomethane	N.D.	0.1	0.5	ug/l	97	99	66-124	2	30
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	96	98	74-133	2	30
Chlorobenzene	N.D.	0.1	0.5	ug/l	101	102	80-120	0	30
Chloroethane	N.D.	0.1	0.5	ug/l	91	93	67-124	2	30
Chloroform	N.D.	0.1	0.5	ug/l	99	101	80-120	1	30
Chloromethane	N.D.	0.2	0.5	ug/l	81	82	55-135	0	30
2-Chlorotoluene	N.D.	0.1	0.5	ug/l	101	103	80-120	1	30
4-Chlorotoluene	N.D.	0.1	0.5	ug/l	102	103	80-120	1	30
Dibromochloromethane	N.D.	0.1	0.5	ug/l	97	98	80-120	1	30
Dibromomethane	N.D.	0.1	0.5	ug/l	112	112	80-120	1	30
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	101	104	80-120	2	30
1,3-Dichlorobenzene	N.D.	0.1	0.5	ug/l	100	102	80-120	2	30
1,4-Dichlorobenzene	N.D.	0.1	0.5	ug/l	100	101	80-120	1	30
Dichlorodifluoromethane	N.D.	0.1	0.5	ug/l	70	70	39-120	0	30
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	97	98	89-122	1	30
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	102	101	80-127	0	30
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	106	106	80-123	0	30
1,2-Dichloroethene (Total)	N.D.	0.1	0.5	ug/l	102	103	80-120	1	30
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	100	102	80-120	2	30
cis-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	98	101	74-120	3	30
trans-1,3-Dichloropropene	N.D.	0.1	0.5	ug/l	97	97	80-120	0	30
Ethylbenzene	N.D.	0.1	0.5	ug/l	98	100	80-120	2	30
Freon 113	N.D.	0.2	0.5	ug/l	106	107	78-132	1	30
Freon 123a	N.D.	0.2	0.5	ug/l	105	106	76-133	1	30
Methylene Chloride	N.D.	0.2	0.5	ug/l	108	107	80-120	1	30
1,1,1,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	97	99	80-120	2	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	104	108	80-125	4	30
Tetrachloroethene	N.D.	0.1	0.5	ug/l	94	95	80-120	1	30
Toluene	N.D.	0.1	0.5	ug/l	99	100	80-120	2	30
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	99	100	79-127	1	30
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	107	106	80-120	1	30
Trichloroethene	N.D.	0.1	0.5	ug/l	103	105	80-120	2	30
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	101	102	66-134	1	30
1,2,3-Trichloropropane	N.D.	0.3	1.0	ug/l	103	107	80-120	3	30
Vinyl Chloride	N.D.	0.1	0.5	ug/l	87	88	65-127	1	30
Xylene (Total)	N.D.	0.1	0.5	ug/l	100	101	80-120	0	30

Batch number: Q121141AA

Sample number(s): 6615345

Benzene	N.D.	25.	250	ug/kg	100	105	80-120	5	30
Benzyl Chloride	N.D.	50.	200	ug/kg	98	100	66-120	2	30
Bromobenzene	N.D.	50.	250	ug/kg	102	105	79-120	3	30
Bromodichloromethane	N.D.	50.	250	ug/kg	93	96	78-120	3	30
Bromoform	N.D.	50.	250	ug/kg	83	87	70-120	5	30
Bromomethane	N.D.	100.	250	ug/kg	126	133	32-162	5	30
Carbon Tetrachloride	N.D.	50.	250	ug/kg	94	98	69-122	4	30
Chlorobenzene	N.D.	50.	250	ug/kg	100	104	80-120	4	30
Chloroethane	N.D.	100.	250	ug/kg	111	114	37-154	3	30
Chloroform	N.D.	50.	250	ug/kg	100	103	80-120	3	30
Chloromethane	N.D.	100.	250	ug/kg	91	93	56-120	2	30
2-Chlorotoluene	N.D.	50.	250	ug/kg	102	105	78-120	3	30
4-Chlorotoluene	N.D.	50.	250	ug/kg	104	105	79-120	2	30
Dibromochloromethane	N.D.	50.	250	ug/kg	92	98	77-120	6	30
Dibromomethane	N.D.	50.	250	ug/kg	96	100	80-120	4	30
1,2-Dichlorobenzene	N.D.	50.	250	ug/kg	101	103	79-120	1	30
1,3-Dichlorobenzene	N.D.	50.	250	ug/kg	102	102	78-120	1	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1302007

Reported: 04/24/12 at 08:01 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,4-Dichlorobenzene	N.D.	50.	250	ug/kg	103	103	79-120	0	30
Dichlorodifluoromethane	N.D.	100.	250	ug/kg	67	67	20-120	0	30
1,1-Dichloroethane	N.D.	50.	250	ug/kg	101	107	80-120	6	30
1,2-Dichloroethane	N.D.	50.	250	ug/kg	105	107	71-129	2	30
1,1-Dichloroethene	N.D.	50.	250	ug/kg	104	105	73-129	1	30
1,2-Dichloroethene (Total)	N.D.	50.	250	ug/kg	99	104	80-120	4	30
1,2-Dichloropropane	N.D.	50.	250	ug/kg	96	100	77-120	4	30
cis-1,3-Dichloropropene	N.D.	50.	250	ug/kg	94	97	74-120	3	30
trans-1,3-Dichloropropene	N.D.	50.	250	ug/kg	98	102	77-120	4	30
Ethylbenzene	N.D.	50.	250	ug/kg	100	104	80-120	4	30
Freon 113	N.D.	100.	500	ug/kg	103	102	64-137	1	30
Freon 123a	N.D.	100.	250	ug/kg	105	105	61-127	0	30
Methylene Chloride	N.D.	100.	250	ug/kg	105	109	76-124	4	30
1,1,1,2-Tetrachloroethane	N.D.	50.	250	ug/kg	96	102	80-120	6	30
1,1,2,2-Tetrachloroethane	N.D.	50.	250	ug/kg	107	108	71-123	1	30
Tetrachloroethene	N.D.	50.	250	ug/kg	99	103	78-126	4	30
Toluene	N.D.	50.	250	ug/kg	100	104	80-120	4	30
1,1,1-Trichloroethane	N.D.	50.	250	ug/kg	99	103	71-125	4	30
1,1,2-Trichloroethane	N.D.	50.	250	ug/kg	102	107	80-120	5	30
Trichloroethene	N.D.	50.	250	ug/kg	95	100	80-120	5	30
Trichlorofluoromethane	N.D.	100.	250	ug/kg	98	99	58-133	1	30
1,2,3-Trichloropropane	N.D.	50.	250	ug/kg	108	108	71-123	0	30
Vinyl Chloride	N.D.	50.	250	ug/kg	89	92	53-120	2	30
Xylene (Total)	N.D.	50.	250	ug/kg	99	103	80-120	4	30

Batch number: X121081AA	Sample number(s): 6615344								
Benzene	N.D.	0.5	5	ug/kg	89	93	80-120	4	30
Benzyl Chloride	N.D.	1.	4	ug/kg	74	76	66-120	3	30
Bromobenzene	N.D.	1.	5	ug/kg	91	94	79-120	3	30
Bromodichloromethane	N.D.	1.	5	ug/kg	85	86	78-120	2	30
Bromoform	N.D.	1.	5	ug/kg	84	85	70-120	2	30
Bromomethane	N.D.	2.	5	ug/kg	63	67	32-162	6	30
Carbon Tetrachloride	N.D.	1.	5	ug/kg	86	89	69-122	3	30
Chlorobenzene	N.D.	1.	5	ug/kg	92	94	80-120	2	30
Chloroethane	N.D.	2.	5	ug/kg	61	73	37-154	18	30
Chloroform	N.D.	1.	5	ug/kg	88	92	80-120	4	30
Chloromethane	N.D.	2.	5	ug/kg	75	77	56-120	2	30
2-Chlorotoluene	N.D.	1.	5	ug/kg	87	90	78-120	4	30
4-Chlorotoluene	N.D.	1.	5	ug/kg	89	93	79-120	4	30
Dibromochloromethane	N.D.	1.	5	ug/kg	86	87	77-120	1	30
Dibromomethane	N.D.	1.	5	ug/kg	89	90	80-120	1	30
1,2-Dichlorobenzene	N.D.	1.	5	ug/kg	91	93	79-120	2	30
1,3-Dichlorobenzene	N.D.	1.	5	ug/kg	87	91	78-120	4	30
1,4-Dichlorobenzene	N.D.	1.	5	ug/kg	89	92	79-120	3	30
Dichlorodifluoromethane	N.D.	2.	5	ug/kg	69	73	20-120	5	30
1,1-Dichloroethane	N.D.	1.	5	ug/kg	88	88	80-120	0	30
1,2-Dichloroethane	N.D.	1.	5	ug/kg	90	91	71-129	2	30
1,1-Dichloroethene	N.D.	1.	5	ug/kg	87	92	73-129	5	30
1,2-Dichloroethene (Total)	N.D.	1.	5	ug/kg	91	94	80-120	4	30
1,2-Dichloropropane	N.D.	1.	5	ug/kg	89	91	77-120	3	30
cis-1,3-Dichloropropene	N.D.	1.	5	ug/kg	82	85	74-120	4	30
trans-1,3-Dichloropropene	N.D.	1.	5	ug/kg	83	82	77-120	1	30
Ethylbenzene	N.D.	1.	5	ug/kg	90	94	80-120	4	30
Freon 113	N.D.	2.	10	ug/kg	87	92	64-137	6	30
Freon 123a	N.D.	2.	5	ug/kg	86	93	61-127	9	30
Methylene Chloride	N.D.	2.	5	ug/kg	86	88	76-124	2	30
1,1,1,2-Tetrachloroethane	N.D.	1.	5	ug/kg	88	91	80-120	4	30
1,1,2,2-Tetrachloroethane	N.D.	1.	5	ug/kg	90	92	71-123	3	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1302007

Reported: 04/24/12 at 08:01 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Tetrachloroethene	N.D.	1.	5	ug/kg	92	97	78-126	5	30
Toluene	N.D.	1.	5	ug/kg	90	94	80-120	5	30
1,1,1-Trichloroethane	N.D.	1.	5	ug/kg	88	93	71-125	5	30
1,1,2-Trichloroethane	N.D.	1.	5	ug/kg	93	92	80-120	1	30
Trichloroethene	N.D.	1.	5	ug/kg	86	90	80-120	4	30
Trichlorofluoromethane	N.D.	2.	5	ug/kg	85	91	58-133	7	30
1,2,3-Trichloropropane	N.D.	1.	5	ug/kg	92	95	71-123	3	30
Vinyl Chloride	N.D.	1.	5	ug/kg	78	80	53-120	3	30
Xylene (Total)	N.D.	1.	5	ug/kg	92	96	80-120	4	30

Batch number: 12107820004B
Moisture

Sample number(s): 6615344-6615345

100

99-101

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: G121072AA	Sample number(s): 6615335, 6615341-6615343 UNSPK: P612681								
Benzene	106	100	87-126	6	30				
Benzyl Chloride	98	90	62-125	9	30				
Bromobenzene	108	102	80-123	5	30				
Bromodichloromethane	107	100	82-133	6	30				
Bromoform	92	85	60-138	7	30				
Bromomethane	104	96	69-135	8	30				
Carbon Tetrachloride	110	103	81-148	7	30				
Chlorobenzene	108	101	78-133	7	30				
Chloroethane	102	95	70-139	6	30				
Chloroform	107	101	86-136	6	30				
Chloromethane	87	81	55-152	7	30				
2-Chlorotoluene	108	103	81-120	5	30				
4-Chlorotoluene	108	101	82-119	7	30				
Dibromochloromethane	104	97	79-125	8	30				
Dibromomethane	116	107	83-126	7	30				
1,2-Dichlorobenzene	106	100	83-117	6	30				
1,3-Dichlorobenzene	107	101	81-118	6	30				
1,4-Dichlorobenzene	105	100	79-120	5	30				
Dichlorodifluoromethane	78	70	39-155	10	30				
1,1-Dichloroethane	111 (2)	89 (2)	88-136	4	30				
1,2-Dichloroethane	108	99	82-135	7	30				
1,1-Dichloroethene	121	109	83-150	3	30				
1,2-Dichloroethene (Total)	116	104	91-131	3	30				
1,2-Dichloropropane	107	102	91-126	4	30				
cis-1,3-Dichloropropene	101	97	74-132	4	30				
trans-1,3-Dichloropropene	100	92	71-128	8	30				
Ethylbenzene	108	102	80-140	6	30				
Freon 113	121	113	87-158	7	30				
Freon 123a	117	110	81-151	5	30				
Methylene Chloride	113	106	84-122	6	30				
1,1,1,2-Tetrachloroethane	106	99	87-126	7	30				
1,1,2,2-Tetrachloroethane	110	101	75-131	8	30				
Tetrachloroethene	102	96	63-156	6	30				

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1302007

Reported: 04/24/12 at 08:01 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Toluene	109	103	83-127	6	30				
1,1,1-Trichloroethane	120	27*	85-140	28	30				
1,1,2-Trichloroethane	110	104	85-129	5	30				
Trichloroethene	103	95	85-131	3	30				
Trichlorofluoromethane	113	108	67-161	4	30				
1,2,3-Trichloropropane	106	95	76-120	11	30				
Vinyl Chloride	98	91	65-151	7	30				
Xylene (Total)	109	102	81-137	6	30				
Batch number: X121081AA Sample number(s): 6615344 UNSPK: P612594 BKG: P612311									
Benzene	139		55-143			N.D.	N.D.	0 (1)	30
Benzyl Chloride	71		30-130						
Bromobenzene	126		43-139						
Bromodichloromethane	119		53-136			N.D.	N.D.	0 (1)	30
Bromoform	106		38-124			N.D.	N.D.	0 (1)	30
Bromomethane	144		42-168			N.D.	N.D.	0 (1)	30
Carbon Tetrachloride	158*		45-153			N.D.	N.D.	0 (1)	30
Chlorobenzene	149*		49-135			N.D.	N.D.	0 (1)	30
Chloroethane	143		39-152			N.D.	N.D.	0 (1)	30
Chloroform	147*		61-142			N.D.	N.D.	0 (1)	30
Chloromethane	159		51-163			N.D.	N.D.	0 (1)	30
2-Chlorotoluene	129		42-146						
4-Chlorotoluene	132		39-145						
Dibromochloromethane	120		51-128			N.D.	N.D.	0 (1)	30
Dibromomethane	116		57-130			N.D.	N.D.	0 (1)	30
1,2-Dichlorobenzene	122		36-133			N.D.	N.D.	0 (1)	30
1,3-Dichlorobenzene	110		34-134			N.D.	N.D.	0 (1)	30
1,4-Dichlorobenzene	126		35-136			N.D.	N.D.	0 (1)	30
Dichlorodifluoromethane	157*		26-151			N.D.	N.D.	0 (1)	30
1,1-Dichloroethane	153*		63-142			N.D.	N.D.	0 (1)	30
1,2-Dichloroethane	127		68-131			N.D.	N.D.	0 (1)	30
1,1-Dichloroethene	171*		61-149			N.D.	N.D.	0 (1)	30
1,2-Dichloroethene (Total)	154*		59-139			N.D.	N.D.	0 (1)	30
1,2-Dichloropropane	136*		62-135			N.D.	N.D.	0 (1)	30
cis-1,3-Dichloropropene	102		51-131			N.D.	N.D.	0 (1)	30
trans-1,3-Dichloropropene	95		49-129			N.D.	N.D.	0 (1)	30
Ethylbenzene	146*		44-141			N.D.	N.D.	0 (1)	30
Freon 113	185*		56-156						
Freon 123a	169*		34-153						
Methylene Chloride	140		61-141			N.D.	N.D.	0 (1)	30
1,1,1,2-Tetrachloroethane	139*		52-130			N.D.	N.D.	0 (1)	30
1,1,2,2-Tetrachloroethane	129		40-152			N.D.	N.D.	0 (1)	30
Tetrachloroethene	174*		42-149			N.D.	N.D.	0 (1)	30
Toluene	160*		50-146			N.D.	N.D.	0 (1)	30
1,1,1-Trichloroethane	162*		64-142			N.D.	N.D.	0 (1)	30
1,1,2-Trichloroethane	139		54-139			N.D.	N.D.	0 (1)	30
Trichloroethene	145*		53-144			N.D.	N.D.	0 (1)	30
Trichlorofluoromethane	193*		47-163			N.D.	N.D.	0 (1)	30
1,2,3-Trichloropropane	136		45-154			N.D.	N.D.	0 (1)	30
Vinyl Chloride	166*		50-154			N.D.	N.D.	0 (1)	30
Xylene (Total)	153*		44-136			N.D.	N.D.	0 (1)	30

Batch number: 12107820004B

Sample number(s): 6615344-6615345 BKG: P614711

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1302007

Reported: 04/24/12 at 08:01 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Moisture						7.2	8.0	11	15

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA SW846/8260 (water-25ml) #1

Batch number: G121072AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6615335	103	107	98	98
6615341	102	105	99	98
6615342	102	106	98	98
6615343	103	103	98	97
Blank	103	105	98	99
LCS	101	103	99	100
MS	101	103	100	100
MSD	102	103	99	99
Limits:	77-114	74-113	77-110	78-110

Analysis Name: EPA SW846/8260 (water-25ml) #1

Batch number: G121081AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6615336	103	105	98	98
6615337	102	103	97	98
6615338	103	106	98	99
6615339	102	104	98	98
6615340	103	105	98	98
Blank	102	103	98	99
LCS	101	102	99	100
LCSD	101	102	99	99
Limits:	77-114	74-113	77-110	78-110

Analysis Name: PPL/TCL Volatiles

Batch number: Q121141AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6615345	86	6791*	101	118
Blank	90	94	96	89
LCS	99	106	109	96
LCSD	107	108	114	102
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL Volatiles

Batch number: X121081AA

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: IBM

Group Number: 1302007

Reported: 04/24/12 at 08:01 PM

Surrogate Quality Control

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6615344	102	102	93	83
Blank	103	102	90	91
DUP	103	105	90	95
LCS	101	103	100	96
LCSD	101	104	102	97
MS	98	103	107	96
Limits:	50-141	54-135	52-141	50-131

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Project Name: IBM - Kingston
LLI Group #: 1302007

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**SW-846 8260B, GC/MS Volatiles**

Batch #: Q121141AA (Sample number(s): 6615345)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 6615345

Batch #: X121081AA (Sample number(s): 6615344 UNSPK: P612594 BKG: P612311)

The recovery(ies) for the following analyte(s) in the MS was outside the acceptance window: Dichlorodifluoromethane, Vinyl Chloride, Trichlorofluoromethane, 1,1-Dichloroethene, 1,1-Dichloroethane, Chloroform, 1,1,1-Trichloroethane, Carbon Tetrachloride, Trichloroethene, 1,2-Dichloropropane, Toluene, Tetrachloroethene, Chlorobenzene, 1,1,1,2-Tetrachloroethane, Ethylbenzene, 1,2-Dichloroethene (Total), xylene (Total), Freon 113, Freon 123a

SW-846 8260B 25mL purge, GC/MS Volatiles

Batch #: G121072AA (Sample number(s): 6615335, 6615341-6615343 UNSPK: P612681)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: 1,1,1-Trichloroethane

1 Client Information				4 Matrix				5 Analyses Requested												For Lab Use Only 10F2							
Client IBM				Acct#				Preservation Code												SCR#							
Project Name# KINGSTON				Project State NEW YORK																Preservation Codes							
IBM PM M. KOMINEK				Sampler D. GOEMAN																H = HC		T = Thiosulfate					
P.O. #																				N = HNO ₃		B = NaOH					
Check One: ☐ Routine Lab GW ☐ Routine GTF O&M				Sediment ☐ Ground ☒ Surface																S = H ₂ SO ₄		O = Other					
☐ Non-Routine Investigation ☐ Non-Routine Upgrades/Installs				Potable ☐ NPDES ☐ Air ☐																6		Remarks					
OU: (Endicott Non-Routine only)				Composite ☒ Soil ☐ Water ☐ Oil ☐																Total # of Containers							
2 Sample Identification				3 Collected		3 Grab																					
				Date		Time																					
RINSAE-04/11/12				04/11/12		0800																					
SAB/SS/IWB1-WC-DECON/PURGE				0845		X														Matrix updated per							
IWB1-TW-13-12				1218		X														DG. NLM 4/18/12							
IWB1-TW-14-19				1253		X																					
IWB1-TW-15-23				1328		X																					
IWB1-TW-16-13				1408		X																					
IWB1-TW-17-19				1443		X																					
IWB1-TW-18-25				04/11/12		1518																					
TAB2086																											
SAB/SS/IWB1-WC-SOIL-LO				04/12/12		0830																					
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by				Date				Time				Received by				Date				Time			
Standard Rush				D. Simpson				04/12/12				0900															
(Rush TAT is subject to Lancaster Laboratories approval and surcharges.)				Relinquished by				Date				Time				Received by				Date				Time			
Date results are needed:				Relinquished by				Date				Time				Received by				Date				Time			
Rush results requested by (please circle) E-mail Phone				Relinquished by				Date				Time				Received by				Date				Time			
E-mail CHENMINGWANG@GOWDEX.COM Phone: 736-454-927				Relinquished by				Date				Time				Received by				Date				Time			
8 Data Package Options (please circle if required)				Relinquished by				Date				Time				Received by				Date				Time			
Type I (Validation/NJ Reg) TX TRRP-13 NY ASP A																Barney Dumb				4.3.12				930			
Type III (Reduced NJ) MA MCP NY ASP B																											
Type VI (Raw Data Only) CT RCP																											
SDG Complete? Yes No																											
				Site-specific QC (MS/MSD/Dup)?																							
				Yes No																							
				(If yes, indicate QC sample and submit triplicate volume.)																							
																Temperature upon receipt 1.4 °C											



**Lancaster
Laboratories**

Acct. #

Group #

For Lancaster Laboratories use only

Sample #

Instructions on reverse side correspond with circled numbers

COC # 016053

[illegible]

Environmental Sample Administration
Receipt Documentation LogClient/Project: IBMShipping Container Sealed: YES NODate of Receipt: 4.13.12Custody Seal Present * : YES NOTime of Receipt: 930* Custody seal was intact unless otherwise noted in the
discrepancy sectionSource Code: 50-1Package: Chilled Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	2783	1.4	TB	WI	Y	L	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

matrix for ID SAB/SS/IWBI-WC-DEcon/Purge
Says Soil on COC Rec 3 vials of water.

Unpacker Signature/Emp#:

Brunch Baulch 2299

Date/Time:

4.13.12 10:18

Issued by Dept. 6042 Management

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but $\geq$ IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>25\%$	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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