



## **LETTER REPORT**

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# **OFF-SITE PHASE III REMEDIAL INVESTIGATION WORK ASSIGNMENT C007540-4.1**

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**FORMER KLINK COSMO CLEANERS SITE  
GREENPOINT/EAST WILLIAMSBURG INDUSTRIAL AREA**

**SITE NO. 224130  
KINGS (C), NY**

Prepared for:  
NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
625 Broadway, Albany, New York

Joseph Martens, Commissioner

DIVISION OF ENVIRONMENTAL REMEDIATION  
REMEDIAL BUREAU B

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**URS Corporation**  
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Buffalo, New York 14202

**Final  
September 2014**

**LETTER REPORT**  
**OFF-SITE PHASE III REMEDIAL INVESTIGATION**  
**FOR THE**  
**FORMER KLINK COSMO CLEANERS SITE**  
**GREENPOINT/EAST WILLIAMSBURG INDUSTRIAL AREA**  
**SITE ID NO. 224130**  
**BROOKLYN, KINGS COUNTY, NEW YORK**

**PREPARED FOR:**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**DIVISION OF ENVIRONMENTAL REMEDIATION**  
**REMEDIAL BUREAU B**  
**WORK ASSIGNMENT NUMBER C007540-4.1**

**PREPARED BY:**

**URS CORPORATION**  
**257 WEST GENESEE STREET, SUITE 400**  
**BUFFALO, NEW YORK 14202-2657**

**FINAL**  
**SEPTEMBER 2014**



September 5, 2014

Mr. David K. Harrington, P.E.  
Senior Environmental Engineer  
Remedial Bureau B  
Division of Environmental Remediation  
NYS Department of Environmental Conservation  
625 Broadway, 12th Floor  
Albany, New York 12233-7016

**Re: NYSDEC Standby Contract, Work Assignment No. C007540-4.1  
Former Klink Cosmo Cleaners, Greenpoint/East Williamsburg Industrial Area,  
Site ID No. 224130  
Final Letter Report – Off-Site Phase III Remedial Investigation**

Dear Mr. Harrington:

URS Corporation - New York (URS) has prepared this Letter Report to summarize the field activities and analytical results associated with the Off-Site Phase III Remedial Investigation (RI) conducted in December 2013 and between January and March 2014 at the Former Klink Cosmo Cleaners (Klink Cosmo) Site [New York State Department of Environmental Conservation (NYSDEC) Site (Site Number 224130)], which is located in the Greenpoint/East Williamsburg Industrial Area section of Brooklyn, New York (Figure 1). The work associated with the Phase III RI was completed under NYSDEC Work Assignment No. C007540-4.1.

## **1.0 INTRODUCTION**

The Off-Site Phase III RI field investigation was conducted to evaluate the downgradient extent of the dissolved-phase chlorinated volatile organic compound (CVOC) groundwater plume at the top of the Raritan Formation originating from the Klink Cosmo Site, and to assess the potential impact of the nearby former JR Cooperage facility on the dissolved-phase CVOC groundwater plume. The following soil vapor, soil boring, and monitoring wells were included for sampling:

### Soil Vapor Implant Locations

SG-195      SG-199

SG-196      SG-200

SG-197

### Well Boring Locations

DEC-111D      DEC-111

DEC-006TC

### NYSDEC Monitoring Well Locations

DEC-006TC

DEC-111

DEC-111D

Activities associated with the Off-Site Phase III RI field investigation consisted of:

- Utility clearance was performed by a geophysical contractor (i.e., Radar Solutions, International) at all soil vapor locations, soil boring, and monitoring well locations on December 9, 2013 and January 21, 2014.
- Five of a proposed six soil vapor implants were installed by Zebra Environmental, Inc. to a maximum depth of 8 feet below ground surface (bgs) on February 7, 2014 (Figure 2). Six soil vapor implants were planned; however, soil vapor point SG-198 was not installed. SG-198 was planned at a location adjacent to a residence at Division and Vandervoort Avenue. The resident at that location did not want the soil vapor point installed. Soil vapor implants were completed with flush-mount protective casings.
- Soil vapor samples were collected on February 12, 2014 from the five new soil vapor implants. Quality control (QC) samples were collected in accordance with soil vapor implant sampling procedures. All soil vapor samples plus quality assurance/quality control (QA/QC) samples were analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory (i.e., Pace Analytical Services, Inc.) for volatile organic compounds (VOCs) plus tentatively identified compounds (TICs). Each sample was collected in a 6-liter Summa canister equipped with a 1-hour flow controller. Helium tracer gas was used to verify the integrity of each soil vapor implant seal.
- Three well borings and corresponding monitoring wells were advanced, sampled, and installed at the site using both conventional mud-rotary and sonic drilling methods up to approximately 124 feet bgs. DEC-006TC was advanced using mud-rotary methods between December 9 and 23, 2013 by Associated Environmental Services Ltd. (Associated), and DEC-111 and DEC-111D were advanced and sampled at the site with sonic drilling methods up to approximately 80 feet bgs using a low clearance sonic drill rig by Glacier Drilling LLC (Glacier) between February 10 and 13, 2014. All boring locations were cleared to 5 feet bgs by Vac-Tron<sup>®</sup> prior to drilling.
- One soil sample was collected from well boring DEC-111D for environmental characterization. One soil sample was also collected from each of the soil vapor implant locations. All soil samples plus QA/QC samples were analyzed by a NYSDOH ELAP certified laboratory (i.e., Spectrum Analytical, Inc.) for TCL VOCs plus TICs.
- At DEC-006TC, two grab samples from the upper glacial sand and the silty sand material above the Raritan Formation clay, and one Shelby tube sample from the top of the Raritan Formation clay were collected for geotechnical analysis by 3<sup>rd</sup> Rock LLC.
- Monitoring wells were developed a minimum of 24 hours after their completion. Between 110 and 200 gallons of development water was removed from the newly installed wells.
- Groundwater samples were collected from the 3 newly installed monitoring wells. A complete synoptic round of water levels in the Klink Cosmo Site area was collected prior to the start of groundwater sampling.

- Groundwater samples were collected in accordance with low-flow groundwater sampling procedures. All groundwater samples were analyzed by a NYSDOH ELAP certified laboratory (i.e., Spectrum Analytical, Inc.) for TCL VOCs plus TICs.
- All investigation derived waste (IDW) (e.g., soil cuttings, development, purge and decontamination water) were drummed for disposal. Drums were removed from the site on a daily basis for proper disposal by AARCO Environmental Services Corporation (AARCO).
- A 100-foot scale topographic survey was completed, which includes the location of existing streets, curbs, sidewalks, fencing and other site features, along with soil boring, monitoring well and soil vapor implant locations by B. Thayer & Associates. The survey was tied into the existing site survey.
- Restoration of three sidewalk flags in kind by AARCO (i.e., DEC-006TC, DEC-111, and DEC-111D).
- Soil vapor implants and monitoring wells were inspected by URS personnel and the information recorded on the appropriate inspection records.

## **2.0 PREVIOUS INVESTIGATIONS**

URS has previously conducted two phases of RI/FS investigation field work at the Klink Cosmo Site. The results for the previous phases have been reported in the Phase II Remedial Investigation Report (URS, 2012). A brief summary is presented below.

Based on the results of all soil vapor, soil, and groundwater data collected to date, the former Klink Cosmo Cleaners is the origin of tetrachloroethene (PCE) and trichloroethene (TCE) contamination which has migrated to the east, north, and northeast of the building that formerly housed the dry cleaning operations. The exact location of the PCE source has yet to be determined and most likely lies beneath the building. Additional intrusive and non-intrusive methods of investigation inside the building that housed the former Klink Cosmo Cleaners are planned as part of the On-Site Phase III RI to determine the location(s) and size(s) of the PCE source(s) material(s).

Based upon the RI Phase II groundwater sampling event, a dissolved chlorinated solvent plume originates at the Klink Cosmo Site. The horizontal extent of the chlorinated solvents has been mostly delineated. RI Phase II PCE concentrations were marginally lower as compared to RI Phase I concentrations except in the area of DEC-015D, DEC-007D, and DEC-006DD, which were higher. It appears that the chlorinated solvent plume in the shallow and deep overburden has higher concentrations of PCE immediately north and east of the Klink Cosmo site. The extent of PCE has a larger footprint in the shallow groundwater compared to the deep groundwater and appears to be moving with regional deep groundwater flow towards the northeast and comingles with the dissolved chlorinated solvent plume originating within the nearby ACME Steel Areas. The vertical extent of PCE and TCE impacted groundwater was determined to extend down to the top of the Raritan Formation. The horizontal extent of PCE impacted groundwater in the deep overburden near the top of the Raritan Formation has not fully been delineated. The impacted groundwater appears to be migrating to the northeast and extends into the ACME Steel Areas in the vicinity the intersection of Porter Avenue and Lombardy Street. The vertical extent of PCE and TCE impacted groundwater is not expected to migrate below the top of the Raritan Formation due to its vast areal extent and low permeability.

Soil vapor in the Klink Cosmo area has been adversely impacted by the presence of PCE, TCE and their daughter products. The elevated soil vapor concentrations were generally present to the west, north, and the eastern perimeter of the former Klink Cosmo Cleaners building and immediately downgradient toward the east and northeast. A second area of elevated soil vapor concentration was found north/ northwest of the site. The approximate size of the soil vapor PCE and TCE plumes from RI Phases are similar in size and appear to also mimic the extent of the dissolved phase shallow PCE and TCE groundwater plume. The exception to this is the concentrations that exist along the west side of the former Klink Cosmo Cleaners building and north/ northwest of the site.

Recommendations for additional off-site field investigations included:

- One top of clay monitoring well should be installed to an approximate depth of 125 feet at DEC-006TC. The rationale for the top of clay well location was to assess the extent of CVOCs at the top of the Raritan Formation between the Klink Cosmo Site and the ACME Steel Sites. The top of clay well should be a hybrid well consisting of a 10-foot screen of 2-inch ID, Type 304 stainless steel 0.010-inch continuous wrap screen with a 2-foot long sump, and, 2-inch ID, Schedule 40 PVC riser string to the surface. A 00 or 00N size sand pack should be installed from the bottom of the well up to 2 feet above the top of the well screen. A bentonite slurry should then be installed around the riser to an elevation of 1-foot below grade via tremie pipe. An 8-inch diameter, flush-mount protective casing should complete the well.
- One monitoring well pair (i.e., DEC-111 and DEC-111D) should be installed near the former JR Cooperage that was situated just north of the Klink Cosmo Site along the west side of Vandervoort Avenue. The shallow well should be installed with a 2-inch ID, 15-foot length of 0.010 slot Schedule 40 PVC screen, and 2-inch ID Schedule 40 PVC riser string to the surface. A 00 or 00N size sand pack should be installed from the bottom of the well up to 2 feet above the top of the well screen. A bentonite slurry should then be installed around the riser to an elevation of 1-foot below grade via tremie pipe. An 8-inch diameter, flush-mount protective casing should complete the well. The deep well should be installed with a 2-inch ID, 10-foot length of 0.010 slot Schedule 40 PVC screen, and 2-inch ID Schedule 40 PVC riser string to the surface. A 00 or 00N size sand pack should be installed from the bottom of the well up to 2 feet above the top of the well screen. A bentonite slurry should then be installed around the riser to an elevation of 1-foot below grade via tremie pipe. An 8-inch diameter, flush-mount protective casing should complete the well.
- Six soil vapor implant locations should be installed to assess and evaluate the elevated soil vapor concentrations found north/northwest of the site.

### **3.0 FIELD ACTIVITIES**

Off-Site Phase III field activities associated with the soil gas, soil, and groundwater sampling event were performed between December 9 and 23, 2013 and between January 21, 2014 and March 7, 2014. Field notes are provided in Attachment 1 and site photographs are provided in Attachment 2.

#### **3.1 Utility Clearance**

Prior to site work, each subcontractor arranged for all appropriate utility clearance mark-outs. This included (but was not limited to) contacting the New York City (NYC) Departments of Environmental Protection and Transportation, the Transit Authority, Consolidated Edison Company of New York (Con Edison), Keyspan, and Verizon, in addition to using the Dig-Safely number for

New York City – 811 or (800) 272-4480. On December 11, 2014, Con Edison jacketed the overhead wires along the west side of Vandervoort Avenue north of Richardson Street because monitoring well locations DEC-111 and DEC-111D were situated under/adjacent to the overhead wires.

### **3.2 Geophysical Survey**

On December 9, 2013, and again on January 21, 2014, Radar Solutions International of Waltham, MA (RSI) mobilized a one person crew with ground penetrating radar (GPR) and electromagnetic (EM) induction equipment to the site. The purpose of the geophysical survey was to screen for and identify the presence/location of underground utilities in areas where monitoring wells (i.e., December 9, 2013), soil borings, and soil vapor implant locations (i.e., January 21, 2014) were proposed.

A 10-foot square reference grid was established around each soil vapor implant, soil boring, and monitoring well location prior to collecting the geophysical data. A GSSI SIR-2000 digital radar system was used to perform the GPR survey. GPR data were acquired along lines spaced 1.0 to 2.5 feet apart. The EM induction equipment used to determine the location of buried utilities was a Ditch Witch 950 RT locating system and a McLaughlin's Verifier G2 digital locator.

RSI marked utilities and anomalies by spray-painting the outline on the pavement as soon as they were located. A URS geologist supervised and assisted RSI. RSI's report is provided in Attachment 3.

### **3.3 Soil Vapor Implant Installation**

Prior to any intrusive activities, the subcontractor obtained all necessary permits (i.e., NYCDOT sidewalk permits) for conducting intrusive activities. During Off-Site Phase III RI field activities, five permanent soil vapor implants (SG-195, SG-196, SG-197, SG-199, and SG-200) were installed on February 7, 2014 by Zebra Environmental Corporation of Lynbrook, NY (Zebra), under the direction of a URS geologist. The five soil vapor implants were installed to a maximum depth of 8 feet bgs. Soil vapor implants were completed with flush-mount protective casings. URS did not install a soil vapor implant at proposed location SG-198 at the request of the property owner. Locations of the soil vapor implants are shown on Figure 2. All locations were installed through sidewalks. Rotary concrete drill bits were used to drill through the concrete sidewalk. A track-mounted Geoprobe® 6620 DT hydraulic push unit was utilized to advance a 2-inch outside diameter (OD) by 5-foot long acetate-lined Macrocore sampler to a maximum depth of 8 feet bgs.

Each sample core was screened with a photoionization detector (PID). One soil sample was collected from each boring from the interval exhibiting odors, staining, or the highest PID reading. If no odors, staining, or elevated PID readings were encountered, then a sample from the bottom of the boring was collected.

A 6-inch long double-woven stainless steel Geoprobe® vapor sampling implant was connected to an anchor and positioned above the silty clay layer (if present) or at the bottom of the probe hole. The implants were constructed to a minimum depth of 2.0 feet bgs. Polyethylene tubing (3/8-inch OD) was connected to the implant and cut above the ground surface. The annular space around the implant (screen) was backfilled with #1 silica sand to a minimum of 6 inches above the implant. A bentonite slurry was placed immediately above the sand for the seal, and extended to the ground surface. The implants were completed with 5-inch diameter aluminum flush-mount protective casings, set in approximately 1 foot of concrete. All downhole equipment was decontaminated between each soil vapor implant location with a non-phosphate detergent and potable water. Soil vapor implant construction details are provided in Attachment 4.

For the soil samples collected during installation of the soil vapor implants, a chain-of-custody (COC) form was maintained and accompanied the soil sample containers to Spectrum Analytical, Inc., of Melville, New York, (Spectrum) a NYSDOH ELAP accredited laboratory. The soil samples were analyzed for TCL VOCs plus TICs, following United States Environmental Protection Agency (USEPA) SW846 Method 8260B.

All IDW generated from the soil vapor implant installation was containerized in Department of Transportation (DOT) approved 55-gallon drums and picked up by AARCO Environmental Services Corporation of Lindenhurst, New York (AARCO), on a daily basis for off-site disposal at a permitted facility.

### **3.4 Soil Vapor Sampling**

Five soil vapor samples (including one field duplicate) and 1 outdoor air sample were collected on February 12, 2014 in accordance with the procedures outlined in the Field Activities Plan (FAP) (URS, April 2010) using laboratory evacuated 6-liter Summa<sup>®</sup> canisters with 1-hour flow regulators provided by Pace Analytical Services, Inc. of Melville, New York (Pace). Per the New York State Department of Health's (NYSDOH's) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH, October 2006), a helium tracer gas was utilized during the sampling of each soil vapor implant. The tracer gas was used to verify that the infiltration of outdoor (ambient) air was not occurring during sample collection. A one-quart enclosure or 5-gallon bucket lid was placed over the well head. The well tubing was run through an outlet and a silicone gasket was used to seal the interface between the tubing and the enclosure or lid. The enclosure or lid was then sealed at the ground surface with a polyurethane foam gasket. A tank containing ultra-high purity helium (99.999%) was connected to the side port of the enclosure or lid and enough helium was released to displace any ambient air and to maintain a positive pressure within the enclosure or lid. Following the application of the tracer gas, one to three volumes were purged from the soil vapor implant using a Gilian GilAir-3 air sample pump.

A Dielectric MGD-2002 helium detector was used to check for the presence of the tracer gas in the purged soil vapor; if less than 10% of the tracer gas was detected, a sample was collected. Following the collection of the soil vapor sample, the helium detector was re-connected to the tubing to check for the presence of the tracer gas in the soil vapor; if less than 10% of the tracer gas was detected, the sample was acceptable for analyses.

One outdoor (ambient) air sample was collected from a location upwind of the sample locations. The outdoor ambient air sample was collected by opening a summa canister fitted with a 1-hour flow controller and drawing in the ambient air. Field duplicate samples were collected using stainless steel 'T' fittings. The Summa Canister Sampling Field Data Sheets documenting the sampling event are presented in Attachment 5.

All samples were transported under chain-of custody (COC) via laboratory courier to Pace. The samples were analyzed for TCL VOCs plus TICs, following USEPA Compendium Method TO-15.

### **3.5 Monitoring Well Installation**

#### **3.5.1 Pre-Boring Clearing and Monitoring Well Construction**

Prior to any intrusive activities, the subcontractor obtained all necessary permits (i.e., NYC DOT street opening permits) for conducting intrusive activities. Three well borings were advanced and sampled at the site using both conventional mud-rotary and sonic drilling methods up to

approximately 124 feet bgs. DEC-006TC was advanced by Associated Environmental Services Ltd. of Hauppauge, New York (Associated) using mud-rotary methods and DEC-111 and DEC-111D were advanced and sampled with sonic drilling methods up to approximately 80 feet bgs by Glacier Drilling LLC of Durham, Connecticut (Glacier) using a low clearance sonic drill rig. All boring locations were cleared to 5 feet bgs by Vac-Tron<sup>®</sup> prior to drilling. Soil boring logs and well construction diagrams are provided in Attachment 6.

#### **3.5.1.1 DEC-006TC Monitoring Well Construction**

On December 9, 2013 Associated mobilized one Vac-Tron<sup>®</sup> unit to perform location specific utility clearance at DEC-006TC as depicted in Figure 3. DEC-006TC was cleared on December 9, 2013. An approximately two-foot by two-foot square area of the sidewalk was cut. An approximately one-foot diameter by five-foot deep hole was excavated using post-hole diggers, pry bars, and an air knife along with the Vac-Tron<sup>®</sup> unit. After the location was cleared for drilling, the borehole was advanced by Associated with a truck-mount Diedrich D-120 drill rig between December 9 and 23, 2013. The soil boring was advanced using 6-inch ID drive and wash with mud-rotary drilling methods. Split spoon samples and/or Macrocore samples were collected continuously using standard penetration techniques (ASTM D1586-84) unless an obstruction was encountered that required the advancement of the drill string past the obstruction. Soil samples for subsurface characterization were screened with a photoionization detector (PID). No odors, staining, or elevated PID readings were encountered. All IDW generated from the monitoring well installation was containerized in DOT approved 55-gallon drums and picked up by AARCO on a daily basis for off-site disposal at a permitted facility.

Select soil samples were analyzed by 3<sup>rd</sup> Rock LLC of East Aurora, New York (3<sup>rd</sup> Rock) for the following geotechnical analyses including: grain size distribution (ASTM D422); Atterberg Limits (ASTM D4318); USCS classification, and falling head permeability (ASTM D5084). Soil samples collected for geotechnical analysis include those from 34-35', 113-115', and 119-121' bgs. Geotechnical results are provided in Attachment 7.

DEC-006TC was constructed as a hybrid well was installed with a 10-foot long, 2-inch inside diameter (ID), Type 304 stainless steel 0.010-inch continuous wrap screen and 2-foot long stainless steel sump. The Type 304 stainless steel screen and sump was flush threaded to 2-inch ID, Schedule 40 polyvinyl chloride (PVC) riser up to the ground surface. A #0 Filpro size sand pack was installed from the bottom of the well up to 6 feet above the top of the well screen. A bentonite slurry was then installed around the riser to an elevation of 1-foot below grade via tremie pipe. DEC-006TC was finished with a locking well cap, a 2-foot square concrete apron, and a flush-mounted curb box. Security bolts were installed in the well cover to minimize the potential for unauthorized well access. The concrete apron for the well pad was approximately 6 inches thick. A monitoring well construction log is included in Attachment 6.

#### **3.5.1.2 DEC-111 and DEC 111D Monitoring Well Construction**

On January 28, 2014 Glacier mobilized one Vac-Tron<sup>®</sup> unit to perform location specific utility clearance at each of the proposed monitoring well locations. Two monitoring well locations were cleared on January 28, 2014. At each location, an approximately two-foot by two-foot square area of the sidewalk was cut. An approximately one-foot diameter by five-foot deep hole was excavated using post-hole diggers, pry bars, and an air knife along with the Vac-Tron<sup>®</sup> unit. After the location was cleared for drilling, the hole was backfilled flush with the sidewalk using the excavated spoils

(rocks and debris were removed and not re-used as backfill) and if necessary, temporarily patched with blacktop patch or concrete.

Between February 10, 2014 and February 13, 2014, Glacier utilized a track-mounted Geoprobe® 8140LS Roto Sonic drill rig for the installation of the DEC-111 monitoring well pair located on Figure 3.

The soil borings at the shallow and deep well location was advanced using a 4-inch outside diameter (OD) inner sampler and a 6-inch OD outer casing with sonic drilling methods. Soil samples were collected continuously from the ground surface to the terminus of DEC-111D. The procedure for the advancement of the borehole was to advance the inner sampler the appropriate interval (5 or 10 feet) and then advance the outer casing over the inner sampler to the desired depth. After the outer casing was advanced, the inner sampler was retrieved and the sample core collected was placed in a polyethylene sample tube. The process was repeated until the desired depth was reached. At the DEC-111 monitoring well pair, only the deep monitoring well location was sampled and logged. Following the installation of the deep monitoring well, the corresponding shallow monitoring well was advanced to a pre-determined depth and installed without the collection of any soil samples.

Each sample core was screened with a PID. On February 6, 2014, one soil sample was collected for environmental characterization from well boring location DEC-111D between 34 and 35 feet bgs. No odors, staining, or elevated PID readings were encountered. Soil boring logs are provided in Attachment 6. A COC form was maintained and accompanied the soil sample containers to Spectrum. The soil sample was analyzed for TCL VOCs plus TICs following USEPA SW846 Method 8260B. All IDW generated from monitoring well installation was containerized in DOT approved 55-gallon drums and picked up by AARCO on a daily basis for off-site disposal at a permitted facility.

DEC-111 was constructed with 15 feet of 2-inch ID, Schedule 40 PVC 0.010-inch slot screen and riser. A #1 size silica sand pack was installed from the bottom of the well up to 4 feet above the top of the well screen. The screen was nominally set between 5 feet above and 10 feet below the water table. Bentonite chips were then installed around the riser to an elevation of 2 feet below grade.

DEC-111D was constructed with 10 feet of 2-inch ID, Schedule 40 PVC 0.010-inch slot screen and Schedule 40 PVC riser. A #1 size sand pack was installed from the bottom of the well up to 2 feet above the top of the well screen. A bentonite slurry was then installed around the riser to an elevation of 2-feet below grade via tremie pipe.

Each monitoring well was finished with a locking well cap, an approximately 2-foot square concrete apron, and a flush-mounted curb box. Security bolts were installed in the well covers to minimize the potential for unauthorized well access. The concrete apron for each well pad was approximately 6 inches thick. Monitoring well construction logs are included in Attachment 6.

### **3.5.2 Monitoring Well Development**

At least 24 hours after the monitoring wells were installed the wells were developed by URS personnel with the pump and surge development method using a Waterra Inertial Hydrolift pump equipped with dedicated/disposable high density polyethylene (HDPE) tubing and dedicated/disposable HDPE check valves. Prior to well development, a 200-foot long Solinst oil/water interface probe was used to check for the presence/thickness of any free product. During well development, water quality parameters (pH, specific conductivity, temperature, turbidity) were measured using a Hanna 991301 Multiparameter Meter and a Lamotte 2020 turbidimeter and



recorded. A monitoring well was considered developed when a minimum of 100 gallons was removed and the water quality parameters had stabilized.

Well development water was collected in DOT approved 55-gallon drums and picked up daily by AARCO for off-site disposal at a permitted facility. Well development forms are included in Attachment 8.

### **3.6 Monitoring Well and Soil Vapor Implant Inspections and Maintenance**

Monitoring well and soil vapor implant inspections and maintenance was performed on all DEC soil vapor points and monitoring wells that were entered during the Off-Site Phase III RI field investigation. If maintenance was necessary and performed, it is noted on the form. Maintenance includes: tapping out bolt holes, replacement of security bolts, addition of an anti-seize paste to security bolts, and location ID stenciling adjacent to the locations. Completed inspection forms are provided in Attachment 9.

### **3.7 Groundwater Level Measurements**

On March 6-7, 2014, a complete synoptic round of water levels in the Klink Cosmo Site area were collected prior to the start of groundwater sampling. Monitoring wells were checked for depth to groundwater and thickness of accumulated light non-aqueous phase liquid (LNAPL), if any. Water levels were measured using a 200-foot long Solinst oil/water interface probe. Table 1 presents groundwater level measurements and the presence/absence of LNAPL in monitoring wells. Groundwater elevations were adjusted if LNAPL was present, based upon the (laboratory) measured specific gravity of the product present in monitoring wells at the site. No LNAPL was present in any of the newly installed monitoring wells.

### **3.8 Non-Aqueous Phase Liquid Gauging**

During the Off-Site Phase III RI field investigation, LNAPL was detected in DEC-048 at a thickness of 0.20 feet.

### **3.9 Groundwater Sampling**

On March 6-7, 2014, URS personnel collected groundwater samples from the 3 monitoring wells shown on Figure 3. Prior to sample collection at DEC-006TC and DEC-111D, standing water was purged with a Grundfos Pump. At DEC-111, standing water was purged with a bladder pump using dedicated/disposable HDPE tubing. The wells were purged at a rate of 1-liter per minute or less and the purge rate was adjusted to minimize draw down. During the purging of the well, water quality parameters (pH, specific conductivity, temperature, dissolved oxygen, turbidity) were measured using a Horiba U-52 Multi-parameter Instrument with a flow-through cell and documented on a purge log. Samples were collected after the water quality parameters stabilized. All IDW including purge water, bailers and HDPE tubing, was collected and placed into Department of Transportation (DOT) approved 55-gallon drums. Well purge logs are provided in Attachment 8.

All samples were transported under COC via laboratory courier to Spectrum. The samples were analyzed for TCL VOCs, plus TICs following USEPA SW846 Method 8260C.

### **3.10 Concrete Flag Replacement**

AARCO was contracted for the replacement of sidewalk flags where monitoring wells were installed during current site activities. AARCO replaced 3 sidewalk flags on May 6, 2014 at monitoring well locations DEC-006TC, DEC-111, and DEC-111D, in accordance with applicable standards. Prior to removal of the damaged flags, AARCO saw cut the perimeter of each flag to be replaced using a

water-cooled pavement saw to reduce fugitive dust. The flags were demolished, removed and disposed of by AARCO. New flags were replaced in kind to the surrounding flags. The daily construction report detailing the flag replacement activities is provided in Attachment 10.

### **3.11 Investigation Derived Waste Disposal**

AARCO was contracted for the daily pick-up and disposal of all drummed IDW at a permitted disposal facility. Copies of the non-hazardous bills of lading and hazardous waste manifests are provided in Attachment 11.

### **3.12 Site Survey**

B. Thayer Associates of Woodbury, New York (i.e., B. Thayer), was contracted to survey additional monitoring well, soil vapor, and soil boring locations in May 2014. The survey provides 100-scale mapping and does not include elevated roadways and expressways (i.e., BQE). The survey was tied into the existing site survey. All surveying was performed under the supervision of a New York State licensed land surveyor. All vertical control points were referenced to the North American Vertical Datum 1988 (NAVD 1988). Horizontal datum was referenced to the North American Datum of 1983 (NAD 83), New York State Plane Coordinate System, Long Island Zone.

## **4.0 STUDY AREA GEOLOGY**

This section discusses the physical characteristics of the study area including: geology, hydrogeology, and SCGs.

### **4.1 Regional Geology**

The Klink Cosmo Site is located within the Atlantic Coastal Plain physiographic province of New York State (Broughton, et al. 1966). The Atlantic Coastal Plain is characterized by low relief with elevations ranging from sea level to almost 400 feet amsl. The lithology of Brooklyn and Queens consists of Cretaceous and Pleistocene age unconsolidated deposits underlain by Precambrian crystalline bedrock. The unconsolidated deposits pinch out in northwestern Queens where bedrock outcrops, but reach a thickness of more than 1,000 feet in southeastern Queens. The unconsolidated deposits form six distinct hydrogeologic units consisting of four aquifers and two confining layers that generally dip to the south-southeast. The units in ascending order are the Lloyd aquifer (0-300 feet thick), the Raritan confining unit (0-200 feet thick), the Magothy aquifer (0-500 feet thick), the Jameco aquifer (0-200 feet thick), the Gardiners clay (0-150 feet thick), and the upper glacial aquifer (0-300 feet thick) (USGS, 1999a and b). The units pinch out to the north-northeast and may not all be found at any one location.

Based on borings performed near the site for unrelated work, the site is underlain from the surface down by upper glacial aquifer, the Raritan Formation, and crystalline bedrock. The upper glacial aquifer is of Wisconsin age and consists of a terminal moraine, a ground moraine, and glacial outwash deposits whose area is characterized as an unsorted and unstratified mixture of clay, sand, gravel and boulders. The Raritan Formation is recognized as a confining unit which has been described as light to dark gray, brown-red, pink, red and gray-white clay, silty clay and clayey to silty fine sand. Disseminated lignite and pyrite are common and calcareous concretions may be found. Prior to the Site Characterization (SC) Phase VI fieldwork, the Raritan Formation had previously been encountered in three borings performed near the site by the USGS: one boring near Morgan Avenue and Meeker Avenue (-47 feet amsl); one boring under the BQE near the west bank of Newtown Creek (-48 feet amsl); and one boring near Meeker Avenue between Stewart Avenue and Gardner Avenue (-71 feet amsl). The boring near Morgan Avenue and Meeker Avenue

penetrated the Raritan Formation into the underlying crystalline bedrock at an elevation of -163 feet amsl.

During the Meeker Avenue Site Characterization Plume Trackdown (SC) and Klink Cosmo RI fieldwork phases, the Raritan Formation was positively encountered in ten top of clay well locations at depths between 108.5 and 138.0 feet bgs (elevations of -56.95 to -121.19 feet amsl) and was described as gray with white banding, brown, brownish gray, greenish gray, dark gray to greenish brown, fine sand and silt, clays with carbonized plant fragments, clays with varying amounts of sand to silts with varying amounts of sand and clay. In the Klink Cosmo area, the top of Raritan Formation was identified at 4 well locations (DEC-006TC, DEC-028TC, DEC-029TC, and DEC-031TC) at depths between 109 feet and 118 feet bgs.

During this RI phase, the top of Raritan Formation was encountered at a depth of 118 feet bgs in DEC-006TC.

#### **4.2 Site Geology and Hydrogeology**

Figure 4 presents the locations of the monitoring wells and cross sections developed during the RI. Cross sections A-A', B-B' and C-C' are shown on Figures 5, 6, and 7, respectively. Based upon subsurface data obtained during this and previous investigations, the upper glacial aquifer has been penetrated and the top of the Raritan Formation has been encountered at the top of clay locations. The following textural units have been found in the upper glacial aquifer in most borings, from the surface downward: a fill unit; a sand unit or a discontinuous glacial till unit; a sand unit if the discontinuous glacial till unit was encountered at the surface; a discontinuous clayey silt unit within the sand unit; sand and gravel unit; and the Raritan Formation. Due to the heterogeneous nature of the geology, some but not all of the units may or may not be present at each boring. The thickness of the upper glacial aquifer in the Klink Cosmo area is approximately 108.5 to more than 113.0 feet thick. The Raritan Formation was encountered between -68.83 and -74.05 feet amsl. An isopleth of the top of Raritan Formation is shown on Figure 8.

A fill unit is present, varying in thickness from approximately 0 to 11 feet, and consists of a heterogeneous mixture of sand, silt, clay and varying amounts of construction and demolition debris (i.e., bricks, concrete, coal, slag, etc.). Potentially former MGP related fill material (i.e., cinder and/or trace slag) was found to be present across Vandervoort Avenue in the vicinity of a former MGP facility in DEC-014D (5-7 feet bgs), DEC-043 (1-11 feet bgs), SG-079 (1-2 feet bgs), and SG-086 (at 1 foot bgs).

A glacial till unit was noted at the surface in some borings and consists of a heterogeneous mixture of sand, silt, and clay and varying amounts of gravel, cobbles and boulders.

A sand unit is present at all the boring locations and is represented by stratified sands of varying textures containing some to no fines.

A lacustrine clayey silt/silt unit has been observed as an inclusive unit within the sand unit. The thickness of the clayey silt/silt unit, where present, varies from 0.5 to over 10 feet thick.

A sand and gravel unit has been found to overlie the Raritan Formation at DEC-006TC, DEC-028TC, DEC-029TC, and DEC-031TC. The Raritan Formation consisted of gray or dark gray, silt with some clay and fine sand stringers; clay with some sand; clay and silt; or fine sand and silt.

Geotechnical results are presented in Attachment 7 and presented below.

A grab sample was collected from the glacial till within the upper glacial aquifer sand at DEC-006TC (34-35 feet bgs). The USCS classification of this sample is SC. Soil was identified as slightly plastic.

A grab sample was collected from the silty sand material above the top of the Raritan Formation clay (DEC-006TC 113-115 feet bgs). It contained 2% gravel, 87.5% sand, 8.3% silt and 2.2% clay which would be classified as a SW.

A Shelby tube sample was collected from the top of the Raritan Formation at DEC-006TC (119-121 feet bgs). The USCS classification of this sample from the Raritan Formation was CL. Soil was identified as slightly to medium plastic. The measured permeability value was  $3.6 \times 10^{-8}$  cm/sec for the clay.

### **4.3 Groundwater Levels**

During the Off-Site Phase III RI field activities, a round of synoptic groundwater levels was obtained from monitoring wells in the Klink Cosmo area prior to the start of the groundwater sampling. These were used to develop groundwater contour elevation maps during the RI so that groundwater flow direction could be determined.

A potentiometric surface map based on the water level measurements from the shallow overburden wells, using 0.1-foot contour interval, is provided in Figure 9. The groundwater flow direction was to the east with northeast and southeast components and is consistent with prior rounds.

A potentiometric surface map based on the water level measurements from the deep overburden wells, using 0.1-foot contour interval, is provided in Figure 10. The groundwater flow direction was to the east with northeast and southeast components and is consistent with prior rounds.

A potentiometric surface map based on the water level measurements from the Top of Raritan Formation wells, using 0.1-foot contour interval, is provided in Figure 11. The groundwater flow direction was generally to the east with east-northeast and southeast components.

The water table surface is found between approximately 25 to 43 feet bgs in the shallow overburden groundwater. The potentiometric surface in the deep overburden groundwater is between 25 and 50 feet bgs. The potentiometric surface in the deep overburden groundwater at the top of Raritan Formation is between 32 and 47 feet bgs. Groundwater levels in the shallow and deep overburden groundwater were approximately a foot lower than those measured in June 2011, and approximately a half foot lower than those measured in March 2012. The groundwater flow direction in all three units is generally to the east (including to the northeast and southeast). A groundwater depression is observed in the shallow overburden groundwater in the vicinity of DEC-028 which is consistent with prior rounds.

### **4.4 Standards, Guidance, and Criteria**

#### **Soil**

Three sources of soil SCGs are considered appropriate for this site: site-specific background soil samples, NYSDEC Part 375, and NYSDEC CP-51. Site-specific background soil sample results were detailed in the Spic and Span RI (URS, September 2012). Soil samples during this Off-Site Phase III RI were only analyzed for VOCs, and since no VOCs were detected in soil background samples, soil background is not included on the analytical tables and figures presented in Section 5.

Part 375 criteria are considered as SCGs for soil samples in conjunction with CP-51 criteria. CP-51 supplements Part 375 by providing criteria for contaminants previously included under TAGM 4046 where values were not included in Part 375. Hereafter, mention of Part 375 includes incorporation of CP-51 criteria values. Part 375 Unrestricted Use criteria are considered to assist in the development of a remedial alternative capable of achieving unrestricted future use, as required by DER-10 Section 4.4 (b) 3 ii. In addition, criteria for the Protection of Groundwater are considered as SCGs for contaminants which exceed groundwater SCGs. Soil SCGs also considered appropriate for the site are Residential criteria. Part 375 Residential and Restricted Residential Use soil cleanup criteria for the soil samples are used on the soil analytical data tables in Section 5.

### **Groundwater**

The SCGs for groundwater are the Class GA standards and guidance values presented in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998 (including subsequent revisions). These groundwater SCGs are included on the groundwater analytical tables presented in Section 5.

### **Soil Vapor**

There are no criteria for soil vapor analytical data.

## **5.0 ANALYTICAL RESULTS**

Full deliverable data packages [i.e., NYSDEC Analytical Service Protocol (ASP) Category B] were provided by the laboratories, and included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

Data Usability Summary Reports (DUSR) were prepared following the guidelines provided NYSDEC Division of Environmental Remediation Draft *DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for the Development of Data Usability Summary Reports*, May 2010. The data packages were reviewed for compliance with analytical method requirements and the following USEPA Region II guidelines:

- *Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B*, SOP HW-24, Revision 2, August 2008; and
- *Validating Volatile Organic Analyses of Ambient Air in Canister by Method TO-15*, SOP HW-31, Revision 4, October 2006.

The type and quality of analytical results that are needed to answer specific environmental questions and support proper environmental decisions met the project quality objectives (PQOs) for this sampling event, except where noted in the DUSRs.

Summaries of the detected TCL VOCs in the soil vapor, soil and groundwater samples are provided in Tables 2, 4A, 4B, and 6, respectively. Results exceeding their respective SCGs are indicated with a circle. As noted above, there are no criteria for soil vapor analytical data.

The complete validated analytical results for the soil vapor, soil and groundwater samples are presented in the DUSRs in Attachment 12, on a CD. Data summary tables, Form Is and Form I-TICs are provided in the DUSRs and include the reporting limit for each non-detected compound.

### **5.1 Outdoor Air and Soil Vapor**

Table 2 presents the outdoor air and soil vapor sample results and depicted on Figure 12. Table 3 provides a statistical summary of the detected parameters for the soil vapor samples as follows: the

number of detections; the minimum, maximum and average values; and the location of the maximum value.

PCE was detected in the outdoor air sample associated with the soil vapor samples. The location of the outdoor air sample was on Richardson Street. In addition, the following VOCs were also detected in the outdoor air sample: 1,2,4-trimethylbenzene, 1,4-dichlorobenzene, acetone, benzene, carbon disulfide, chloromethane, dichlorodifluoromethane, 2-butanone, methylene chloride, toluene, trichlorofluoromethane, vinyl acetate, and xylenes.

#### **5.1.1 Soil Vapor PCE Detections**

PCE was detected in 4 of the 5 soil vapor samples collected. Concentrations ranged from 0.81  $\mu\text{g}/\text{m}^3$  to 62.6  $\mu\text{g}/\text{m}^3$ . The highest concentration of PCE was detected at SG-195 (62.6  $\mu\text{g}/\text{m}^3$ ), followed by SG-196 (8.61  $\mu\text{g}/\text{m}^3$ ), SG-197 (2.51  $\mu\text{g}/\text{m}^3$ ), and SG-199 (0.81  $\mu\text{g}/\text{m}^3$ ).

PCE concentrations in the soil vapor samples are shown on Figure 13. Since all detections are less than 100  $\mu\text{g}/\text{m}^3$  no isoconcentration contours are shown.

#### **5.1.2 Soil Vapor TCE Detections**

TCE was detected in 2 of the 5 soil vapor samples collected. Concentrations ranged from 1.02  $\mu\text{g}/\text{m}^3$  to 9.03  $\mu\text{g}/\text{m}^3$ . The highest concentration of PCE was detected at SG-195 (9.03  $\mu\text{g}/\text{m}^3$ ), followed by SG-199 (1.02  $\mu\text{g}/\text{m}^3$ ).

TCE concentrations in the soil vapor samples are shown on Figure 14. Since all detections are less than 100  $\mu\text{g}/\text{m}^3$  no isoconcentration contours are shown.

#### **5.1.3 Soil Vapor PCE and TCE Degradation Product Detections**

The presence of PCE and TCE degradation products have also been detected in this soil vapor sampling event. Cis-1,2-dichloroethene (cis-1,2-DCE) and trans-1,2-dichloroethene (trans-1,2-DCE) were detected in 1 of the 5 soil vapor samples collected (SG-195), as listed in Table 3. The concentration of cis-1,2-DCE was 5.63  $\mu\text{g}/\text{m}^3$ , while the concentration of trans-1,2-DCE was 0.44  $\mu\text{g}/\text{m}^3$ .

### **5.2 Soil**

Tables 4A and 4B present the soil analytical results. Methylene chloride was the only VOC detected in the soil samples, which is below SCG criteria at all locations. PCE, TCE, and subsequent degradation products were not detected in any of the 6 soil samples. Table 5 provides a statistical summary of the detected parameters for the soil samples as follows: the number of detections; the minimum, maximum and average values; and the location of the maximum value.

### **5.3 Soil PCE, TCE and Degradation Product Detections**

PCE, TCE, and subsequent degradation products were not detected in any of the 6 soil samples collected.

### **5.4 Groundwater**

Table 6 presents the groundwater analytical results. Figure 15 presents the analytical results for the groundwater samples. Table 7 provides a statistical summary of the detected parameters for the groundwater samples as follows: the number of detections; the minimum, maximum and average values; and the location of the maximum value.

#### **5.4.1 Groundwater PCE Detections**

PCE was detected in all 3 groundwater samples collected, with each location exceeding groundwater criteria. Concentrations exceeding groundwater criteria ranged from 18 µg/L to 4,900 µg/L. The highest concentration of PCE was detected at DEC-006TC (4,900 µg/L), followed by DEC-111 (1,300 µg/L), and DEC-111D (18 µg/L).

Concentrations of PCE in the groundwater samples are shown on Figure 16.

#### **5.4.2 Groundwater TCE Detections**

TCE was detected in all 3 groundwater samples collected, with each location exceeding groundwater criteria. Concentrations exceeding groundwater criteria ranged from 8.4 µg/L to 380 µg/L (Figure 15). The highest concentration found at DEC-006TC (380 µg/L), followed by DEC-111D (220 µg/L), and DEC-111 (8.4 µg/L).

Concentrations of TCE in the groundwater samples are shown on Figure 17.

#### **5.4.3 Groundwater PCE and TCE Degradation Product Detections**

The presence of PCE and TCE degradation products have also been detected in this groundwater sampling event at concentrations exceeding groundwater criteria (Figure 15).

Cis-1,2-DCE was detected in all 3 groundwater samples collected, with only 1 location exceeding groundwater criteria, as listed in Table 7. The range of cis-1,2-DCE varied from 2.4 µg/L to 11 µg/L, with the highest concentration detected at DEC-111D.

Additional VOCs were detected above SCGs and include: 1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, and 1,2-dichloroethane.

### **6.0 CONCLUSIONS AND RECOMMENDATIONS**

#### **6.1 Conclusions**

Based upon the results of the Off-Site Phase III RI field investigation, the following conclusions are provided.

##### **6.1.1 Geology**

- The 3 monitoring wells installed during the RI Phase III are located in the upper glacial aquifer and the Top of Raritan Formation. Well DEC-006TC is mostly screened in stratified sands of varying textures containing some silt and fines and reached the Top of Raritan Formation at a depth of 118 feet (elevation -68.83 amsl). DEC-111 and DEC-111D are screened through fine to coarse sand and gravel.
- Shallow overburden groundwater flow in the vicinity of the Klink Cosmo Site is to the east with northeast and southeast components.
- Deep overburden groundwater flow in the vicinity of the Klink Cosmo Site is to the east with northeast and southeast components.
- Deep overburden groundwater flow near the top of Raritan Formation in the vicinity of the Klink Cosmo Site is generally to the east with east-northeast and southeast components.
- There is a slight upward vertical hydraulic gradient at monitoring well pair DEC-111 and between DEC-006 and DEC-006TC.

### **6.1.2 Soil**

- There were no VOCs detected above SCGs during the Off-Site Phase III RI.

### **6.1.3 Groundwater Analytical Results**

- PCE and its degradation products were detected at concentrations exceeding groundwater criteria in shallow and deep groundwater monitoring wells (DEC-111 and DEC-111D, respectively) which are located immediately downgradient of the Klink Cosmo Site, adjacent to the former JR Cooperage facility.
- PCE and TCE have also been detected in groundwater sample DEC-006TC at concentrations exceeding groundwater criteria. The sample was collected immediately above the top of the Raritan Formation at approximately 115 feet bgs. The PCE concentration at DEC-006TC (i.e., 4,900 µg/L) is similar to the concentration detected at DEC-029TC (i.e., 4,500 µg/L) during the RI Phase II sampling event. DEC-029TC is located upgradient of DEC-006TC at the top of the Raritan Formation. This indicates the PCE contamination maybe continuing to migrate to the northeast in the direction of groundwater flow in the deep groundwater zone above the top of the Raritan Formation from the Klink Cosmo Site area. However, since DEC-006TC is within the zone of potential impact from the nearby ACME Steel Sites, the PCE contamination could be attributed to the ACME Steel Sites, or a combination of the ACME Steel Sites and Klink Cosmo Site.

### **6.1.4 Soil Vapor**

- PCE was detected in 4 of the 5 soil vapor samples collected. Concentrations ranged from 0.81 µg/m<sup>3</sup> to 62.6 µg/m<sup>3</sup>. The highest concentration of PCE was detected at SG-195 (62.6 µg/m<sup>3</sup>), followed by SG-196 (8.61 µg/m<sup>3</sup>), SG-197 (2.51 µg/m<sup>3</sup>), and SG-199 (0.81 µg/m<sup>3</sup>).
- TCE was detected in 2 of the 5 soil vapor samples collected. Concentrations ranged from 1.02 µg/m<sup>3</sup> to 9.03 µg/m<sup>3</sup>. The highest concentration of PCE was detected at SG-195 (9.03 µg/m<sup>3</sup>), followed by SG-199 (1.02 µg/m<sup>3</sup>).
- Cis-1,2-DCE and trans-1,2-DCE were detected in 1 of the 5 soil vapor samples collected (SG-195), as listed in Table 3. The concentration of cis-1,2-DCE was 5.63 µg/m<sup>3</sup>, while the concentration of trans-1,2-DCE was 0.44 µg/m<sup>3</sup>.

## **6.2 Recommendations**

The following recommendations are offered for consideration by the Department.

- Carbon specific isotope analysis (CSIA) should be analyzed at locations immediately downgradient of the Klink Cosmo Site (i.e., DEC-111 and DEC-111D) and at DEC-006TC to determine if concentrations of PCE and TCE are attributable to the Klink Cosmo Site and/or the former JR Cooperage facility (i.e., DEC-111 and DEC-111D), and/or the nearby ACME Steel Sites (i.e., DEC-006TC), or a combination of these areas.
- A complete round of groundwater samples should be collected from all Klink Cosmo monitoring wells, including the newly installed monitoring wells. All groundwater samples should be analyzed for TCL VOCs plus TICs. Prior to the start of groundwater sampling, a synoptic round of water levels/ LNAPL gauging should be collected from all



monitoring wells proposed for sampling. This event should be conducted after the source area On-Site Phase III RI Phase is completed.

- An additional round of soil vapor sampling is recommended to confirm the results.

## **7.0     REFERENCES**

- Broughton, J.G., et al. 1966. Geology of New York: A Short Account. New York State Museum and Science Service Educational Leaflet No. 20. Albany, NY.
- NYSDEC, Division of Water. April 2000. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. Technical and Operational Guidance Series (TOGS) No. 1.1.1, Class GA including June 2004 Addenda
- NYSDEC. December 14, 2006. 6 NYCRR Subpart 375-6, Remedial Program Soil Cleanup Objectives
- NYSDEC. October 21, 2010. CP-51/Soil Cleanup Guidance
- New York State Department of Health (NYSDOH). October 2006. Guidance for Evaluating Soil Vapor Intrusion in the State of New York
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- URS Corporation – New York. April 2010. Final. Field Activities Plan (FAP)
- URS Corporation – New York, April 2012. Final – Site Characterization, Phase VI Data Summary Report
- URS Corporation – New York, November 2012. Final – Remedial Investigation, Former Klink Cosmo Cleaners Site
- URS Corporation – New York, November 2013. Final – Site Characterization, Phase VII Data Summary Report

## **8.0 TABLES, FIGURES, AND ATTACHMENTS**

The following tables, figures, and attachments are included as part of this letter report:

### **Tables** (following Text)

Table 1	Groundwater Elevation Measurements
Table 2	Summary of Detected Compounds in Phase III Soil Vapor Samples
Table 3	Statistical Summary of Detected Compounds in Phase III Soil Vapor Samples
Table 4A	Summary of Detected Compounds in Phase III Soil Samples – Unrestricted Use, Protection of Groundwater, and Background Criteria
Table 4B	Summary of Detected Compounds in Phase III Soil Samples – Restricted Residential and Residential Use Criteria
Table 5	Statistical Summary of Detected Compounds in Phase III Soil Samples
Table 6	Summary of Detected Compounds in Phase III Groundwater Samples
Table 7	Statistical Summary of Detected Compounds in Phase III Groundwater Samples

### **Figures** (following Tables)

Figure 1	Site Location
Figure 2	Soil Vapor Implant Locations
Figure 3	Groundwater Monitoring Well Sampling Locations
Figure 4	Monitoring Well and Cross Section Locations
Figure 5	Cross Section A-A'
Figure 6	Cross Section B-B'
Figure 7	Cross Section C-C'
Figure 8	Top of Raritan Formation Isopleth
Figure 9	Shallow Overburden Groundwater Potentiometric Surface (3/6/2014)
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Figure 11	Top of Raritan Formation Groundwater Potentiometric Surface (3/6/2014)
Figure 12	Soil Vapor Analytical Results
Figure 13	Tetrachloroethene Concentrations in Soil Vapor
Figure 14	Trichloroethene Concentrations in Soil Vapor
Figure 15	Groundwater Analytical Results
Figure 16	Tetrachloroethene Concentrations in Groundwater
Figure 17	Trichloroethene Concentrations in Groundwater

### **Attachments** (following Figures)

Attachment 1	Field Notes
Attachment 2	Photographic Log
Attachment 3	RSI Geophysical Report
Attachment 4	Soil Vapor Implant Construction Logs
Attachment 5	Summa Canister Sampling Field Data Sheets
Attachment 6	Boring Logs and Well Construction Diagrams
Attachment 7	Geotechnical Results
Attachment 8	Well Development and Purge Logs

Attachment 9 Monitoring Well Inspection Forms and Soil Vapor Implant Inspection Forms  
Attachment 10 Daily Construction Report for Flag Replacement  
Attachment 11 Investigation Derived Waste (IDW) Disposal Documentation  
Attachment 12 Data Usability Summary Reports (on CD)

**Closing**

Please contact me at 716-856-5636 if you have any questions or comments. We appreciate serving the Department with this interesting and challenging project.

Sincerely, and with kind regards,

**URS Corporation**

A handwritten signature in black ink, appearing to read "Michael Gutmann", with a long horizontal flourish extending to the right.

Michael Gutmann  
Project Manager

cc: File: 11176390 (R-1)  
George Kisluk URS  
Scott McCabe URS

## **TABLES**

**TABLE 1**  
**GROUNDWATER ELEVATION MEASUREMENTS**  
**FORMER KLINK COSMO CLEANERS SITE**

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
DEC-004 MNW	202478.489	1001408.06	39.26	39.26	39.12	A		3/7/2014 0000	37.22	1.90	0.00		
DEC-006D MNW	202533.2908	1002137.5083	48.81	48.81	48.49	A		3/7/2014 0000	46.90	1.59	0.00		
DEC-006DD MNW	202527.166	1002139.573	48.596	48.60	47.87	B		3/7/2014 0000	46.29	1.58	0.00		
DEC-006TC MNW	202541.2	1002132.04	49.17	49.17	48.83	B		3/7/2014 0000	47.22	1.61	0.00		
DEC-007 MNW	202366.6424	1002021.554	43.25	43.25	43.04	A		3/7/2014 0000	41.40	1.64	0.00		
DEC-007D MNW	202355.105	1001986.276	42.846	42.85	42.43	B		3/7/2014 0000	40.70	1.73	0.00		
DEC-008 MNW	202398.1214	1001768.69	41.01	41.01	40.72	A		3/7/2014 0000	38.90	1.82	0.00		
DEC-009 MNW	202173.5584	1001470.099	40.91	40.91	40.77	A		3/7/2014 0000	38.90	1.87	0.00		
DEC-009D MNW	202178.077	1001466.14	40.666	40.666	40.17	B		3/7/2014 0000	38.25	1.92	0.00		
DEC-010 MNW	202023.8858	1001331.374	41.32	41.32	40.98	A		3/6/2014 0000	38.95	2.03	0.00		
DEC-010D MNW	202030.164	1001328.923	41.238	41.238	40.63	B		3/6/2014 0000	38.65	1.98	0.00		
DEC-011 MNW	201714.2021	1001434.313	40.22	40.22	39.91	A		3/7/2014 0000	37.15	2.76	0.00		

NM - No Measurement

**TABLE 1  
GROUNDWATER ELEVATION MEASUREMENTS  
FORMER KLINK COSMO CLEANERS SITE**

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
DEC-011D MNW	201722.911	1001433.352	40.42	40.42	39.37	B		3/7/2014 0000	37.05	2.32	0.00		
DEC-012 MNW	201758.1077	1001716.322	39.64	39.64	39.42	A		3/6/2014 0000	37.40	2.02	0.00		
DEC-013 MNW	201958.3382	1001649.616	39.47	39.47	39.19	A		3/7/2014 0000	37.35	1.84	0.00		
DEC-013D MNW	201962.96	1001647.311	39.467	39.47	38.86	B		3/7/2014 0000	36.85	2.01	0.00		
DEC-014D MNW	201919.921	1001937.307	36.099	36.10	35.84	B		3/7/2014 0000	33.99	1.85	0.00		
DEC-014R MNW	201916.144	1001938.635	36.011	36.01	35.86	A		3/7/2014 0000	33.98	1.88	0.00		
DEC-015 MNW	202166.8569	1001855.13	39.21	39.21	38.80	A		3/7/2014 0000	36.95	1.85	0.00		
DEC-015D MNW	202171.785	1001853.162	39.310	39.31	39.06	B		3/7/2014 0000	37.25	1.81	0.00		
DEC-015R MNW	202176.13	1001851.797	39.38	39.38	38.48	A		3/7/2014 0000	36.65	1.83	0.00		
DEC-022D MNW	202679.727	1002001.044	51.73	51.73	51.39	A		3/7/2014 0000	49.80	1.59	0.00		
DEC-027 MNW	202550.9026	1001621.705	42.45	42.45	42.30	A		3/7/2014 0000	40.56	1.74	0.00		
DEC-028 MNW	202252.7643	1001700.994	39.99	39.99	39.78	A		3/7/2014 0000	38.26	1.52	0.00		

NM - No Measurement

**TABLE 1**  
**GROUNDWATER ELEVATION MEASUREMENTS**  
**FORMER KLINK COSMO CLEANERS SITE**

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
DEC-028D MNW	202254.948	1001707.16	40.00	40.00	39.53	B		3/7/2014 0000	37.75	1.78	0.00		
DEC-028TC MNW	202256.5113	1001711.779	39.95189	39.95189	39.549	B		3/7/2014 0000	37.10	2.45	0.00		
DEC-029 MNW	202086.6722	1002015.247	38.90	38.90	38.74	A		3/7/2014 0000	36.95	1.79	0.00		
DEC-029D MNW	202087.488	1002022.985	38.848	38.85	38.61	B		3/7/2014 0000	NA		NM		Inaccessible
DEC-029TC MNW	202083.059	1002007.523	38.95	38.95	38.50	B		3/7/2014 0000	NA		NM		Inaccessible
DEC-030 MNW	202008.4618	1001816.911	37.43	37.43	37.12	A		3/7/2014 0000	NA		NM		Inaccessible
DEC-030D MNW	201995.054	1001821.776	37.320	37.32	37.00	B		3/7/2014 0000	NA		NM		Inaccessible
DEC-031 MNW	201767.8547	1001889.641	34.99	34.94	34.52	A		3/6/2014 0000	32.65	1.87	0.00		
DEC-031D MNW	201768.9664	1001895.1371	34.70	34.70	34.48	B		3/6/2014 0000	32.50	1.98	0.00		
DEC-031TC MNW	201765.771	1001886.31	35.19	35.19	34.83	B		3/6/2014 0000	32.80	2.03	0.00		
DEC-032 MNW	201579.3871	1001969.121	28.30	28.30	28.03	A		3/6/2014 0000	26.20	1.83	0.00		
DEC-033 MNW	201498.31	1001515.033	36.67	36.67	36.35	A		3/7/2014 0000	33.80	2.55	0.00		

NM - No Measurement

**TABLE 1**  
**GROUNDWATER ELEVATION MEASUREMENTS**  
**FORMER KLINK COSMO CLEANERS SITE**

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
DEC-039 MNW	202601.4996	1001779.721	45.02	45.02	44.83	A		3/7/2014 0000	43.15	1.68	0.00		
DEC-042 MNW	202512.9313	1001729.4849	42.10	42.10	41.88	A		3/7/2014 0000	40.15	1.73	0.00		
DEC-043 MNW	202181.3558	1002285.3685	37.67	37.67	37.38	A		3/7/2014 0000	35.65	1.73	0.00		
DEC-043D MNW	202181.307	1002285.318	37.724	37.72	37.41	B		3/7/2014 0000	NA		NM		Inaccessible
DEC-044 MNW	201738.3781	1001809.4731	37.15	37.15	37.02	A		3/7/2014 0000	35.08	1.94	0.00		
DEC-044D MNW	201741.332	1001817.671	37.022	37.02	36.60	B		3/7/2014 0000	34.65	1.95	0.00		
DEC-045 MNW	201745.6009	1001996.6186	32.55	32.55	32.30	A		3/7/2014 0000	30.40	1.90	0.00		
DEC-045D MNW	201727.996	1002001.655	32.18	32.18	32.01	B		3/7/2014 0000	30.05	1.96	0.00		
DEC-046 MNW	201452.7908	1001672.8018	36.38	36.38	36.20	A		3/7/2014 0000	NA		NM		Inaccessible
DEC-046D MNW	201448.423	1001666.64	36.66	36.66	36.01	B		3/7/2014 0000	NA		NM		Inaccessible
DEC-047 MNW	201110.7101	1001622.1025	31.26	31.26	30.97	A		3/7/2014 0000	28.55	2.42	0.00		
DEC-048 MNW	201186.6834	1001797.0208	28.69	28.69	28.36	A	0.8608	3/7/2014 0000	26.50	1.86	0.20	2.03	LNAPL

NM - No Measurement



**TABLE 1  
GROUNDWATER ELEVATION MEASUREMENTS  
FORMER KLINK COSMO CLEANERS SITE**

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
DEC-064 MNW	202041.174	1001897.505	37.638	37.64	37.32	A		3/7/2014 0000	35.36	1.96	0.00		
DEC-064D MNW	202043.667	1001902.992	37.766	37.77	37.47	B		3/7/2014 0000	35.55	1.92	0.00		
DEC-065 MNW	201696.658	1001686.982	39.412	39.41	39.11	A		3/6/2014 0000	37.00	2.11	0.00		
DEC-065D MNW	201699.61	1001695.714	39.249	39.20	39.05	B		3/6/2014 0000	37.30	1.75	0.00		
DEC-066 MNW	201683.68	1001934.037	32.240	32.22	31.82	A		3/6/2014 0000	29.90	1.92	0.00		
DEC-066D MNW	201668.614	1001939.332	31.462	31.48	31.29	B		3/6/2014 0000	29.35	1.94	0.00		
DEC-071 MNW	202188.919	1001277.37	39.93	39.93	39.33	A		3/6/2014 0000	37.80	1.53	0.00		
DEC-088 MNW	202299.578	1002213.142	40.87	40.87	40.67	A		3/7/2014 0000	39.00	1.67	0.00		
DEC-088D MNW	202287.202	1002217.027	40.42	40.42	39.69	B		3/7/2014 0000	38.00	1.69	0.00		
DEC-089 MNW	202123.97	1002124.132	39.20	39.20	38.95	A		3/7/2014 0000	NA		NM		Inaccessible
DEC-089D MNW	202121.562	1002118.166	39.19	39.19	39.01	B		3/7/2014 0000	NA		NM		Inaccessible
DEC-090 MNW	201834.407	1001966.483	34.85	34.85	34.00	A		3/7/2014 0000	32.10	1.90	0.00		

NM - No Measurement

**TABLE 1**  
**GROUNDWATER ELEVATION MEASUREMENTS**  
**FORMER KLINK COSMO CLEANERS SITE**

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Specific Gravity	Date / Time	Depth to Water (ft)	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
DEC-090D MNW	201829.028	1001968.225	34.74	34.74	34.35	B		3/7/2014 0000	32.42	1.93	0.00		
DEC-091 MNW	201593.708	1002045.892	28.34	28.34	27.55	A		3/7/2014 0000	25.61	1.94	0.00		
DEC-091D MNW	201586.28	1002048.376	28.14	28.14	27.46	B		3/7/2014 0000	25.50	1.96	0.00		
DEC-097 MNW	202219.451	1001599.852	40.478	40.478	40.01	A		3/7/2014 0000	38.20	1.81	0.00		
DEC-097D MNW	202220.834	1001604.145	40.434	40.434	40.16	B		3/7/2014 0000	38.36	1.80	0.00		
DEC-111 MNW	201879.53	1001868.15	36.39	36.39	36.07	A		3/7/2014 0000	34.20	1.87	0.00		
DEC-111D MNW	201871.68	1001871.05	36.27	36.27	36.09	B		3/7/2014 0000	34.19	1.90	0.00		

NM - No Measurement

**TABLE 2**  
**SUMMARY OF DETECTED COMPOUNDS IN PHASE III SOIL VAPOR SAMPLES**  
**KLINK COSMO CLEANERS**

Location ID		OUTDOOR AIR	SG-195	SG-196	SG-197	SG-199
Sample ID		AA20140212	SG-195	SG-196	SG-197	SG-199
Matrix		Outdoor Air	Subslab Vapor	Subslab Vapor	Subslab Vapor	Subslab Vapor
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/12/14	02/12/14	02/12/14	02/12/14	02/12/14
Parameter	Units					
<b>Volatile Organic Compounds</b>						
1,1,1-Trichloroethane	UG/M3		6.38			3.00
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3					1.76
1,1-Dichloroethane	UG/M3		2.83			
1,2,4-Trimethylbenzene	UG/M3	0.54	1.13	1.23	0.88	0.98
1,2-Dichloroethene (cis)	UG/M3		5.63			
1,2-Dichloroethene (trans)	UG/M3		0.44			
1,3-Dichlorobenzene	UG/M3		9.14	10.1	7.40	6.85
1,4-Dichlorobenzene	UG/M3	0.66	6.07	4.69	3.07	3.13
Acetone	UG/M3	6.75	36.8	44.8	30.3	29.2
Benzene	UG/M3	0.99	1.44	3.45	2.14	1.34
Carbon disulfide	UG/M3	0.37	0.44	4.05	5.48	54.8
Carbon tetrachloride	UG/M3				0.63	
Chloroform	UG/M3		8.40	1.03	2.05	0.93
Chloromethane	UG/M3	1.26		0.62	0.87	0.56
Dichlorodifluoromethane	UG/M3	2.72	1.63	1.83	2.72	0.79
Ethylbenzene	UG/M3		0.69	0.69	0.69	0.56
Methyl ethyl ketone (2-Butanone)	UG/M3	0.53	1.92	2.39	2.21	1.89
Methylene chloride	UG/M3	10.6 J	4.62 J	3.46 J	5.86 J	17.6 J
Tetrachloroethene	UG/M3	2.71	62.6	8.61	2.51	1.22
Toluene	UG/M3	1.58	3.28	5.57	8.36	2.34
Trichloroethene	UG/M3		9.03			1.02
Trichlorofluoromethane	UG/M3	1.46	5.84	1.40	1.69	1.57
Vinyl acetate	UG/M3	0.99	4.72	4.40	3.03	4.58
m&p-Xylene	UG/M3	1.00	2.30	2.35	2.26	1.78
o-Xylene	UG/M3	0.43	1.04	1.04	0.96	0.83

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value.

NA - Not analyzed.

Only Detected Results Reported.

**TABLE 2**  
**SUMMARY OF DETECTED COMPOUNDS IN PHASE III SOIL VAPOR SAMPLES**  
**KLINK COSMO CLEANERS**

Location ID		SG-200	SG-200
Sample ID		DUP020140212	SG-200
Matrix		Subslab Vapor	Subslab Vapor
Depth Interval (ft)		-	-
Date Sampled		02/12/14	02/12/14
Parameter	Units	Field Duplicate (1-1)	
<b>Volatile Organic Compounds</b>			
1,1,1-Trichloroethane	UG/M3	1.42	1.64
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3		
1,1-Dichloroethane	UG/M3		
1,2,4-Trimethylbenzene	UG/M3	1.23	1.18
1,2-Dichloroethene (cis)	UG/M3		
1,2-Dichloroethene (trans)	UG/M3		
1,3-Dichlorobenzene	UG/M3	10.6	9.20
1,4-Dichlorobenzene	UG/M3	4.09	3.73
Acetone	UG/M3	29.3	29.4
Benzene	UG/M3	1.47	1.63
Carbon disulfide	UG/M3	4.48	4.89
Carbon tetrachloride	UG/M3	0.63	0.76
Chloroform	UG/M3		
Chloromethane	UG/M3	0.31	0.31
Dichlorodifluoromethane	UG/M3	1.48	1.04
Ethylbenzene	UG/M3	0.78	0.78
Methyl ethyl ketone (2-Butanone)	UG/M3	2.04	2.12
Methylene chloride	UG/M3	6.95 J	3.69 J
Tetrachloroethene	UG/M3	0.81	
Toluene	UG/M3	3.58	4.07
Trichloroethene	UG/M3		
Trichlorofluoromethane	UG/M3	2.42	2.47
Vinyl acetate	UG/M3	3.59	3.70
m&p-Xylene	UG/M3	2.74	2.61
o-Xylene	UG/M3	1.22	1.13

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value.

NA - Not analyzed.

Only Detected Results Reported.

**TABLE 3**  
**STATISTICAL SUMMARY OF DETECTED COMPOUNDS IN PHASE III SOIL VAPOR SAMPLES**  
**KLINK COSMO CLEANERS**

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
<b>Volatile Organic Compounds</b>							
1,1,1-Trichloroethane	UG/M3	5	3	1.53	6.38	3.64	SG-195
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	5	1	1.76	1.76	1.76	SG-199
1,1-Dichloroethane	UG/M3	5	1	2.83	2.83	2.83	SG-195
1,2,4-Trimethylbenzene	UG/M3	5	5	0.880	1.23	1.09	SG-196
1,2-Dichloroethene (cis)	UG/M3	5	1	5.63	5.63	5.63	SG-195
1,2-Dichloroethene (trans)	UG/M3	5	1	0.440	0.440	0.440	SG-195
1,3-Dichlorobenzene	UG/M3	5	5	6.85	10.10	8.68	SG-196
1,4-Dichlorobenzene	UG/M3	5	5	3.07	6.07	4.17	SG-195
Acetone	UG/M3	5	5	29.20	44.80	34.09	SG-196
Benzene	UG/M3	5	5	1.34	3.45	1.98	SG-196
Carbon disulfide	UG/M3	5	5	0.440	54.80	13.89	SG-199
Carbon tetrachloride	UG/M3	5	2	0.630	0.695	0.663	SG-200
Chloroform	UG/M3	5	4	0.930	8.40	3.10	SG-195
Chloromethane	UG/M3	5	4	0.310	0.870	0.590	SG-197
Dichlorodifluoromethane	UG/M3	5	5	0.790	2.72	1.65	SG-197
Ethylbenzene	UG/M3	5	5	0.560	0.780	0.682	SG-200
Methyl ethyl ketone (2-Butanone)	UG/M3	5	5	1.89	2.39	2.10	SG-196
Methylene chloride	UG/M3	5	5	3.46	17.60	7.37	SG-199

Only Detected Results Reported.

**TABLE 3**  
**STATISTICAL SUMMARY OF DETECTED COMPOUNDS IN PHASE III SOIL VAPOR SAMPLES**  
**KLINK COSMO CLEANERS**

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
<b>Volatile Organic Compounds</b>							
Tetrachloroethene	UG/M3	5	5	0.435	62.60	15.08	SG-195
Toluene	UG/M3	5	5	2.34	8.36	4.68	SG-197
Trichloroethene	UG/M3	5	2	1.02	9.03	5.03	SG-195
Trichlorofluoromethane	UG/M3	5	5	1.40	5.84	2.59	SG-195
Vinyl acetate	UG/M3	5	5	3.03	4.72	4.08	SG-195
m&p-Xylene	UG/M3	5	5	1.78	2.68	2.27	SG-200
o-Xylene	UG/M3	5	5	0.830	1.18	1.01	SG-200

Only Detected Results Reported.

**TABLE 4A**  
**SUMMARY OF DETECTED COMPOUNDS IN PHASE III SOIL SAMPLES**  
**UNRESTRICTED USE, PROTECTION OF GROUNDWATER, AND BACKGROUND CRITERIA**  
**KLINK COSMO CLEANERS**

Location ID					DEC-111D	SG-195	SG-196	SG-197	SG-199
Sample ID					DEC-111D-34-35	SG-195(7.5-8.0)	SG-196(3.5-4.0)	SG-197(1.5-2.0)	SG-199(3-3.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					34.0-35.0	7.5-8.0	3.5-4.0	1.5-2.0	3.0-3.5
Date Sampled					02/06/14	02/07/14	02/07/14	02/07/14	02/07/14
Parameter	Units	(1)	(2)	(3)					
Volatile Organic Compounds									
Methylene chloride	MG/KG	0.05	0.05	-			0.0022 J		0.0025 J

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, plus CP-51 Table 1 10/21/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, plus CP-51 Table 1 10/21/10.

(3)- Background soil concentrations from Msgr. McGolrick Park collected August 3, 2011 exceeding 6 NYCRR Part 375.6 Unrestricted Use and CP-51 Table 1 limits.

Flags assigned during chemistry validation are shown.

 Concentration Exceeds Criteria 1

 Concentration Exceeds (2)

 Concentration Exceeds (3)

J - The reported concentration is an estimated value.

Only Detected Results Reported.

**TABLE 4A**  
**SUMMARY OF DETECTED COMPOUNDS IN PHASE III SOIL SAMPLES**  
**UNRESTRICTED USE, PROTECTION OF GROUNDWATER, AND BACKGROUND CRITERIA**  
**KLINK COSMO CLEANERS**

Location ID		SG-200			
Sample ID		SG-200(3.5-4)			
Matrix		Soil			
Depth Interval (ft)		3.5-4.0			
Date Sampled		02/07/14			
Parameter	Units	(1)	(2)	(3)	
<b>Volatile Organic Compounds</b>					
Methylene chloride	MG/KG	0.05	0.05	-	0.0026 J

- (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, plus CP-51 Table 1 10/21/10.
- (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, plus CP-51 Table 1 10/21/10.
- (3)- Background soil concentrations from Msgr. McGolrick Park collected August 3, 2011 exceeding 6 NYCRR Part 375.6 Unrestricted Use and CP-51 Table 1 limits.

Flags assigned during chemistry validation are shown.

 Concentration Exceeds Criteria 1

 Concentration Exceeds (2)

 *Border* Concentration Exceeds (3)

J - The reported concentration is an estimated value.

Only Detected Results Reported.



**TABLE 4B**  
**SUMMARY OF DETECTED COMPOUNDS IN PHASE III SOIL SAMPLES**  
**RESTRICTED RESIDENTIAL AND RESIDENTIAL USE CRITERIA**  
**KLINK COSMO CLEANERS**

Location ID				DEC-111D	SG-195	SG-196	SG-197	SG-199
Sample ID				DEC-111D-34-35	SG-195(7.5-8.0)	SG-196(3.5-4.0)	SG-197(1.5-2.0)	SG-199(3-3.5)
Matrix				Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)				34.0-35.0	7.5-8.0	3.5-4.0	1.5-2.0	3.0-3.5
Date Sampled				02/06/14	02/07/14	02/07/14	02/07/14	02/07/14
Parameter	Units	(1)	(2)					
		Volatile Organic Compounds						
Methylene chloride	MG/KG	100	51			0.0022 J		0.0025 J

(1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, plus CP-51 Table 1 10/21/10.

(2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Residential, plus CP-51 Table 1 10/21/10.

Flags assigned during chemistry validation are shown.

-  Concentration Exceeds (1)  
 Concentration Exceeds (2)

J - The reported concentration is an estimated value.

Only Detected Results Reported.

**TABLE 4B  
SUMMARY OF DETECTED COMPOUNDS IN PHASE III SOIL SAMPLES  
RESTRICTED RESIDENTIAL AND RESIDENTIAL USE CRITERIA  
KLINK COSMO CLEANERS**

Location ID		SG-200		
Sample ID		SG-200(3.5-4)		
Matrix		Soil		
Depth Interval (ft)		3.5-4.0		
Date Sampled		02/07/14		
Parameter	Units	(1)	(2)	
<b>Volatile Organic Compounds</b>				
Methylene chloride	MG/KG	100	51	0.0026 J

- (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, plus CP-51 Table 1 10/21/10.
- (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Residential, plus CP-51 Table 1 10/21/10.

Flags assigned during chemistry validation are shown.

-  Concentration Exceeds (1)
-  Concentration Exceeds (2)

J - The reported concentration is an estimated value.

Only Detected Results Reported.

**TABLE 5**  
**STATISTICAL SUMMARY OF DETECTED COMPOUNDS IN PHASE III SOIL SAMPLES**  
**KLINK COSMO CLEANERS**

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Freq. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
						Min	Max	Avg			
<b>Volatile Organic Compounds</b>											
Methylene chloride	MG/KG	0.05	6	3	50.0%	0.002	0.003	0.002	0	SG-200	3.5-4

\*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, plus CP-51 Table 1 10/21/10.



Concentration Exceeds Criteria

Only Detected Results Reported.

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WHERE [LOGDATE] BETWEEN #2/6/2014# AND #2/7/2014# AND [MATRIX] = 'SO' AND [SDG] = 'N016'

**TABLE 6**  
**SUMMARY OF DETECTED COMPOUNDS IN PHASE III GROUNDWATER SAMPLES**  
**KLINK COSMO CLEANERS**

Location ID			DEC-006TC	DEC-111	DEC-111	DEC-111D
Sample ID			DEC-006TC	DEC-111	DUP20120306	DEC-111D
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			03/07/14	03/06/14	03/06/14	03/06/14
Parameter	Units	Criteria*			Field Duplicate (1-1)	
<b>Volatile Organic Compounds</b>						
1,1,1-Trichloroethane	UG/L	5				8.5
1,1-Dichloroethane	UG/L	5				14
1,1-Dichloroethene	UG/L	5	2.1 J			53
1,2-Dichloroethane	UG/L	0.6				140
1,2-Dichloroethene (cis)	UG/L	5	3.2 J	3.2 J	2.4 J	11
Chloroform	UG/L	7		1.0 J	0.88 J	
Tetrachloroethene	UG/L	5	4,900 D	1,300 D	950 D	18
Trichloroethene	UG/L	5	380 D	8.4	6.5	220 D

\*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including April 2000 and June 2004 Addenda, Class GA.

Flags assigned during chemistry validation are shown.

 Concentration Exceeds Criteria

J - The reported concentration is an estimated value.


D - Result reported from a secondary dilution analysis.

Only Detected Results Reported.

**TABLE 7**  
**STATISTICAL SUMMARY OF DETECTED COMPOUNDS IN PHASE III GROUNDWATER SAMPLES**  
**KLINK COSMO CLEANERS**

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Freq. of Detections	Range of Detections			No. Exceed	Location of Max Value
						Min	Max	Avg		
<b>Volatile Organic Compounds</b>										
1,1,1-Trichloroethane	UG/L	5	3	1	33.3%	8.50	8.50	8.50	1	DEC-111D
1,1-Dichloroethane	UG/L	5	3	1	33.3%	14.00	14.00	14.00	1	DEC-111D
1,1-Dichloroethene	UG/L	5	3	2	66.7%	2.10	53.00	27.55	1	DEC-111D
1,2-Dichloroethane	UG/L	0.6	3	1	33.3%	140.0	140.0	140.0	1	DEC-111D
1,2-Dichloroethene (cis)	UG/L	5	3	3	100.0%	2.80	11.00	5.67	1	DEC-111D
Chloroform	UG/L	7	3	1	33.3%	0.940	0.940	0.940	0	DEC-111
Tetrachloroethene	UG/L	5	3	3	100.0%	18.00	4,900	2,014	3	DEC-006TC
Trichloroethene	UG/L	5	3	3	100.0%	7.45	380.0	202.5	3	DEC-006TC

\*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including April 2000 and June 2004 Addenda, Class GA.

 Concentration Exceeds Criteria

Only Detected Results Reported.

## **FIGURES**







J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter Report\02\_SG Locations.mxd 7/2/2014 MDL



**Legend**

- 📍 NYSDEC Soil Vapor Implant
- New Soil Vapor Implant**

Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
SOIL VAPOR IMPLANT LOCATIONS

FIGURE 2



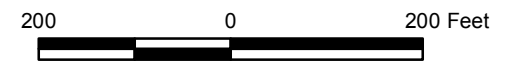
J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter Report\03 MW Sampling Locations.mxd 7/2/2014 MDL



**Legend**

- 📍 NYSDEC Monitoring Well

Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
GROUNDWATER MONITORING WELL  
SAMPLING LOCATIONS



FIGURE 3

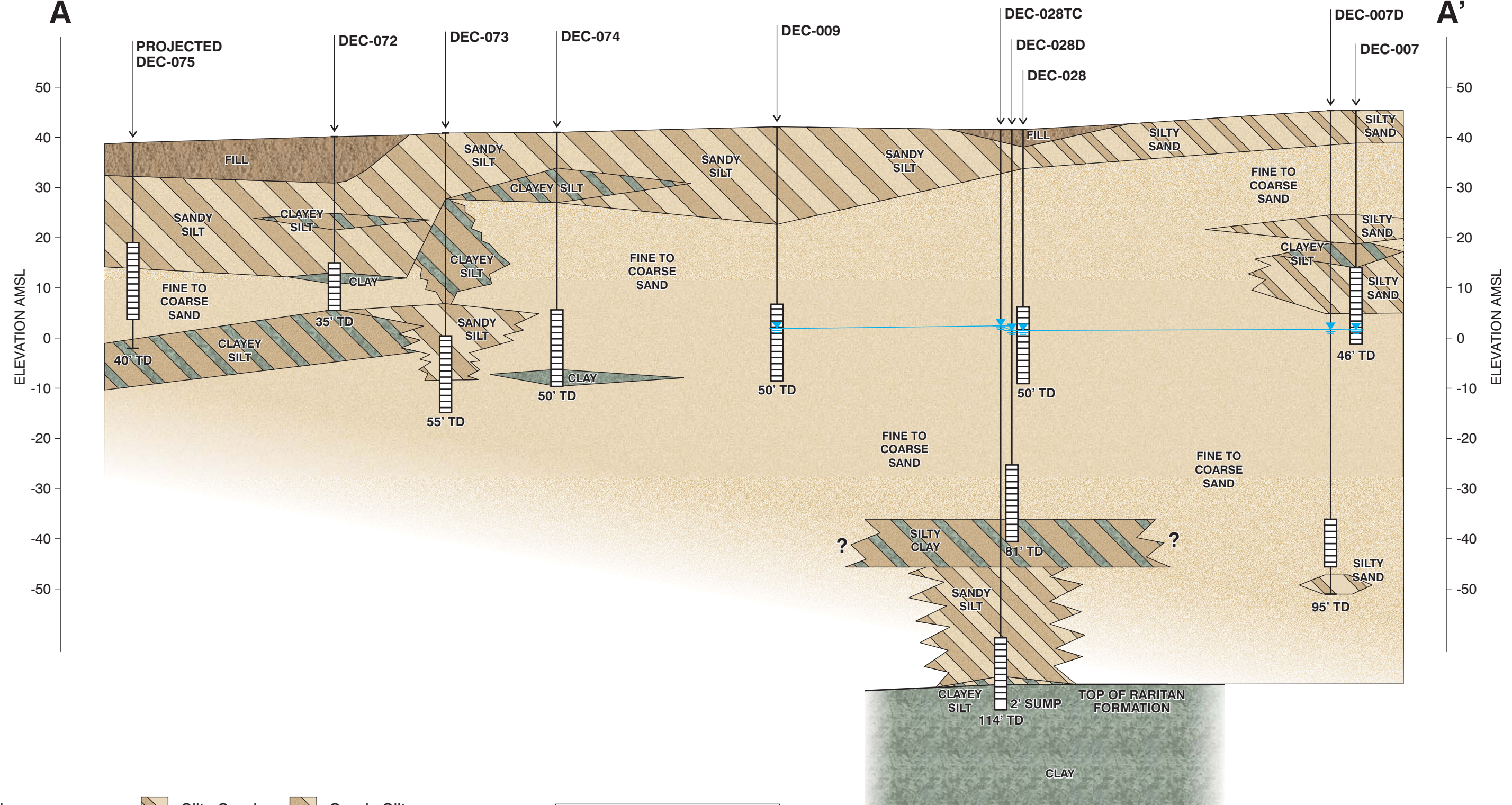






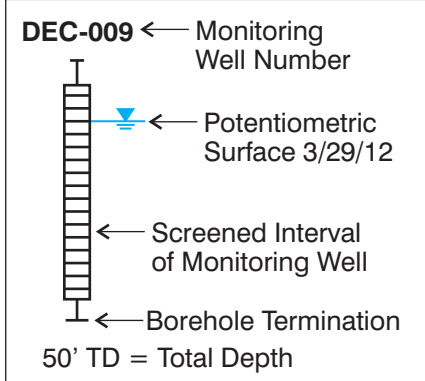
WEST  
**A**

EAST  
**A'**



- |  |                               |  |                        |  |            |
|--|-------------------------------|--|------------------------|--|------------|
|  | Fill                          |  | Silty Sand             |  | Sandy Silt |
|  | Fine Sand or Fine-Coarse Sand |  | Clayey Silt/Silty Clay |  | Clay       |

NOTES:  
 1. Geologic conditions shown are representative of conditions encountered at each boring location to the depth drilled. Extrapolations between borings have been interpreted using standardly accepted geologic practices and principles. Actual conditions may vary between borings from those shown.  
 2. Elevations based on North American Vertical Datum, 1988.



Horizontal Scale: 1" = 100'  
 Vertical Scale: 1" = 20'  
 5x Vertical Exaggeration

Revised: June 2014

FORMER KLINK COSMO CLEANERS SITE CROSS SECTION A - A'	
	FIGURE 5

AG20719A-11176390-061114-GCM

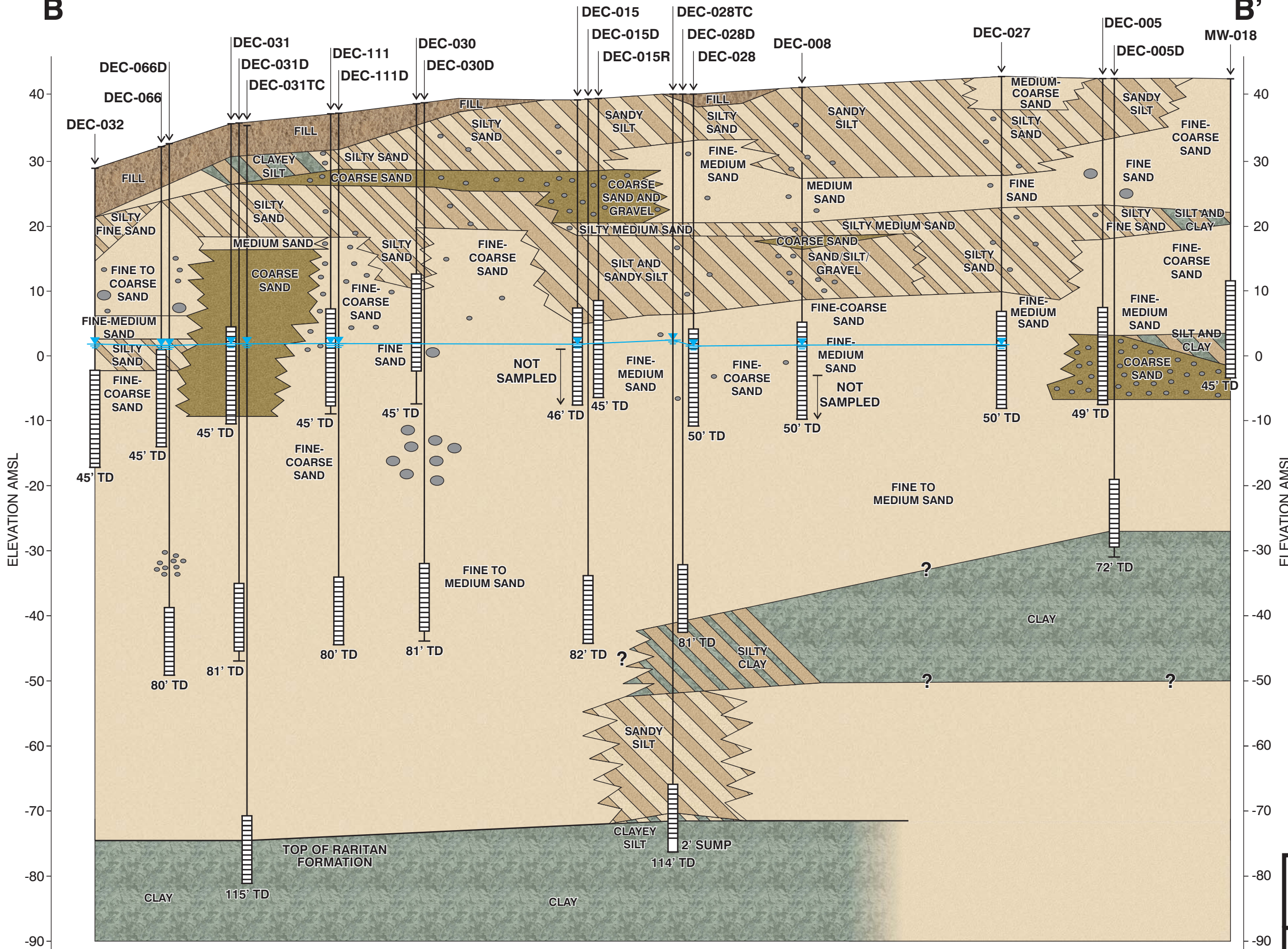


SOUTH

NORTH

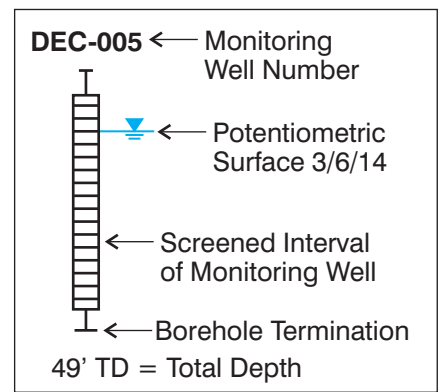
B

B'



Not To Scale

Revised: June 2014



- Cobbles
- Gravel
- Silty Sand
- Clay
- Fill
- Clayey Silt/Silty Clay
- Very Coarse or Coarse Sand
- Fine Sand or Fine-Coarse Sand
- Sandy Silt

- NOTES:
1. Geologic conditions shown are representative of conditions encountered at each boring location to the depth drilled. Extrapolations between borings have been interpreted using standardly accepted geologic practices and principles. Actual conditions may vary between borings from those shown.
  2. Elevations based on North American Vertical Datum, 1988.
  3. Water levels not taken at DEC-005, DEC-005D, DEC-030, DEC-030D and MW-018 on 3/6/14.

**FORMER KLINK COSMO CLEANERS SITE**  
**CROSS SECTION B - B'**

FIGURE 6

AG20720A-11176390-061114-GCM



SOUTHWEST

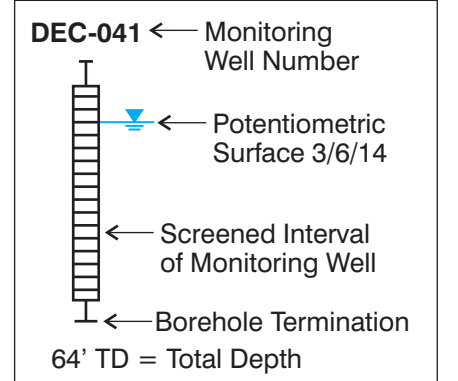
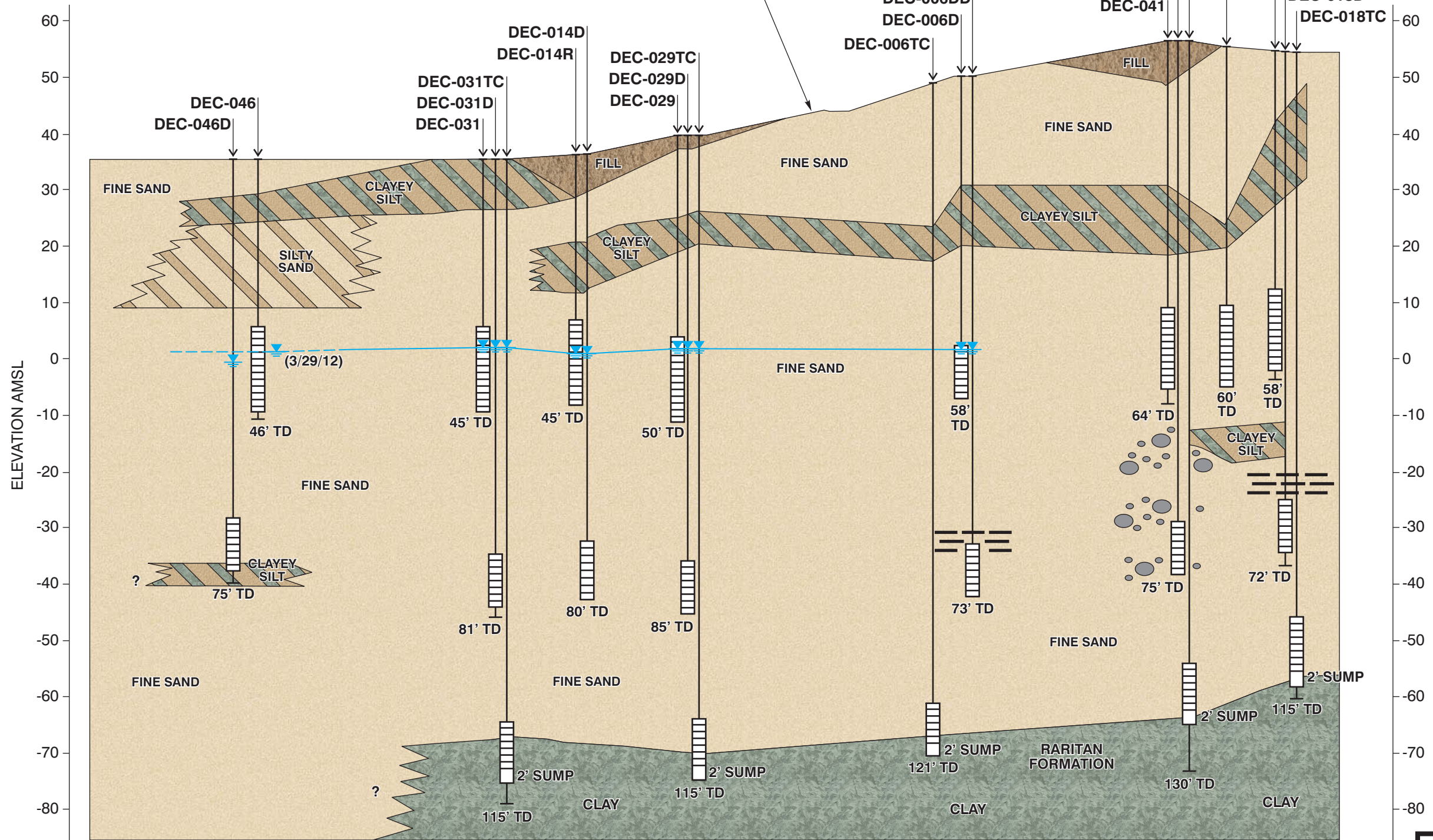
NORTHEAST

C

C'

Horizontal Scale: 1" = 200'  
Vertical Scale: 1" = 20'  
10x Vertical Exaggeration

Revised: June 2014



- Fill
- Fine Sand
- Clayey Silt
- Clay
- Silty Sand
- Clayey Silt
- Gravel and Cobbles
- Sand with Silt and Clay Lenses

- NOTES:
- Geologic conditions shown are representative of conditions encountered at each boring location to the depth drilled. Extrapolations between borings have been interpreted using standardly accepted geologic practices and principles. Actual conditions may vary between borings from those shown.
  - Elevations based on North American Vertical Datum, 1988.
  - Water levels not taken at DEC-018, DEC-018D, DEC-018TC, DEC-041, DEC-041D, DEC-041TC, DEC-046, and DEC-082 on 3/6/14.

FORMER KLINK COSMO  
CLEANERS SITE  
CROSS SECTION C - C'



FIGURE 7

AG20721A-11176390-061114-GCM



J:\Projects\1174989.00\000\00\GIS\KlinkCosmo-Report\Letter\08 Surface Elev Raritan.mxd 7/2/2014 MDL



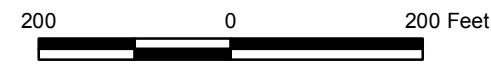
**Legend**

- NYSDEC Monitoring Well
- Top of Raritan Elevation Contour (ft amsl)

Well ID: DEC-031TC, -73.31

Surface Elevation

Source: ESRI World Imagery

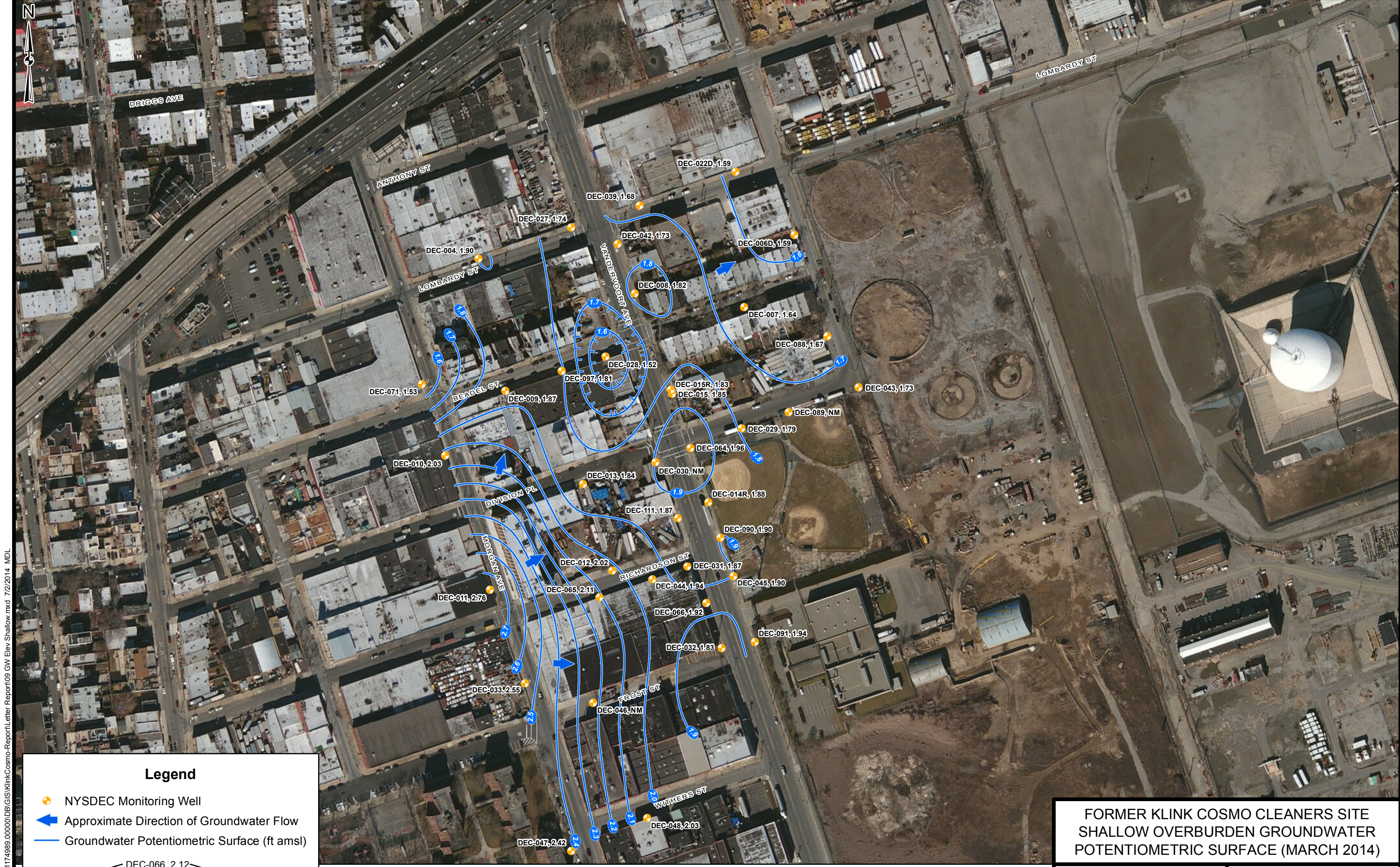


FORMER KLINK COSMO CLEANERS SITE  
TOP OF RARITAN FORMATION ISOPLETH



FIGURE 8





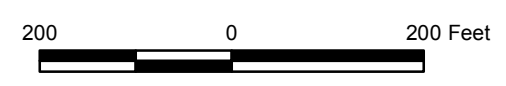
J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter\09\_GW\_Elev\_Shallow.mxd 7/2/2014 MDL

**Legend**

- NYSDEC Monitoring Well
- ← Approximate Direction of Groundwater Flow
- Groundwater Potentiometric Surface (ft amsl)

Well ID	DEC-066, 2.12	Groundwater Elevation
---------	---------------	-----------------------

Note: NM = Not Measured  
 Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
 SHALLOW OVERBURDEN GROUNDWATER  
 POTENTIOMETRIC SURFACE (MARCH 2014)



FIGURE 9



J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter\10 GW Elev Deep.mxd 7/22/2014 MDL

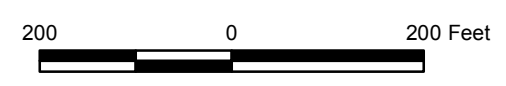


**Legend**

- NYSDEC Monitoring Well
- ← Approximate Direction of Groundwater Flow
- Groundwater Potentiometric Surface (ft amsl)

Well ID — DEC-066D, 2.92 — Groundwater Elevation

Note: NM = Not Measured  
 Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
 DEEP OVERBURDEN GROUNDWATER  
 POTENTIOMETRIC SURFACE (MARCH 2014)



FIGURE 10



J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter\11 GW Elev Raritan.mxd 7/2/2014 MDL

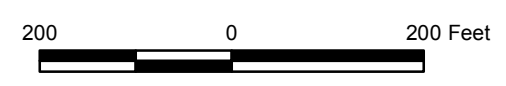


**Legend**

- NYSDEC Monitoring Well
- Approximate Direction of Groundwater Flow
- Groundwater Potentiometric Surface (ft amsl)

Well ID	DEC-029TC, 2.18	Groundwater Elevation
---------	-----------------	-----------------------

Note: NM = Not Measured  
 Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
 TOP OF RARITAN FORMATION GROUNDWATER  
 POTENTIOMETRIC SURFACE (MARCH 2014)



FIGURE 11



J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter\12 SG Analytical.mxd 7/2/2014 MDL



SG-196 | 2/14

VOCs:	
1,2,4-Trimethylbenzene	1.23
1,3-Dichlorobenzene	10.1
1,4-Dichlorobenzene	4.69
Acetone	44.8
Benzene	3.45
Carbon disulfide	4.05
Chloroform	1.03
Chloromethane	0.62
Dichlorodifluoromethane	1.83
Ethylbenzene	0.69
Methyl ethyl ketone (2-Butanone)	2.39
Methylene chloride	3.46
Tetrachloroethene	8.61
Toluene	5.57
Trichlorofluoromethane	1.4
Vinyl acetate	4.4
m&p-Xylene	2.35
o-Xylene	1.04

SG-195 | 2/14

VOCs:	
1,1,1-Trichloroethane	6.38
1,1-Dichloroethane	2.83
1,2,4-Trimethylbenzene	1.13
1,2-Dichloroethene (cis)	5.63
1,2-Dichloroethene (trans)	0.44
1,3-Dichlorobenzene	9.14
1,4-Dichlorobenzene	6.07
Acetone	36.8
Benzene	1.44
Carbon disulfide	0.44
Chloroform	8.4
Dichlorodifluoromethane	1.63
Ethylbenzene	0.69
Methyl ethyl ketone (2-Butanone)	1.92
Methylene chloride	4.62
Tetrachloroethene	62.6
Toluene	3.28
Trichloroethene	9.03
Trichlorofluoromethane	5.84
Vinyl acetate	4.72
m&p-Xylene	2.3
o-Xylene	1.04

SG-197 | 2/14

VOCs:	
1,2,4-Trimethylbenzene	0.88
1,3-Dichlorobenzene	7.4
1,4-Dichlorobenzene	3.07
Acetone	30.3
Benzene	2.14
Carbon disulfide	5.48
Carbon tetrachloride	0.63
Chloroform	2.05
Chloromethane	0.87
Dichlorodifluoromethane	2.72
Ethylbenzene	0.69
Methyl ethyl ketone (2-Butanone)	2.21
Methylene chloride	5.86
Tetrachloroethene	2.51
Toluene	8.36
Trichlorofluoromethane	1.69
Vinyl acetate	3.03
m&p-Xylene	2.26
o-Xylene	0.96

SG-199 | 2/14

VOCs:	
1,1,1-Trichloroethane	3
1,1,2-Trichloro-1,2,2-trifluoroethane	1.76
1,2,4-Trimethylbenzene	0.98
1,3-Dichlorobenzene	6.85
1,4-Dichlorobenzene	3.13
Acetone	29.2
Benzene	1.34
Carbon disulfide	54.8
Chloroform	0.93
Chloromethane	0.56
Dichlorodifluoromethane	0.79
Ethylbenzene	0.56
Methyl ethyl ketone (2-Butanone)	1.89
Methylene chloride	17.6
Tetrachloroethene	1.22
Toluene	2.34
Trichloroethene	1.02
Trichlorofluoromethane	1.57
Vinyl acetate	4.58
m&p-Xylene	1.78
o-Xylene	0.83

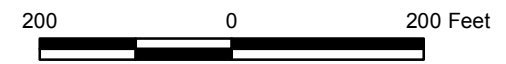
SG-200 | 2/14

VOCs:	
1,1,1-Trichloroethane	1.64
1,2,4-Trimethylbenzene	1.23
1,3-Dichlorobenzene	10.6
1,4-Dichlorobenzene	4.09
Acetone	29.4
Benzene	1.63
Carbon disulfide	4.89
Carbon tetrachloride	0.76
Chloromethane	0.31
Dichlorodifluoromethane	1.48
Ethylbenzene	0.78
Methyl ethyl ketone (2-Butanone)	2.12
Methylene chloride	6.95
Tetrachloroethene	0.81
Toluene	4.07
Trichlorofluoromethane	2.47
Vinyl acetate	3.7
m&p-Xylene	2.74
o-Xylene	1.22

**Legend**

▲ NYSDEC Soil Vapor Implant

Note: Units are in  $\mu\text{g}/\text{m}^3$   
 Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
 SOIL VAPOR ANALYTICAL RESULTS

**URS**

FIGURE 12



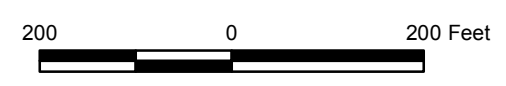
J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter\13 PCE SG.mxd 7/2/2014 MDL



**Legend**

▲ NYSDEC Soil Vapor Implant

Note: Units are in  $\mu\text{g}/\text{m}^3$   
 Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
 TETRACHLOROETHENE IN SOIL VAPOR



FIGURE 13



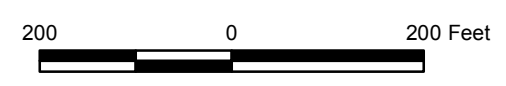
J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter Report\14 TCE SG.mxd 7/2/2014 MDL



**Legend**

▲ NYSDEC Soil Vapor Implant

Notes: Units are in  $\mu\text{g}/\text{m}^3$ ; ND = Not Detected  
 Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
 TRICHLOROETHENE IN SOIL VAPOR



FIGURE 14





DEC-006TC   CRIT   3/14		
VOCs:		
Tetrachloroethene	5	4900
Trichloroethene	5	380

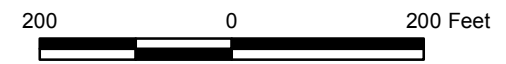
DEC-111   CRIT   3/14		
VOCs:		
Tetrachloroethene	5	1300
Trichloroethene	5	8.4

DEC-111D   CRIT   3/14		
VOCs:		
1,1,1-Trichloroethane	5	8.5
1,1-Dichloroethane	5	14
1,1-Dichloroethene	5	53
1,2-Dichloroethane	0.6	140
1,2-Dichloroethene (cis)	5	11
Tetrachloroethene	5	18
Trichloroethene	5	220

**Legend**

📍 NYSDEC Monitoring Well

Note: Units are in µg/L  
 Criteria: NYSDEC TOGS 1.1.1 Ambient Water Quality Standards, Class 6A  
 Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
 GROUNDWATER ANALYTICAL RESULTS

**URS**

FIGURE 15



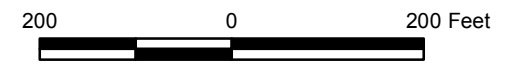
J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter\16\_PCE\_GW.mxd 7/2/2014 MDL



**Legend**

📍 NYSDEC Monitoring Well

Note: Units are in  $\mu\text{g/L}$   
 Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
 TETRACHLOROETHENE IN GROUNDWATER



FIGURE 16



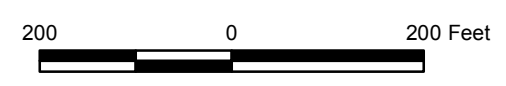
J:\Projects\1174989.00000\DB\GIS\KlinkCosmo-Report\Letter\17 TCE GW.mxd 7/2/2014 MDL



**Legend**

📍 NYSDEC Monitoring Well

Note: Units are in  $\mu\text{g/L}$   
 Source: ESRI World Imagery



FORMER KLINK COSMO CLEANERS SITE  
 TRICHLOROETHENE IN GROUNDWATER



FIGURE 17



**ATTACHMENT 1**

**FIELD NOTES**



Location Flink Cosmo Date 12/9/13 3

Project / Client NYSDEC - Lombardy/Refer pg. 1  
Mud drilling ~35°F - Cloudy/rain

0800 - Sking arrive onsite w/  
Scott McCale

- review Site history + area.

0900 - DEC arrives onsite

0915 - utility markout company  
arrives onsite

0935 - markouts completed for  
location b/w Beadel + Lombardy  
St.

0950 - markout company + Scott  
offsite to second location

0915 - AES (2) arrive onsite

- wait until markout is complete

1005 - AES sets up on top of clay  
boring.

- arrive w/ track truck support  
truck + Dietrich D120 limited  
access rig.

1035 - have to use closed head auger  
to drill thru concrete, no  
chop saw, no AC w/ air knife involved

1055 - Scott back onsite

1105 - drill through concrete

- begin preclearing

1135 - Finish preclearing hole



Location Klink Cosmo Date 12/9/13  
 Project / Client NYSDEC pg. 2

@ 6 1/4" ID  
 (4 1/4" ID)

Boring / log	Rec	PID	CI	Grth	blows per 6"
0-4"				Concrete	
1-2	-	0	SMC		
2-3	-	0	SMC		
3-4	-	0	SMC		
4-5	-	0	SMC		
5-7	20/24	0.1	SP	8/12/15/19	
7-9	20/24	0.0	SM ML	7/7/8/11	
9-11	24/24	0.0	ML SP	5/3/21/29	
11-13	13/24	0.1	ML <sub>sm</sub>	6/15/13/41	
13-15	9/24	0.0	ML	29/8/21/8	
15-17	9/24	0.1	ML SW	5/7/11/12	

1330 - Scott back onsite  
 1345 - Mike Gottman onsite

Location Klink Cosmo Date 12/9/13 5  
 Project / Client NYSDEC pg. 3

Depth	Lith
1-2	brown silt, trace fine sand
2-3	SAA, tan mottling
3-4	tan SAA
4-5	SAA, slight plast
5-7	tan & sand
7-9	7-8 - Brown silt, some F sand 8-9 - brown silt, trace clay med plast
9-11	9-10 - SAA 10-11 - brown F sand, trace silt
11-13	11-13 - Brown silt, trace - some F sand, trace cobble
13-15	13-15 - SAA, cobble obstructed spoon, low recovery
15-17	15-16 - brown silt, trace F sand 16-17 - fm sand, tan/grey



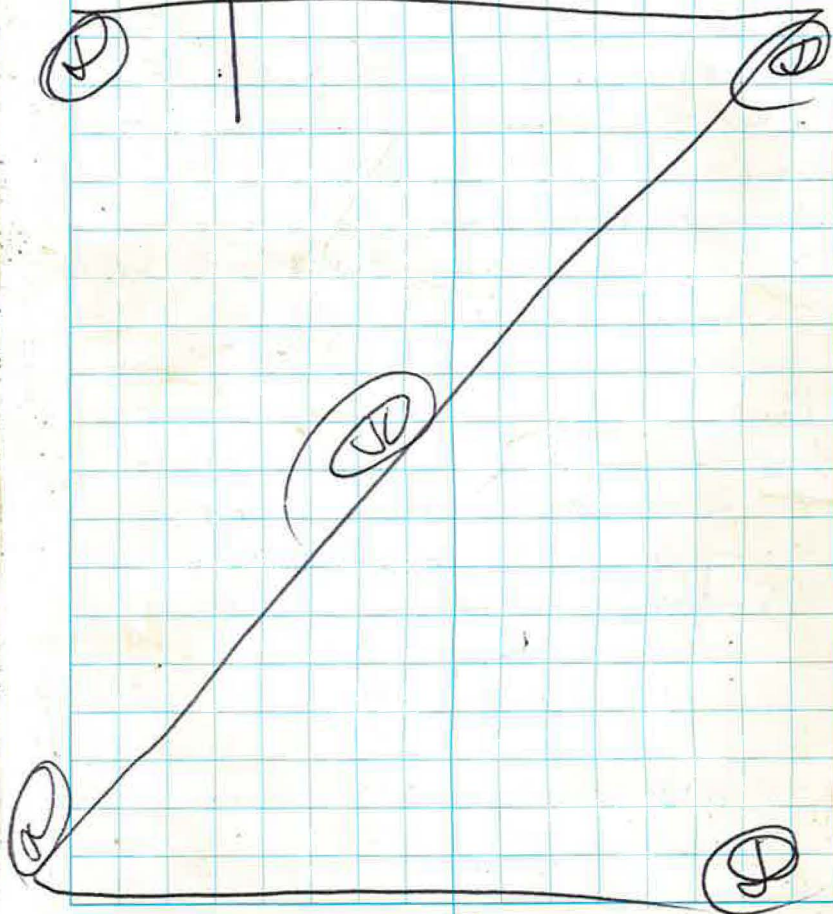
Location Klink Cosmo Date 12/9/13  
 Project / Client NYSDEC pg 4

Depth	Req	PID	CI	Blows
17-19	21/24	0.2	SW	3/5/6/9
19-21	18/24	0.0	SW	5/4/5/7

- 1400 - AES pulls all augers (20')
- 1430 - put 5 bags bent chips into hole final depth = ~~17.5'~~ 14'  
 - hydrate, Ryan says bent is to make seal around mud rotary casing when installed. 30 gal
- 1530 - install 15' of steel casing  
 - bent seal casing to grade  
 - home owner next door asks question re drilling. Reply we have permit.
- 1545 - began to clean up equip.  
 - inform Ryan he can't leave rig on hole, needs to park rig in street.
- 1630 AES + CBS offsite.

Location Klink Cosmo Date 12/9/13  
 Project / Client NYSDEC pg 5

Depth	Lith
17-19	tan-grey - fm sand.
19-21	SAA, 3" sluff.





Location Klink Cosmo Date 12/10/13  
 Project / Client NYSDEC pg. 1  
 Mud Rotary 235F/Snow

0800-UPS (King + McCabe) arrive onsite

0905-Receive call from Ryan, says stuck on UE, will be late.

1000-AES arrive onsite (2), set up on DEC006TC

- per Mike + Dave (DEC), OK to use 5 macrocore if we can get at least 70% recovery.

1100-mud rotary set up complete

1200-Fill mud tub w/ water + mix in 2 1/2 scoops of revert

- begin mud drilling from approx 15'

1250-switch to split spans after 50% recovery from macrocore. - pull back 2' of spans

1545-start breakdown + clean

1645-UPS + AES @ site.

generate 0.5 drums from drilling activities

Location Klink Cosmo Date 12/10/13  
 Project / Client NYSDEC pg. 2  
 Mud Rotary

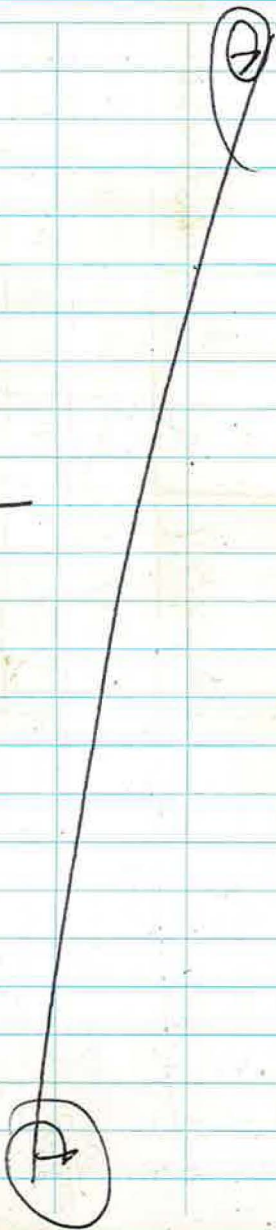
Depth / Rec	PID	CI	Blas	Lith
20-25	20-21 21-22 22-25	SW	3/3/7/8 9/8/10/11 10/10	4" bent plug tan f-m sand
25-27	0.0	SW	7/6/6/7	SAA, 2" SLCP
27-29	27-28 28-29-0	SW ML	8/7/14/15	Drawn water core 27-28-SAA Drawn w/ 1/4" some sand, trace gravel
29-31	0.0	ML	4/4/7/7	Drawn 5 sand, trace gravel
31-33	0.0	SW SW	9/10/12/16	Drawn 5 sand, trace gravel
33-35	0.0	SW SW	17/16/22/43	33-34- Brown f-m sand 34-35- silt, some f sand, some gravel trace 34.5-35= grey, red plastic



Location Klink Cosmo  
Project / Client NYSDEC

Date 12/10/13  
pg. 3

Decorate Depth	PID	CI	Blows	Lith
35-37	15/24	50	16/27/30/33	brown, F-C sand, some gravel, trace cobble
37-40	0/24	-	36	macronite - 2" penetration - rock



Location Klink Cosmo  
Project / Client NYSDEC  
Mud Drilling

Date 12/11/13  
pg. 1

- 0730 - King + S McAhe (OPS) arrive onsite.
- 0930 - AES arrive onsite (2) w/ support truck + truck  
- review H+S/Saw/JSAs
- 1030 - set up on mud hole
- 1105 - start mud drilling  
- tell Jim to advance to 40' then drive a 5' macronite  
" obstruction at 37'.
- 1210 - slow advancing, probable cobble/gravel layer
- 1300 - Daye (OPS) allows advancing to 45' w/o sampling
- 1330 - resident approaches site, complains about a split sidewalk flag, inquired about duration of work. Informed resident that we will likely be here until Friday.
- 1340 - AES cleans/packs equip
- 1350 - AARC onsite, takes 2 P solid drums  
- generate one drum



Location Klink Cosmo  
 Project / Client NYSDEC

Date 12/14/13

BB<sup>2</sup>



Location Klink Cosmo  
 Project / Client NYSDEC

Date 12/12/13

Mud drilling

225<sup>th</sup> / Class

BB<sup>1</sup>

- 0830 - King arrives onsite  
 0840 - AES tack truck arrives onsite.  
 0850 - AES begin setting up on well location DECCO/TC  
 - Scott McCabe arrives onsite.  
 1045 - start drilling location  
 1210 - Scott McCabe off site  
 1250 - AES take break  
 - pore recovery on 53-55, a lot of sluff, will run macrocore from 55-60'. Dave says if recovery is less than 50%. Drill to 57' span to 59', then drill 2', sample 2'.  
 1315 - Dave off site  
 1330 - water frozen in pump, AES warms hoses to thaw + adds more reagent to drilling fluid.  
 1445 - AARCO arrives onsite  
 1500 - pull up rods from 55' roller bit missing 2 sets of rollers



Klink Cosmo

12/12/13

NYSDEC

pg. 2

Depth	Rec	PID	CI	Blows	Lith
45-47	6/24	0.2	500	69/35/35/35	brown fc sand, some grav, found, wet
47-49	6/24	0.0	500	24/58/65/69	SAA
49-51	6/24	0.7	500	26/39/58/42	44-50-SAA 50-51-SAA, some s.H, some rubble
51-53	6/24	1.7	500	24/27/46/62	51-52-DRAIN F-C sand, w/ grav 52-53-SAA, some s.H, some rubble
53-55	6/24	5.6	500	10/15/24/23	SA 52-53
55-60					MACROCORNE

12/12/13

pg. 3

Depth	Rec	PID	CI	Blows	Lith
1510					
1530					
1550					
1640					

1510-attempt to obtain 55-60 macro.  
-generate 1 drum from days activities  
1530-begin cleanup, macroized, not attempted  
1550-APPC offsite w/ 1 drum  
1640-URSTAES offsite



Location Flink Cosmo Date 12/13/13  
 Project / Client NYSDEC ~35°F/clear  
 Mud Drilling pg 1

- 0745 King arrive onsite  
 - AES already onsite  
 0750 - AES begins setting up equip.  
 0800 - speak w/ Jim. Says plan is to run b/w 45-50' of outer casing (4") into borehole to prior to continued drilling.  
 0845 - raise 15' of casing + remove tee into 6" casing  
 0945 - lower 4" casing to 41', won't lower anymore, drilled to 55' yesterday w/ mud.  
 1015 - hammer casing to 44' w/ auto-hammer + adapters.  
 1030 - attach 4" tee w/ ferncos  
 1105 - unthread destroyed roller bit  
 From rods + replace w/ new 3" 7/8 roller bit.  
 1145 - lower bit + rods to 44' + mud drill.  
 - not enough mud coming out of tee when drilling. losing fluid outside 4" casing + around old borehole

Location Flink Cosmo Date 12/13/13  
 Project / Client NYSDEC  
 Mud drilling pg 2

DECOCATC	Depth Rec	C.I	PID	Blows	Lth
55-60	30/60	5W	55-57 1.4 57-59 3.9 59-60 9.7	64/72/40/33 28/24/28/26 31/55	microcase 55-57 - brown f-m sand, trace silt, w/ clay + pebbles 57-60 - brown f-m sand some gravel
60-65	28/60	5W	60-61 10.3 61-63 13.05 63-65 6.1	24/11/34/20 20/20/20/21 27/26	60-62 - brown f sand 62-65 - brown f - m sand



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Location Klink Cosmo Date 12/13/13Project / Client NYSDEC pg. 3

Mud drilling

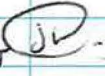
1150-add 1/2 bag powdered bentonite  
inside outer 6" casing + outside  
inner 4" casing.

1230-drill to 48"

-drillers take break for

warm up + to allow hole to clear

1250-drillers return from  
break.

135-drill to 55', attempt ~~macro~~ 

-allow hole to clear

1350-begin to sample 53'-60'

1510-retrieve 60-65' sample, bring  
up + break all rods

1520-AARCC arrive onsite, says only  
has room for 24-5 drums.

1540-start cleaning area

-empty mud tub

# generate 3 drums liquid / 1 drum solid

1630-AARCC offsite.

1730-tie off sidewalk + parked  
in street.

1740-AES + URS offsite.

19

Location Klink Cosmo Date 12/16/13Project / Client NYSDEC pg. 1

Mud drilling 230°F/Clear

0730-Jking arrives onsite  
-no signs of damage/  
vandalism to rig + borehole

0745-AES arrive onsite

0800-begin to setup on borehole  
DECORATE.

1000-mud tub set up w/ revert,  
1/2 bag used.

1100-drill down to 65'

1140-soon 73-75, change roller bit.

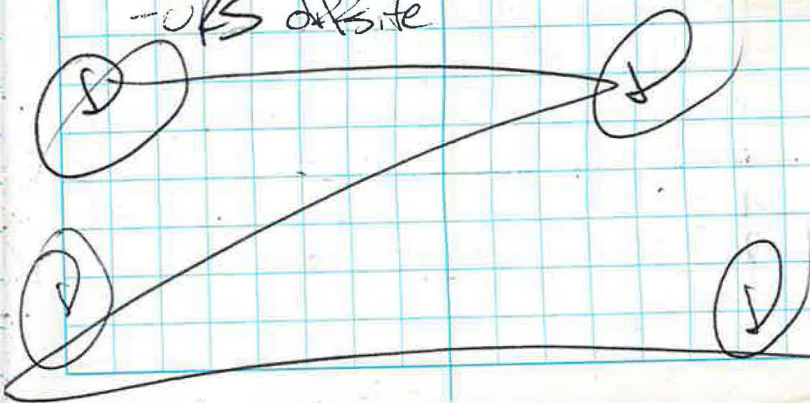
1530-start cleanup as pulling  
rods out.

-generate 1 drum-solid during  
day's activities (1/4 full)

1645-AES offsite

-leave drum onsite, no AARCC

-URS offsite





Location Klink CosmoProject / Client NYSDEC

Mud drilling

Date 12/16/13

Pg. 2

DECCO6TC Depth Rec	PID	CI	Blows	Loth
65-67 9/24	0.9	SW	28/31/23/17	brown fm sand, some grav, some cobble
67-69 8/24	3.6	SW	20/25/30/29	SAA, no cobble
69-71 14/24	0.6	SW	16/15/15/17	brown fm sand, coarse
71-73 11/24	0.4	SW	20/20/18/17	SAA
73-75 9/24	-	-	29/32/38/40	No recovery, basket changed
75-77 9/24	0.4	SW	29/7/18/20	brown fm sand, some gravel, coarse

Location Klink CosmoProject / Client NYSDEC

Mud drilling

Date 12/17/13

230°F/snow Pg. 1

0730 - King arrives onsite

0820 - AES (2) arrive onsite.

1000 - setup on DECCO6TC complete

- Dave Harrington (NYSDEC) onsite

1130 - drill to 77'

1315 - Dave offsite

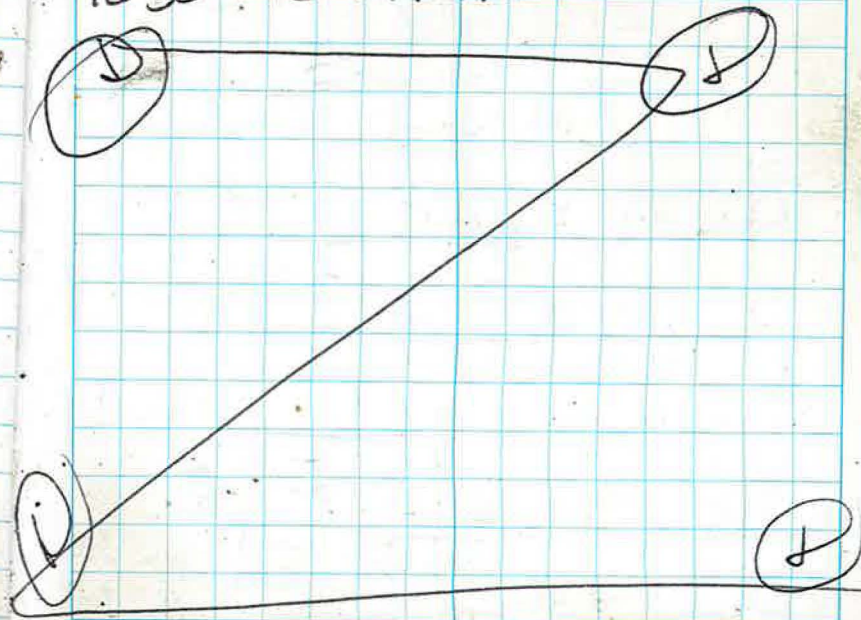
1400 - AAPCO arrives onsite

1600 - AAPCO offsite w/

solid drum

1630 - AES offsite

1635 - URS offsite.





Location Klink CosmoDate 12/17/13Project / Client NYSDEC

pp. 2

Mud drilling

DECCO TC	Rec	PID	C1	Blows	Lith
77-79	9/24	-	-	25/73/25/32	no recovery
79-81	17/24	0.3	SW	38/34/32/34	brown f-m sand, some grav, 100%
81-83	15/24	0.5	SW	15/16/17/18	SAA, trace grav
83-86	10/24	0.3	SW	27/28/29/23	SAA
85-87	10/24	0.4	SW	37/31/21/23	SAA
87-89	9/24	0.2	SW	47/44/39/34	SAA
89-91	9/24	0.1	SW	39/25/21/19	SAA, some cobble

Location Klink CosmoDate 12/15/13Project / Client NYSDEC

pp. 1

Mud drilling

232°F/Clear

0730 - Sking arrive onsite

0800 - AES (2) arrive onsite

0830 - set up on DECCO TC

1000 - set up complete

- Dave Harrington (NYSDEC) onsite
- start lowering rods to terminal depth

1530 - retrieve 105-107 spool

break rods, begin cleanup

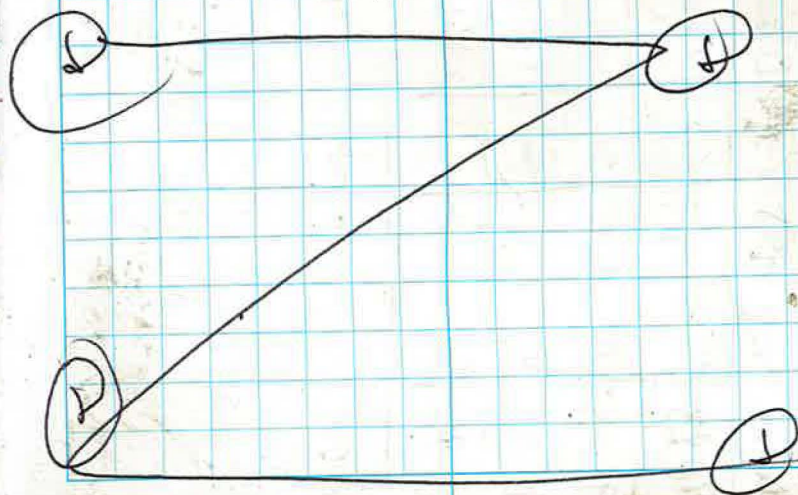
- generate 1 drum (solid)

↳ leave drum onsite, 1/3

Pull

1645 - AES offsite

URS offsite





Location Klink CosmoDate 12/18/13Project / Client NYSDEC

pg. 2

Mod drilling

DECOGATE Depth	Rec	P.I.D	CI	Blows	Lith
91-93	11/24	0.7	SW	29/29/30/39	brown f-m sand
93-95	9/24	0.8	SW	19/18/20/44	SAA, some gravel
95-97	9/24	0.7	SW	31/25/28/35	SAP. Rock in spoon
97-99	9/24	0.3	SW	30/24/23/26	SAA, no rock
99-101	11/24	1.0	SW	19/17/22/27	99-100-SAA 100-101-brown f-m sand, w/ grav, trace silt
101-103	10/24	1.4	SW	61/32/53/34	brown f-m sand, w/ grav, some silt, grey mottling

Location Klink CosmoDate 12/18/13Project / Client NYSDEC

pg. 3

Mod drilling

depth	Rec	P.I.D	CI	Blows	Lith
103-105	10/24	1.6	SW	22/32/35/40	light brown f-c sand, w/ grav, some silt.
105-107	6/24	3.0	SW	33/28/27/27	reddish/brown f-m sand, some grav, trace silt.

(S)



Location Klink CosmoDate 12/19/13Project / Client NYSDEC

Mud drilling

pg 1  
~ 40' off clear

- 0730- King arrives onsite  
 0745- AES (2) arrive onsite.  
 0755- set up on DECCO6TC  
 0930- drill down to 107  
 - Dave onsite  
 1255- Dave offsite.  
 1415- drill to 119

- encounter clay at 118.

- inform Scott McCabe, says  
to call Pine+ask to have all  
equip. picked up.

- 1430- AARCO arrives onsite  
 1440- prepare to drive Shelby tube  
 from 119-121  
 1500- obtain Shelby tube, AARCO offsite.  
 15" 6" - 500 psi  
 6" - 24" - 1400 psi  
 7 drive pressure

- 1545- bring up + break down rods  
 - Shelby disconnected + located  
 in bottom of hole

- 1550- call Scott, speaks w/ Mike  
 - spoon thru, collect soil. install  
 well into at least 2.5' of clay  
 - 1 drum offsite (solid)  
 1645- AES/URS offsite.

Location Klink CosmoDate 12/19/13Project / Client NYSDEC

Mud drilling

pg 2

DECCO6TC	Depth	Rec	PID	CL	Blows	Lith
	107-109	15/24	2.1	SW	20/31/30/34	reddish brown f-m sand, trace silt, trace grav.
	109-111	15/24	1.7	SW	16/28/31/36	SAA
	111-113	13/24	0.8	SW	60/49/44/54	reddish brown f-m sand, some silt
	113-115	15/24	13.1	SW	28/24/26/31	SAA
	115-117	14/24	2.1	SW	45/28/31/37	4115-116- brown SAA 116-117- dark grey SAA
	117-119	15/24	11.7-118 0.3 118-119 0.3	SM work CL	42/64/19/28	117-118- dark grey - white f sand w/ silt - mottling 119-118- dark grey new silt, low plast clay, some silt, low plast white mottling Silt

↓  
10' increments



Location Klink Cosmo Date 12/29/13Project / Client NYSDEC Pg. 1

Mud drilling 250°F/clear

- 0720 - Sking arrives onsite.  
 0730 - AES arrives onsite  
 0750 - set up on DECCO6TC  
 0930 - start to retrieve 119-121  
 0940 - retrieve 119-121

119-121 Blows: 33/36/132

-through shelby

Rec - 15"/24 PD-3.2

C1 - C1

Lith - dark grey clay, some silt.

\*bottom of well sump to be set at ~~120.5~~ 121, bottom of sump cap, 2' sump, + welding = 2.5'.

1000 - find that AES only has 5' of welded wire wrap stainless screen. No PVC screen.

1015 - leave VM w/ Scott. Speak w/ Mike G., says that well only goes in w/ stainless sump + screen. speak + inform w/ Ryan.

1045 - speak w/ Scott M. Asks status of screen. Reply Ryan is working on it.

Location Klink Cosmo Date 12/20/13Project / Client NYSDEC Pg. 2

Mud drilling / MW install.

1035 - Ryan says that John S. is on his way

1100 - continue to drill through shelby tube to a depth of 121'.

1210 - John S. arrives, drops off an additional 5' of stainless wire wrap screen.

1220 - John S. off site.

1200 - Pine arrives, give all equip

1245 - start installing well.

1520 - complete sand + grouting.

- AARCO onsite

- call Scott, not completed well by nightfall

- decide to complete well on Monday, still need to pull 4" + 6" casing.

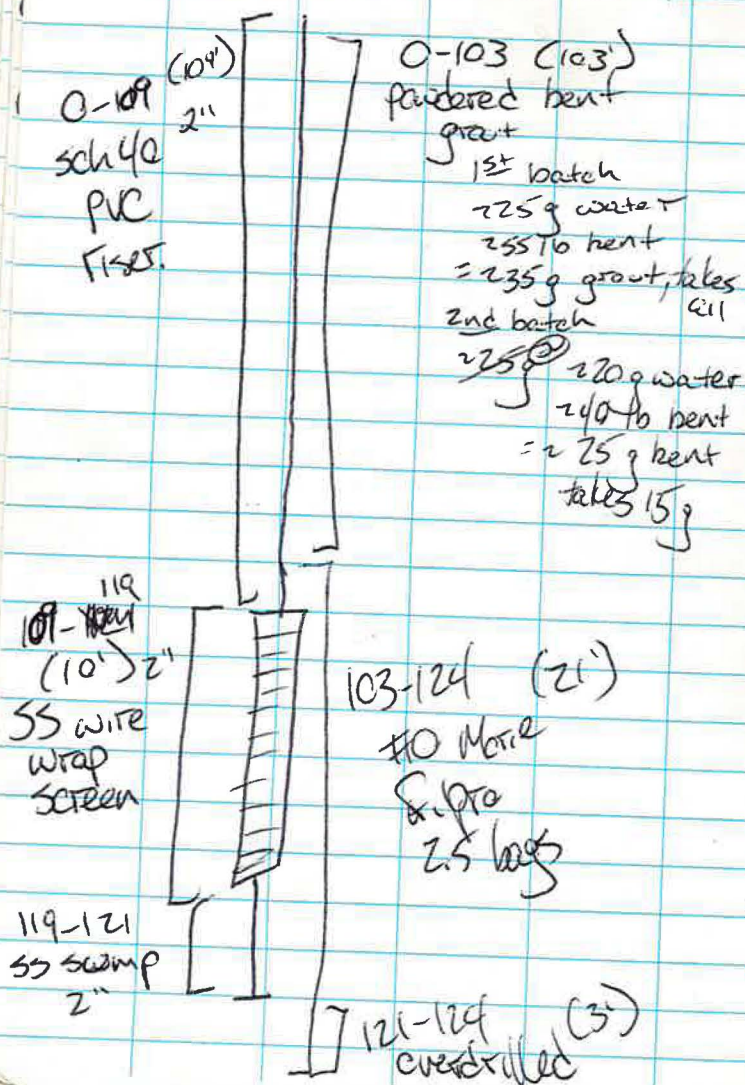
- Scott will speak w/ Shreshmaya

- tell Ryan status, finish grouting, empty mud tub, move everything to sidewalk, clean area



Location Klink Cosmo Date 12/20/13  
 Project / Client NYSDEC pg 3  
 MW Install

DECOGTC construction  
 borehole 24" dia



Location Klink Cosmo Date 12/20/13  
 Project / Client NYSDEC pg 4  
 MW Install

1540- Jose arrive onsite to help.

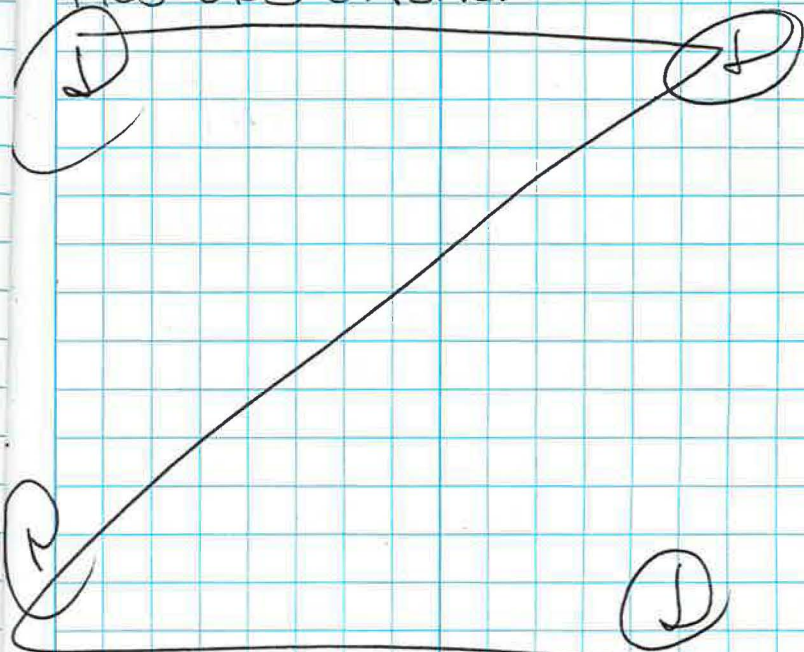
1530-empty mud tub+ begin cleanup.

1630-ARCO offsite generate:

2 solid drums  
 3 liquid drums.

1700-AES offsite

1705-URS offsite.





Location Klink Cosmo Date 12/23/13Project / Client NSDECMW Installation 50°F Rain

0720-J King arrives onsite.

0740-AES active onsite

0750-set up on DECCOOTE

1000-pull 45' of 4" casing while

tapping off w/ bent slurry.

1000-pull 15' of 6" casing

-gauge bottom of well

121" w/ ~1" of soil at bottom

1030-fold up + clean up rig.

-clean up work zone

1100-sand upper 2' of borehole

-install security bolts on manhole

1130-cut 2x2' well pad, remove concrete

1205-AES offsite to get more concrete. Did not have enough for 2x2' pad.

1220-AES back onsite.

-pour pad, cover w/ plaster + leave 2 cones

1300-AES + OPS offsite.

Location Klink Cosmo Date \_\_\_\_\_

Project / Client \_\_\_\_\_

Total / drum count  
for Field Event  
12-9-13 → 12/23/13

Date of Pickup	Solid	Liquid
12/10/13	2	✓
12/11/13	2	
12/12/13	1	
12/13/13	1	3
12/17/13	1	
12/19/13	1	
12/20/13	2	3
TOTAL	10	6

76

Location \_\_\_\_\_

Date

2/4/14

Project / Client \_\_\_\_\_

DEC-107  
well

LOSS ~ 3' During install.



~1520 - D.H. OFFSITE

1540 - M. GUTMANN OFFSITE

- GLACIER CLEANING UP

- AARCO LOADING UP

1600 - GLACIER GOES TO LADDER TO GET LADDER.

1705 - GLACIER OFFSITE, WILL PACK LOW BOY ON  
DIVISION NEAR DRAIN PLACE

URS OFFSITE

77

Location \_\_\_\_\_

Date

2/5/14

Project / Client \_\_\_\_\_

0800 - R. MURPHY + M. GUTMANN ONSITE.

W = 33° RAIN/FROSTING RAIN:

- GLACIER ONSITE, GETTING SET UP, WILL  
TAKE ROAD BONES + SET THEM @ DEC 107/107D

- GLACIER SETS TEMP BOXES @ DEC 107/107D

1017 - GLACIER @ DEC: 11/111D

- Shovelng sidewalk to setup area.

1140 - GLACIER BREAKS FOR LUNCH.

- URS SACKS SIDEWALK AREAS 107/107D

1227 - PAUL PICKS UP SAMPLES FROM  
yesterday.

1315 - RIG SETUP ON DEC-107/107D

1400 - Borehole 0-5'

5-10' 100% River (N)

5-7 - Brown f-m sand.

7-10 - Brown f-c sand some f-gravel  
trace cobbles silt

LARGE COBBLE @ 10'

cobbles 10-12' - 100%

12'-13' - Brown moist silty f-c sand  
(N) some f-gravel (angular)

Location \_\_\_\_\_

Date

2/5/14

Project / Client \_\_\_\_\_

15-25' - 6/10' Recovery.

15-19' - Very Silty f-c sand  
Some angular gravel,  
fine clay nodules19-25' - F-C sand and f-c gravel,  
trace cobbles  
damp to dry

25-27' 100%.

As above - GW - damp to dry  
F-C gravel some sand

(ND)

27-28' - Cobble

28-30' - Run sampler will reach 4 in.

1600 - AAREO OFFSITE w/ one drum (sol. ds)

1610 - GLACIER HAS SAMPLER TO 20', leave here  
for night

1625 - USE 1 GLACIER OVERVIEW

Location

OFFSITE

RUNK ROSS

Date

2/6/14

Project / Client

NYSDEC

0800 - AAREO onsite, GLACIER UNLOADING SUPPLIES  
OFF TRUCK

WX - 30°F, MOSTLY CLOUD.

DEC-111D

28-30' - 100%

Brown silty f-c sand & gravel (ND)  
AND COBBLES

0900 - RECOVERED 30-35'

35-40' fell out of sampler.

Loosened up and drilled extra to 33' on

Put bucket on to recover 35-50' surface

-30-31' Brown silty f-c sand some f-c  
gravel.34-35' - GRAY F-C sand (ND)  
SPAND F-C gravel SW/GW

Run sampler to 50'

0930 STOPPED, 6" over case, leaks

Really bad go far more Base seal  
to seal up tub.1000 - 6" to 20" tub leaks again  
Dig out tub + use foam cushion  
to seal

2/6/14

1100 - DMS HAZARDOUS WASTE SITES

- 6 inch casing down to 50'

Reamer 35-50' sample

- SAMPLER DID NOT PICK UP 35-40' Portion  
of Previous Run - So 50% Recovery from  
30-40', WATER TABLE LIKELY 35'  
based on nearby hdb

40-50' - 7/10 Recovery + Sample non recovery

- Brown M-C SAND some (M)

f-c sand gravel

trace cobbles

1110 - Collected DEC - 1110 - 34-35'

1115 - M. Casing off site

56-60 - 8' sample in sampler.

8/10 Recovery ND through

50-58 - As Above

F-C sand some f-c rd gravel

58-60 - F-M sand trace f gravel rd

2/6/14

1220 SAMPLER @ 80'  
Running 6" casing

1225 Reamer 60-80

60-70 100% Recovery (M)

60-70 Brown f-c sand

to some trace f gravel  
subangular  
to 3/4" sized

70-80' 50% Recovery (M)

As above

1315 - BREAK FOR LUNCH / AFTER

FIXING WATER SERVICE AGAIN w/  
JB WARD.1345 - RESUMES w/ 6" CASING w/ 4" Casing  
6" casing ~ 15' of slough in  
barrel.1400 - Deep well inside 4" Band then full  
4" at BREAK in 5' pieces



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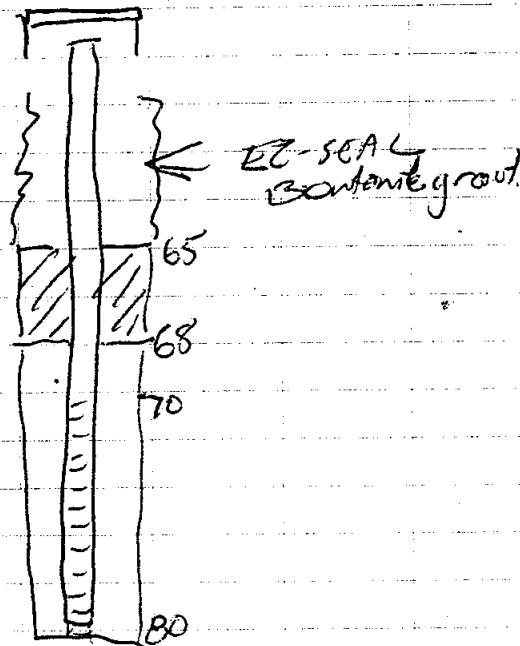
Location \_\_\_\_\_

Date

2/6/14

Project / Client \_\_\_\_\_

DEC-111D



1515 - DAVE H. OFFSITE.

- Gravel filling remaining 6" casing
- Then will pump in remaining Bentonite slurry.

1605 - AARCO COMES LAST DRUM

8 WATERS; 3 SOILS FOR DAT.

1630 - Depart site

83

Location

KLINK KOSMO SITE

Date

2/7/14

Project / Client

NPSDEC

- 0800 - EMERSON ARRIVES onsite, wireline  
 @ Laydown area loading Supplies  
 WS - 35°F Sunny  
 set up to DRILL DEC-111
- 1015 - USING WATER TO GET THROUGH  
 CEMENT zone @ 10' -
- 1035 - @ 15' w/ 4" 6" P.P.E
- 1115 - Down to 30', case/sample band  
 keeps gungy w/ 2" cobbles  
 - water sampler starts leaking again. make  
 repair.
- 1150 - Spectrom Analytical Picks up Klink  
 Kosmo Samples collected so far  
 (DEC 111D, SG 197, SG 196, SG-195)
- MIRA will call for pickup Monday for  
 remaining 2-samples she will be  
 collecting later today
- 1250 - sample @ 45', Runing 6" to  
 - lots of casing
- 1325 - Begin Building well DEC-111  
 - well pulled up ~ 3' during  
 install.

1400 - FORTY TWO ON SITE  
 - MORE DUSTERS

DEC-111



← Best dip.

23

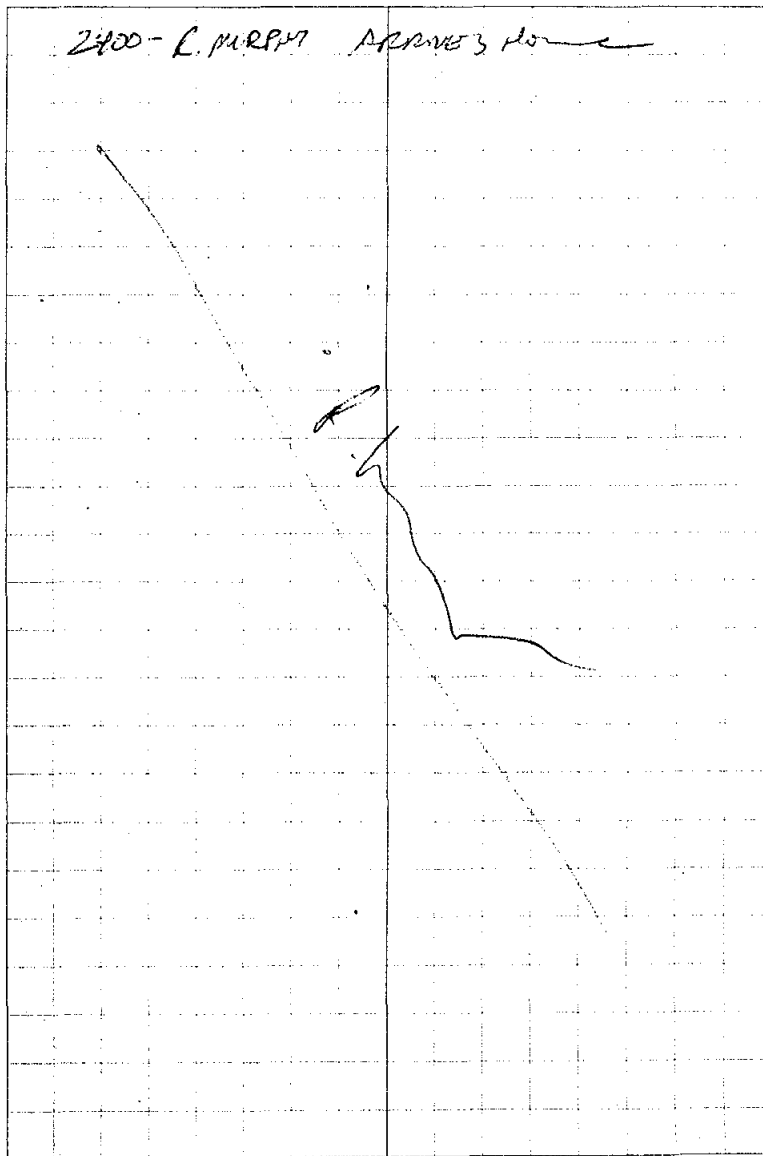
27

42

45

1505 - AARCO OFFSITE w/  
 7 purge water + 2 solids  
 - Go replace Security Bldg @ Remington  
 Closest lands up + Deep Road Boxes  
 1615 - L. MURPHY, OFFSITE  
 a. 11.000 Di. under trailer

2400 - L. MURPHY ARMY'S HOME





Location Klink Cosmo Date 1/21/14Project / Client NYSDEC

Cloudy 28°F

0545 MA on-site waiting for Doria to  
Continue to clear SG point @  
Klink Cosmo.

0630 Doria on site

-700 starting to clear SG-200

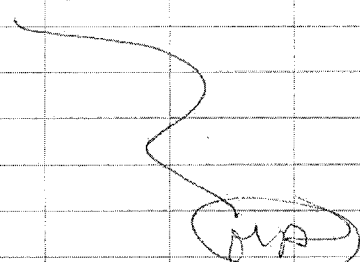
0723 Cleared SG-200, moved on  
to clear SG-1990738 Cleared SG-199, moved on  
to clear SG-198 on Division  
Place.0751 Cleared SG-198, moved on to  
clear SG-1970816 Cleared SG-197, move to  
clear SG-196

0830 Cleared SG-196 &amp; SG-195

0849 Doria off-site

0900 Spoke to Scott McCabe  
about upcoming schedule

0930 MA off-site



MA

Location Spic & Span / Klink Cosmo Date 1/23/14Project / Client NYSDEC

Cloudy, 10°F, very cold.

0540 MA on site awaiting Scott  
McCabe at Morgan Ave to  
discuss upcoming schedule.

0730 Scott obtaining drums for  
DEC-067C well development.

0930 Set-up at DEC-067C to develop  
well ~ 300 gals. Pump not  
working called pine to deliver  
a new work area pump & extension  
cord. Pine indicated they will  
deliver by ~ 1300 hrs.

11/15 Pine on site w/ new work area pump  
& extension cord. Informed Scott  
McCabe

1/1/16 MA off-site to pick up vehicle  
for work



MA



Location Klink CosmoDate 1/24/14Project / Client NYS DECCloudy, 11°F.

- 0545 MA on-site to Develop  
DEC-06TC
- 0630 Start set-up for Development  
of DEC-06TC
- 0800 started to develop DEC-06TC
- 0838 stopped developing DEC-06TC  
200gls Development H<sub>2</sub>O,  
waiting for ARCCO to pick  
UP drums.
- 1525 ARCCO on-site to pick  
UP 3 soil drums & 7 H<sub>2</sub>O  
Drums.
- 1615 MA & ARCCO off-site

MA

Location Spic & SpanDate 1/6Project / Client NYS DECCloudy, 40°F

- 0605 MA on-site to oversee  
clearing of DEC-109, 109T  
& DEC-083 on Kingsland
- 0805 Glacier on-site, walked  
showed them locations of  
DEC wells on Kingsland Av
- 0850 Glacier will start clearing D  
& 107 First to 5' in Depth.
- 0910 started to saw cut DEC-107, 10
- 0945 DEC-107
- 0-5' Brown silt <sup>(FA)</sup> w/ some  
sand, little F-C gravel. No  
odor, dry (0.06%) Asphalt <sup>(FA)</sup>  
concrete.
- 1015 starting to clear DEC-10  
DEC-107D
- 0-0.6" Asphalt <sup>(FA)</sup> Concrete.
- 0.6" 5.0' Brown silt w/ some sa  
little V.F.C Gravel, no od  
PID=0.0ppm, no visible Co
- 1105 start to saw cut DEC-08
- 1121 starting clearing DEC-083  
5' in Depth.
- DEC-083
- 0-0.5" Asphalt <sup>(FA)</sup> Concrete
- 0.5" 5' Brown silt w/ some V.F.C  
little F-C gravel, 0.8 ppm



Location SPIC &amp; SPAN

Date 1/27/14

Project / Client NY SDEC

Sunny, 40°F.

1210 Lunch Break

1240 Back from lunch, ready to  
saw cut DEC-109, 109D to  
clear to 5' in depth.1118 Finished saw cutting DEC-109  
& 109D, Beginning to Jack  
hammer asphalt @ DEC-109, 109D

1349 DEC-109

0-0.6" Asphalt <sup>(MA)</sup> Concrete0.6"-5.0' Brown silt w/ some V.F.-F  
Sand, little F.C gravel, PID:  
0.3PP, No visible staining.  
Slight pet odor present.1355 Started to Jack hammer  
DEC-109D0-0.6" Asphalt <sup>(MA)</sup> Concrete0.6"-5.0' Brown silt w/ some V.F.-F  
Sand, little F.C gravel,  
PID 1.0PPM, No staining  
Visible, slight pet odor present.1453 Patch-up all 5 Holes on  
Kingstand ave w/ asphalt.  
Crew clean-up.

1505 MA &amp; Glacier off-side.

Location Rliak Cosmo

Date 1/28/14

Project / Client NY SDEC

Sunny, 18°F, Very Cold Feels like 0°F  
15 MA on-site to continue clearing

DEC well locations.

0820 glacier on-side.

0840 Drive to clear locations DEC-111 &  
111D on Vander-Voort.

0900 Saw cutting DEC-111 location.

0910 Saw cutting DEC-111D location

0930 Jack hammering DEC-111 & 111D  
locations.1010 Finished clearing DEC-111 to 5'  
Depth.

0-0.5" Concrete.

0.5-5' - Brown silt & V.F.-F Sand,  
Some F.C gravel, 0.0 ppm  
NO visible staining or odor.

1015 moved on to clear DEC 111D location.

1123 Finished clearing DEC-111D to 5'  
Depth

0-0.8" Concrete.

0.8-5' Brown silt & V.F.-F Sand,  
Some F.C gravel, 0.0 ppm  
NO visible staining or odor.



Location SPIC & Span, Klink Cosmo Date 2/7/14

Project / Client NYSDEC

Sunny, 30°F.

0610 MA on site to continue installing SG. points. waiting for Zebra Env.

0730 Zebra on-site, conducted H&S Meeting, setting up to drill SG-191

0-0.4 Concrete.

0.4-3' Brown F. sand & silt, trace (-) v.f. gravel, 0.0 ppm, Dry to moist @ 2.6' (Set SG Point @ 2.5') (pic taken) Sample (2-2.5) @ 0810

0848 moved on to Klink Cosmo to install 6 SG points.

0915 Starting to install SG-195

0-0.4 Concrete.

0.4-8 Brown F. VF sand & silt, trace (-) clay @ 4.5-5 feet, 0.0 ppm set SG point @ 8', Sample (7.5-8) @ 0935 Dry. (pic taken).

\*3 pics of 196, 197, 198 Taken of Before Drilling.

0950 moved on to drill SG-196 on division st.

Location Klink Cosmo

Date 2/7/14

Project / Client NYSDEC

Sunny, 30°F.

SG-196

0-0.4 Concrete.

0.4-4' Brown F. VF Sand & silt, trace V.F. gravel, 0.0 ppm, Dry. Set SG point @ 4' because of obstruction at 4'. Sample (3.5-4) @ 1010 Pic Taken.

1040 moved on to drill SG-197

0-0.4 Concrete

0.4-10' Brown V.F. F Sand & silt, dry to wet @ 2.1, 0.0 ppm. set well @ 2' due to H<sub>2</sub>O, Sample SG-197 (1.5-2) @ 1110 Pic Taken.

According to Dave H. of NYSDEC, we are not to install SG-198 location because tenant (owner Anette) not wanting another hole in her concrete. He to Scott McCabe informed him of this situation.

Starting to drill SG-199 (pic taken of the installation)



Location Klink CosmoDate 2/7/14Project / Client NYSDECSunny, 30°F.SG-1990-0.8 Concrete0.8-4' Brown F. sand some silt,Dry to moist @ 3.6, 0.0 PPMset SG @ 3.5', sample (3-35)@ 1210, (pic taken)1235 Starting to drill SG-2000-0.8 Concrete0.8-4' Brown F. sand some siltDry to moist @ 3.6, 0.0 PPMset SG @ 3.5, samplepic taken.1435 MA off-site.Mina A.

Location \_\_\_\_\_

Date \_\_\_\_\_

Project / Client \_\_\_\_\_



12/10/13.

0745 S. MCH 97 + J. KING ONSITE.

WX: 33°F LIGHT TO MODERATE SNOW.

Personnel	Activities	ON/OFF
S. MCH 97	URS	0745
J. King	URS	0745

- mark onsite for Assent/E. mounted.
- 0800 Ryan of ASSOCIATED calls on LIFE by workover blind. will be onsite soon.
- 0940 Assent/E. onsite. move rig ahead & set up on Dec-006TC.
- r/h. onsite as is DIT
- Assent/E. sets up to drill mud plug.
- use REVERS D-ILLING MUD
- Kopr-KOTE WATER WELD
- 1200 Assent/E. Begin to drill & Sample. Dec-006D.
- 1330 ADUC
- 1430 ADUC remove 2 windows.
- 1600 ASSOCIATED OFF SITE
- 1630 URS OFF SITE

0715 SM + JK ONSITE

WX: clear, sunny 27°F.

→ ASSOCIATED TO be onsite at 0730.

0840 Mh. onsite. calls Jim Van Horn OF ASSOCIATED.

0903 SM calls Corey (Custer of C&amp;E) to check on overhead wire safety at Dec-107/107D location

- OH LINES NOT TACKLED. Corey will check into IT and call back THIS AFTERNOON.

0930 Call AARCO. Speak with Harlo. Let her know that pickup scheduled for 1700 not 1300 like yesterday. URS will NOT STOP drilling early and will NOT pay for standby time if they show up early.

0933 ASSOCIATED onsite. Ryan &amp; Jim Van Horn.

1000 SM &amp; Mh. get paint out Dec-107 + 107D location on site.

- C&E D TACKLING OH WIRES

SM + Mh. conduct PCC-107 + 107D.

- PH ONSITE



Date 12/9/13

- 0700 S. MICHAEL & J. King, meet in lobby of HOTEL.
- 0715 Donor of Razer Silicon calls. She is in Tucson & should be onsite ~ 0830.
- 0730 SM & JIC walk to SITE to REEVEAN location & get oriented with other sites.
- 0815 D. Harrington (MURPHY) onsite.
- 0920 Donor of Razer Silicon onsite - ASSUMING few onsite with us, Ryan &.
- 0930 Donor clears DEC-006/11C with Chicago PD.
- Gas line ~ 20' to N into block across street from site.
  - Meter in street. ~ 5' off curb.
  - H<sub>2</sub>O on opposite side of the street
- 1000 Move to DEC-107/107D location -
- 1040 DEC-107/107D all clear.
- water - in the street, where site work is being done ~ 20' N of where wells are.
- gas enters block from sidewalk ~ 60' N of well location.
- OH WORKS AT DEC-107/107D NOT TRACKED yet. SM. call's

Date 12/9/13

Company at Court. A new system is in place. IT HAS slowed down the work. Copy put "Razi" on JOB LAST week. Should be done by the end of this week.

1100. Assante set up on DEC-006C. TAIL section D-120. They agreed this curb & will clean to 5' with post hole digger.

- SM call's John & Assante. WKS out of work location same as in 2'x2' & cleared entire water down to 5' lbs.

1130 SM off site to grab materials. People's Site. Let's Tessa & D.H. Kim

Assante crew - Ryan & Jose

1300 SM returning to site. M. Burton NOT onsite yet.

1400 M. Burton onsite

1545 - Temporary 6" ID STEEL CASE installed - DEC-006C.

- Temporary sealed with BRUTE Slurry.

1630 OFF SITE



- 1 10:15 Assorted planning out pump on  
 6 rig. Did not winterize it yesterday.  
 4 10:40 Assorted finally started to circulate  
 11 11:00  
 5 10:55 Assorted began to install drill string in  
 J the hoisting.  
 .240 Assorted drilled for 37-40' interval  
 6 6" mud cutting. Still in rubble/cobbles,  
 0 flow rig is becoming more difficult.  
 0 Drill tells Assorted to stop at 5' and  
 0 Drill down. will remove sample, when  
 we get there it  
 - 14:00 Hse arrived in 6" over last hour.  
 14:30 Talk with John at Associates.  
 - will try using carbide button bit to  
 roller bit through cobbles  
 12 IF not, will try next to 60' turn  
 13 mud 60' to button.  
 14 14:30 Talk with 1161 & relay message for  
 16 John at Associates.  
 16 - Agree on work  
 - pick up 2 Sonos drums -  
 16:30 Assorted drilled 6' turn -  
 OFF SITE FOR THE DAY

12/12/13.

0800 Start + JK overrig.

wt: clear, sunny, 24°F.

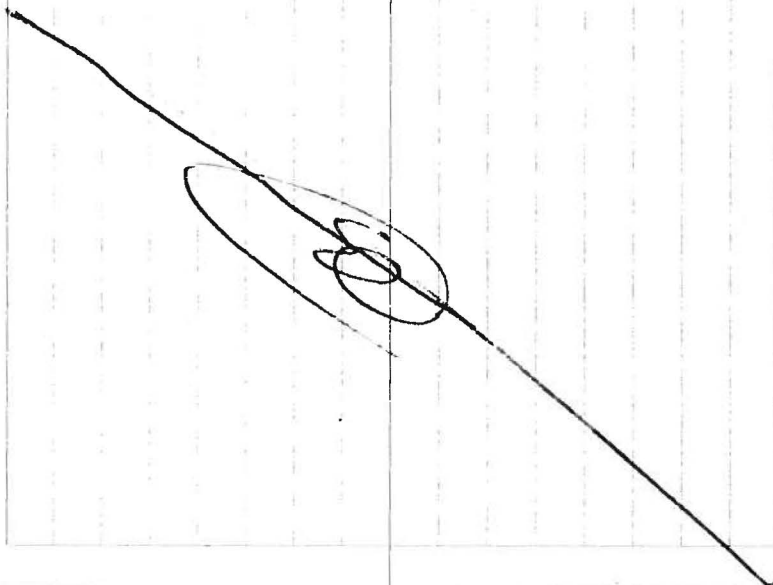
ASSOCIATES NEW OBSERVE - SIM. RYM

- Assorted are working up rigs & getting  
 ready to begin drilling. Permit begin  
 at 0800.

will cut to mud string drill from 43' down.  
 run 3 7/8" carbon button roller bit.

10:00 - Carbon button bit is in log to  
 drill thru cobbles.

- Take split spore 45-49'





**ATTACHMENT 2**  
**SITE PHOTOGRAPHS**



**PHASE III SAMPLING EVENT, FORMER KLINK COSMOS CLEANERS SITE  
PHOTOGRAPHIC LOG  
BROOKLYN, NEW YORK**



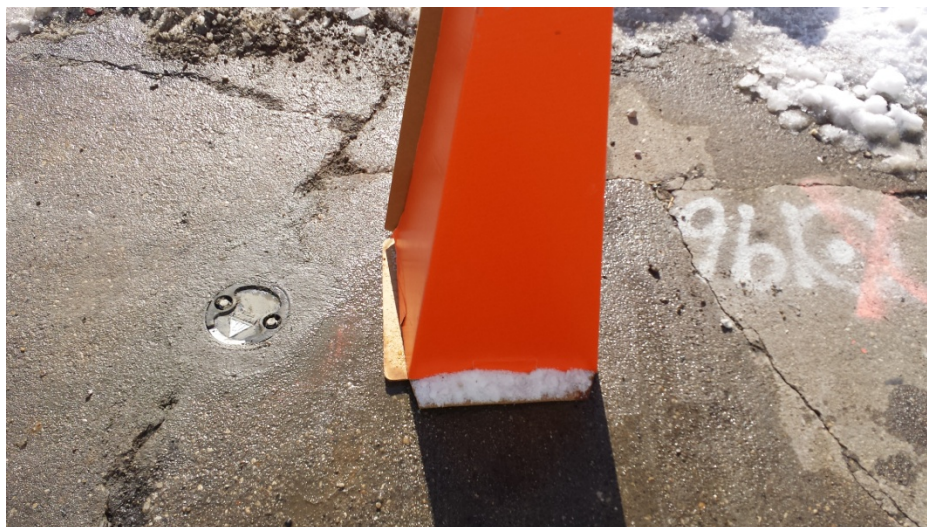
**Photo 1:** 2/5/14: Installation of DEC-111 and DEC-111D.



**Photo 2:** 2/7/14: SG-195 recently installed.



**PHASE III SAMPLING EVENT, FORMER KLINK COSMOS CLEANERS SITE  
PHOTOGRAPHIC LOG  
BROOKLYN, NEW YORK**



**Photo 3:** 2/7/14: SG-196 recently installed.



**Photo 4:** 2/7/14: SG-197 recently installed.



**PHASE III SAMPLING EVENT, FORMER KLINK COSMOS CLEANERS SITE  
PHOTOGRAPHIC LOG  
BROOKLYN, NEW YORK**



**Photo 5:** 2/7/14: SG-199 recently installed.



**Photo 6:** 2/7/14: SG-200 recently installed.



**PHASE III SAMPLING EVENT, FORMER KLINK COSMOS CLEANERS SITE  
PHOTOGRAPHIC LOG  
BROOKLYN, NEW YORK**



**Photo 7:** 2/12/14: Collection of soil vapor sample at SG-195.



**Photo 8:** 2/12/14: Collection of soil vapor sample at SG-196.



**PHASE III SAMPLING EVENT, FORMER KLINK COSMOS CLEANERS SITE  
PHOTOGRAPHIC LOG  
BROOKLYN, NEW YORK**



**Photo 9:** 2/12/14: Collection of soil vapor sample at SG-197.



**Photo 10:** 2/12/14: Collection of soil vapor sample at SG-199.



**PHASE III SAMPLING EVENT, FORMER KLINK COSMOS CLEANERS SITE  
PHOTOGRAPHIC LOG  
BROOKLYN, NEW YORK**



**Photo 11:** 2/12/14: Collection of soil vapor samples SG-200 and DUP20140212 at SG-200.



**Photo 12:** 2/12/14: Collection of ambient air sample AA20140212.



**PHASE III SAMPLING EVENT, FORMER KLINK COSMOS CLEANERS SITE  
PHOTOGRAPHIC LOG  
BROOKLYN, NEW YORK**



**Photo 13:** 12/13/13: Installation of DEC-006TC.



**ATTACHMENT 3**  
**RSI GEOPHYSICAL REPORT**



February 19, 2014

Mr. George Kisluk  
Mr. Michael Gutmann  
Mr. Scott McCabe  
URS Corporation, Inc.  
77 Goodell Street  
Buffalo, NY 14203

Re: Utility Clearance Survey using GPR and EM Induction  
Spic and Span (WA #C007540-2.1) Site  
Brooklyn, New York  
NYDEC Contract WA C007540-5

Dear Gentlemen,

Please find attached our finalized GPR, and EM induction (EMI) interpretations for the Spic and Span site performed on January 20th, 2014. The purpose of these investigations were to confirm that the proposed monitoring well and soil boring/soil vapor locations were clear of utilities and other obstructions. RSI personnel President and Sr. Geophysicist Doria Kutrubes was on site to conduct ground penetrating radar (GPR) and EMI surveys to locate potential utilities. Key results are also summarized below:

Boring no.	Proposed Location	Recommended Location	Comments
DEC 108	3E,5N	2.5E,6.5N	Utility parallel 5E, gas line parallel 6.5E
DEC108D	9E,5N	9E,6.5N	Utility parallel 5E, gas line parallel 6.5E
SG 190	2.5E,5N	1.5E,1.5N	Utility parallel 7N
DEC 201	3.5E,6N	4E, 14N	
DEC 201D	3.5E,12N	4E,4N	
DEC 110D	4E,5N	6E,5N (optional)	Recommended location OK. Option to move.
DEC110S	4E,12.5N	6E,12.5N (optional)	Recommended location OK. Option to move.
DEC 109	5E,5N	N/A	Recommended location OK.
DEC 109D	5E,12N	N/A	Recommended location OK.
SG 191	5E,5N	N/A	Recommended location OK.
SG 193	3E,1N	N/A	Recommended location OK.
SG 188	6E,4N	N/A	Recommended location OK.



DEC 107	5E,5N	N/A	Recommended location OK.
DEC 107D	5E,10N	N/A	Recommended location OK.
SG 183	5E,24N	N/A	Recommended location OK.
DEC 083	5E,5N	N/A	Recommended location OK.
SG 184	5E,1.5S	N/A	Recommended location OK. Electric utility parallel 6S and 4.5S
SG 185	5E,2.5S	N/A	Recommended location OK.
SG 186	5E,3.5S	N/A	Recommended location OK. Electric utility parallel 6S and 7S
SG 187	5E,1.5S	2.5E,1.5S	GPR point targets clustered near proposed location.
SG 192	5E,5N	N/A	Recommended location OK. Excavation parallel to 2.5E. Gas parallel to 3.5S. Unknown utility parallel 3N.
SG 189	5E,5N	N/A	Recommended location OK.
SG 200	5E,5N	N/A	Recommended location OK. Point targets parallel 6.5E.
SG 199	5E,5N	N/A	Recommended location OK.
SG 198	1.5E,4N	N/A	Recommended location OK. Excavation at 1.5N.
SG 197	5E,5N	5E,6N	Gas parallel 13S. Point targets parallel 3.5-4.5N.
SG 196	5E,5N	4E,8N	Large target 3N to 5.5N. Fill vent at 4N, 1W.
SG 195	5E,5N	7E,7N	

Please drill with caution as not all utilities may have been detected in the field. We appreciate this opportunity to work with URS Corporation, Inc. again. Please call should you have any inquiries regarding this or future assignments.

Sincerely,  
RADAR SOLUTIONS INTERNATIONAL



President and Sr. Geophysicist



**ATTACHMENT 4**

**SOIL VAPOR IMPLANT CONSTRUCTION LOGS**



**DRILLING SUMMARY**

**Geologist:**  
M. Abdelaziz

**Drilling Company:**  
Zebra Environmental

**Driller:**  
Lucas Reiss/Carlos Fernandez

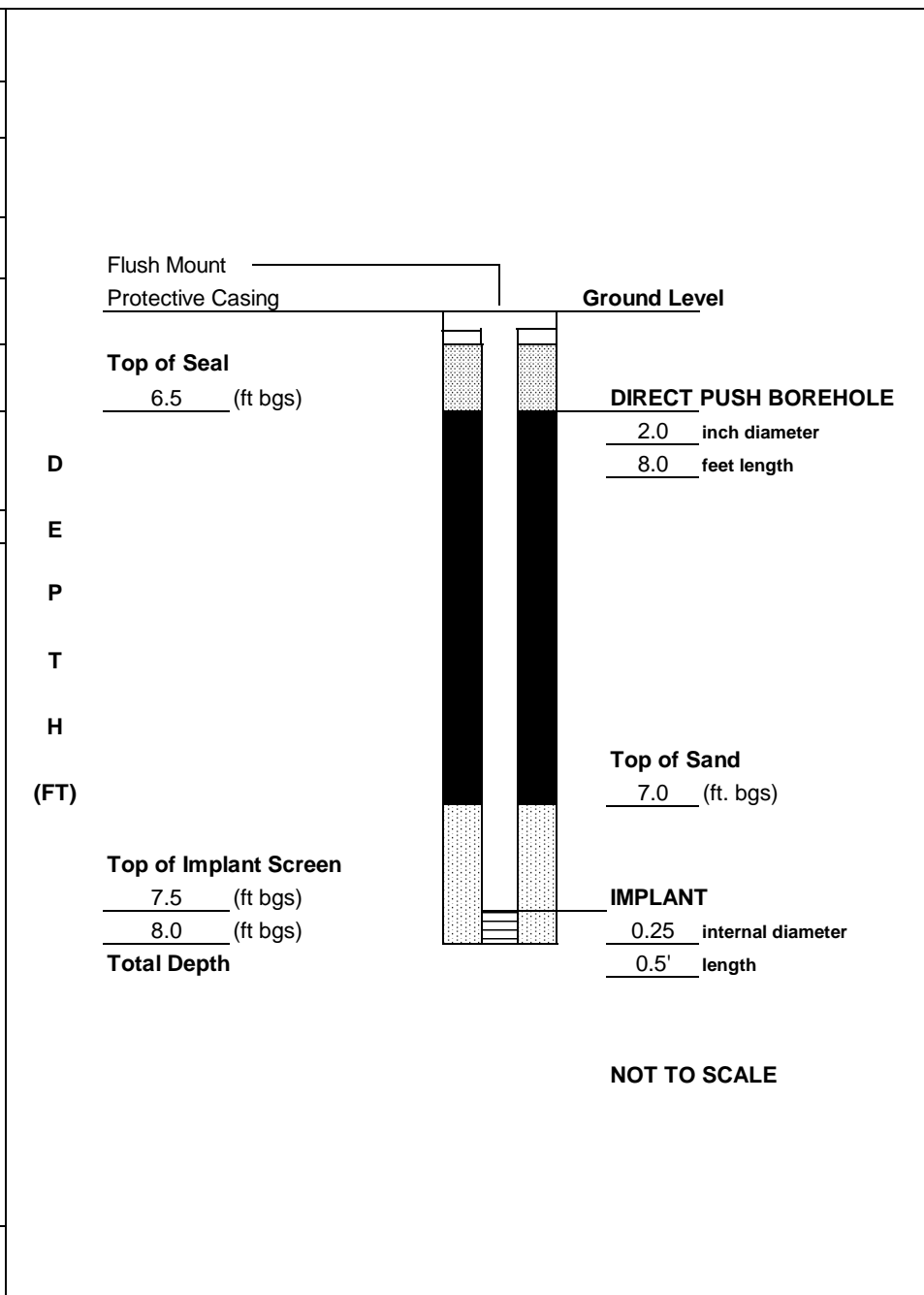
**Rig Make/Model:**  
Geoprobe 6620 DT

**Date:**  
2/7/2014

**GEOLOGIC LOG**

Depth(ft.)	Description
0-0.4	CONCRETE
0.4-8	Brown fine to very fine SAND and SILT, trace clay from 4.5-5', dry, 0 ppm




**WELL DESIGN**



CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
<b>Surface:</b> 5-inch Steel grade box	<b>Type:</b> 6 inch stainless steel implant	<b>Type:</b> #1 Sand <b>Setting:</b> 7-8 ft
<b>Monitor:</b> 3/8 inch OD polyethylene tubing	<b>Pore Diameter:</b> 0.007 inch	<b>SEAL MATERIAL</b>
		<b>Type:</b> Bentonite Slurry <b>Setting:</b> 6.5-7 ft

**COMMENTS:**  
Sample collected between 7.5-8' bgs at 9:35 for TCL VOCs analysis.

**LEGEND**

	Cement/Bentonite Grout
	Bentonite Seal
	Silica Sandpack

**Client:** NYSDEC

**URS Corporation**

**Meeker Avenue Plume Trackdown Site - Klink Comso Phase III**

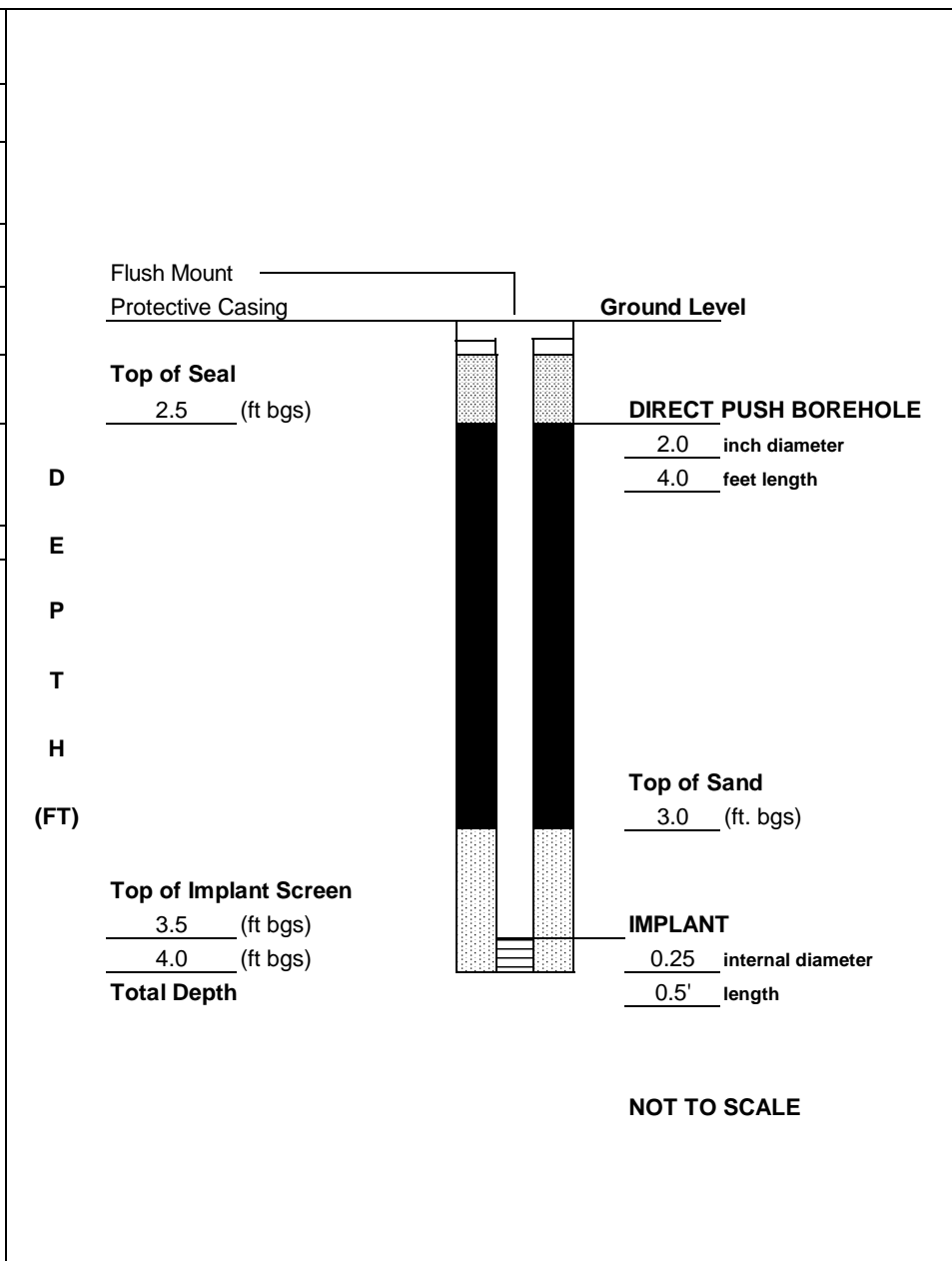
**SOIL VAPOR IMPLANT CONSTRUCTION DETAILS**

**Project No.:** 11176390.00002

**Well Number:** SG-195



DRILLING SUMMARY	
<b>Geologist:</b> M. Abdelaziz	
<b>Drilling Company:</b> Zebra Environmental	
<b>Driller:</b> Lucas Reiss/Carlos Fernandez	
<b>Rig Make/Model:</b> Geoprobe 6620 DT	
<b>Date:</b> 2/7/2014	
GEOLOGIC LOG	
Depth(ft.)	Description
0-0.4	CONCRETE
0.4-4	Brown fine to very fine SAND and SILT, trace very fine gravel, dry, 0 ppm



**WELL DESIGN**

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
<b>Surface:</b> 5-inch Steel grade box	<b>Type:</b> 6 inch stainless steel implant	<b>Type:</b> #1 Sand <b>Setting:</b> 3-4 ft
<b>Monitor:</b> 3/8 inch OD polyethylene tubing	<b>Pore Diameter:</b> 0.007 inch	SEAL MATERIAL
		<b>Type:</b> Bentonite Slurry <b>Setting:</b> 2.5-3 ft

**COMMENTS:**  
Sample collected between 3.5-4' bgs at 10:10 for TCL VOCs analysis.

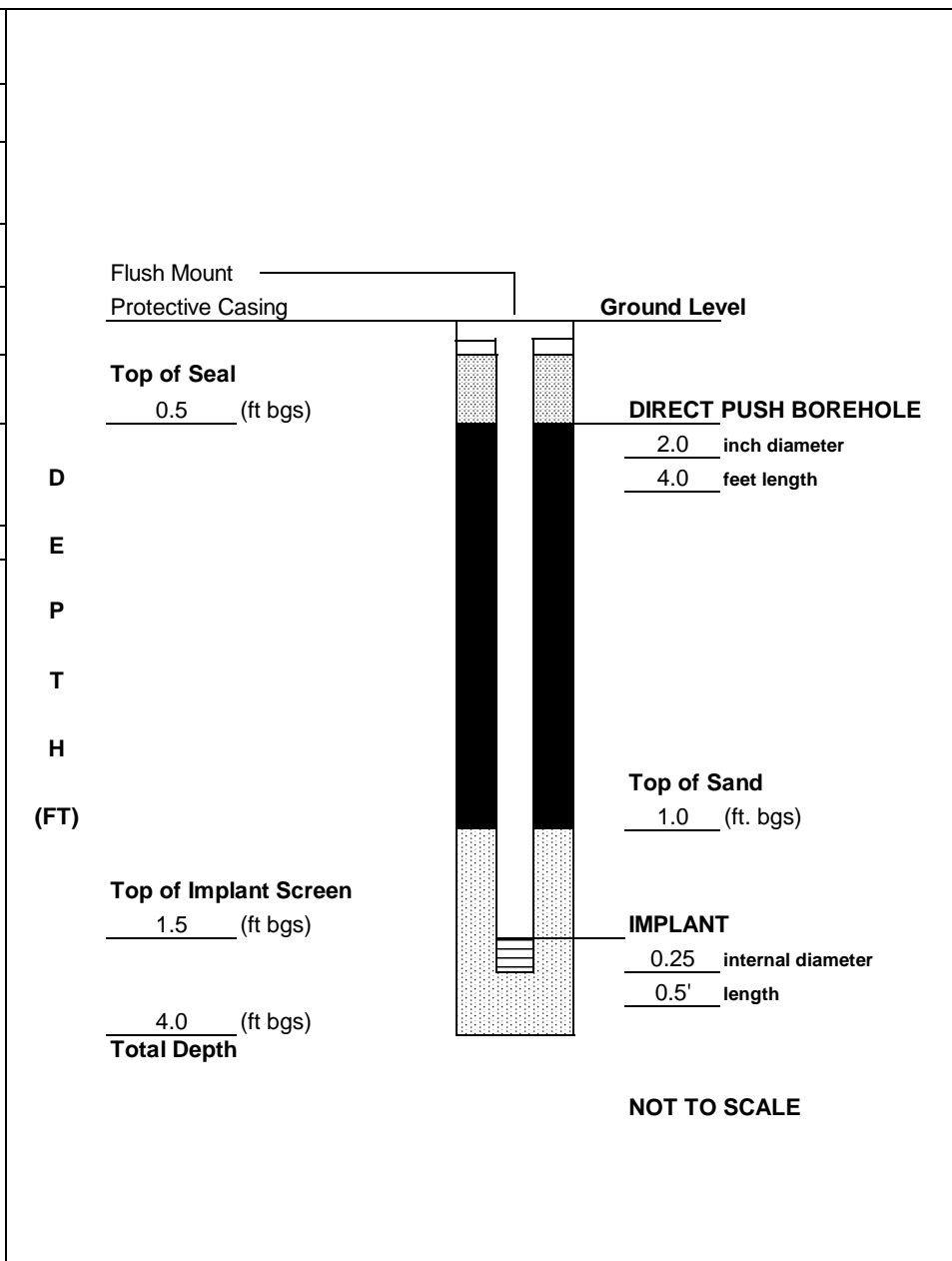
**LEGEND**

	Cement/Bentonite Grout
	Bentonite Seal
	Silica Sandpack

<b>Client:</b> NYSDEC	<b>Meeker Avenue Plume Trackdown Site - Klink Comso Phase III</b>	<b>Project No.:</b> 11176390.00002
<b>URS Corporation</b>	<b>SOIL VAPOR IMPLANT CONSTRUCTION DETAILS</b>	<b>Well Number:</b> SG-196



DRILLING SUMMARY	
<b>Geologist:</b> M. Abdelaziz	
<b>Drilling Company:</b> Zebra Environmental	
<b>Driller:</b> Lucas Reiss/Carlos Fernandez	
<b>Rig Make/Model:</b> Geoprobe 6620 DT	
<b>Date:</b> 2/7/2014	
GEOLOGIC LOG	
Depth(ft.)	Description
0-0.4	CONCRETE
0.4-4	Brown fine to very fine SAND and SILT, dry to wet 2.1', 0 ppm



**WELL DESIGN**

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
<b>Surface:</b> 5-inch Steel grade box	<b>Type:</b> 6 inch stainless steel implant	<b>Type:</b> #1 Sand <b>Setting:</b> 1-4 ft
<b>Monitor:</b> 3/8 inch OD polyethylene tubing	<b>Pore Diameter:</b> 0.007 inch	SEAL MATERIAL
		<b>Type:</b> Bentonite Slurry <b>Setting:</b> 0.5-1 ft

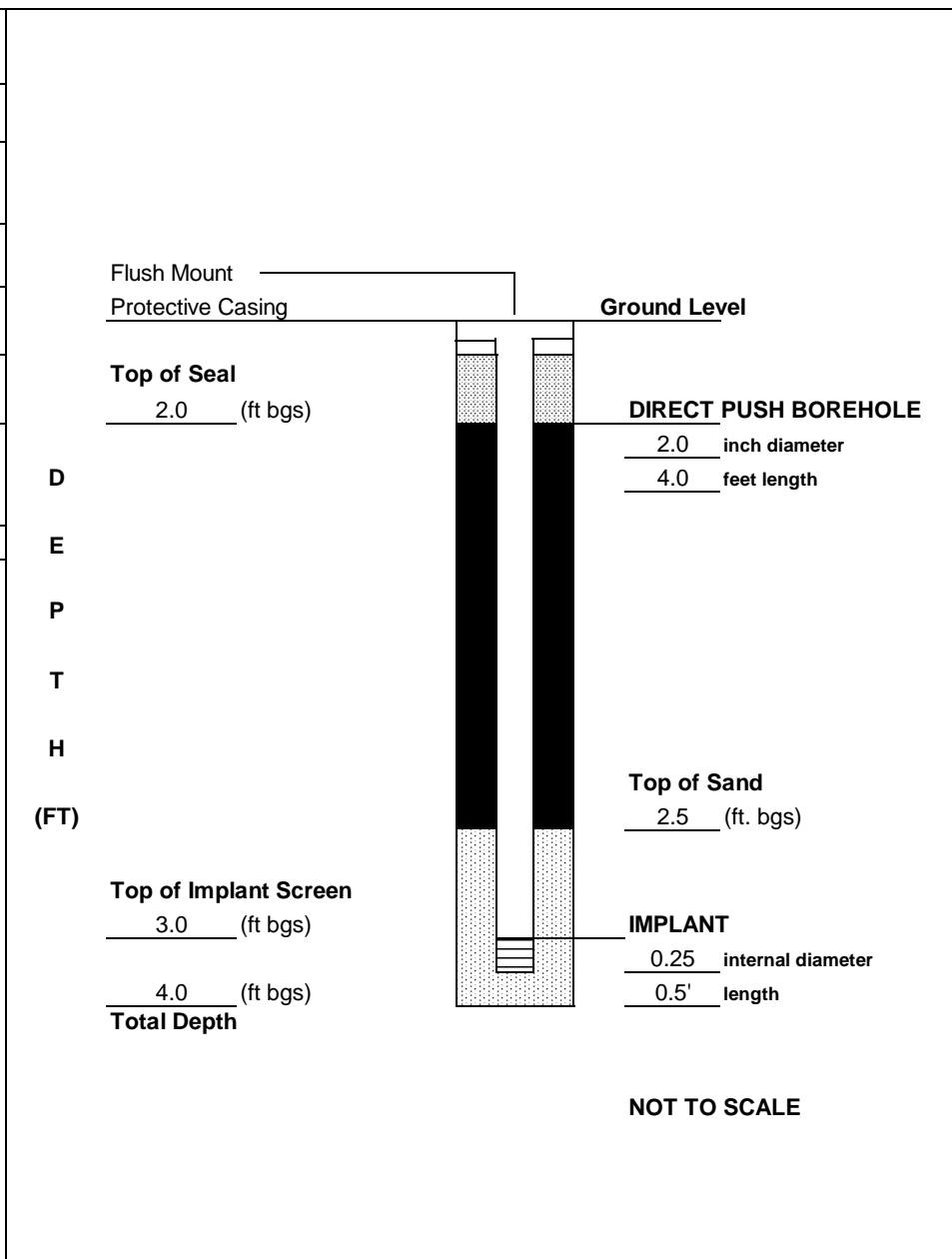
**COMMENTS:**  
Sample collected between 1.5-2' bgs at 11:10 for TCL VOCs analysis.

**LEGEND**

	Cement/Bentonite Grout
	Bentonite Seal
	Silica Sandpack

<b>Client:</b> NYSDEC	<b>Meeker Avenue Plume Trackdown Site - Klink Comso Phase III</b>	<b>Project No.:</b> 11176390.00002
<b>URS Corporation</b>	<b>SOIL VAPOR IMPLANT CONSTRUCTION DETAILS</b>	<b>Well Number:</b> SG-197

DRILLING SUMMARY	
<b>Geologist:</b> M. Abdelaziz	
<b>Drilling Company:</b> Zebra Environmental	
<b>Driller:</b> Lucas Reiss/Carlos Fernandez	
<b>Rig Make/Model:</b> Geoprobe 6620 DT	
<b>Date:</b> 2/7/2014	
GEOLOGIC LOG	
Depth(ft.)	Description
0-0.8	CONCRETE
0.8-4	Brown fine SAND, some silt, dry to moist at 3.6', 0 ppm






**WELL DESIGN**

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
<b>Surface:</b> 5-inch Steel grade box	<b>Type:</b> 6 inch stainless steel implant	<b>Type:</b> #1 Sand <b>Setting:</b> 2.5-4 ft
<b>Monitor:</b> 3/8 inch OD polyethylene tubing	<b>Pore Diameter:</b> 0.007 inch	SEAL MATERIAL
		<b>Type:</b> Bentonite Slurry <b>Setting:</b> 2-2.5 ft

**COMMENTS:**  
Sample collected between 3-3.5' bgs at 12:10 for TCL VOCs analysis.

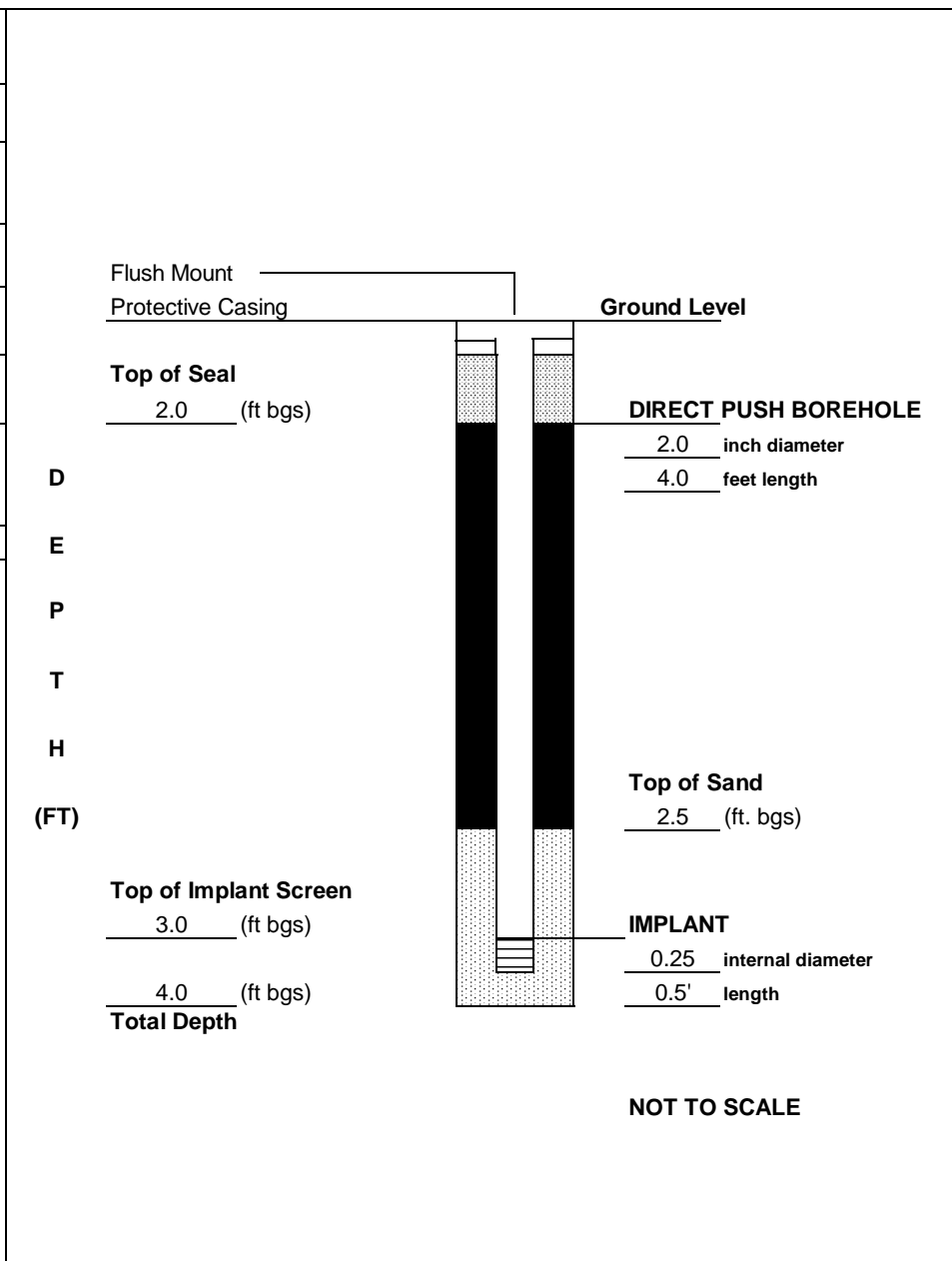
**LEGEND**

	Cement/Bentonite Grout
	Bentonite Seal
	Silica Sandpack

<b>Client:</b> NYSDEC	<b>Meeker Avenue Plume Trackdown Site - Klink Comso Phase III</b>	<b>Project No.:</b> 11176390.00002
<b>URS Corporation</b>	<b>SOIL VAPOR IMPLANT CONSTRUCTION DETAILS</b>	<b>Well Number:</b> SG-199



DRILLING SUMMARY	
<b>Geologist:</b> M. Abdelaziz	
<b>Drilling Company:</b> Zebra Environmental	
<b>Driller:</b> Lucas Reiss/Carlos Fernandez	
<b>Rig Make/Model:</b> Geoprobe 6620 DT	
<b>Date:</b> 2/7/2014	
GEOLOGIC LOG	
Depth(ft.)	Description
0-0.8	CONCRETE
0.8-4	Brown fine sand, some silt, dry to moist at 3.6', 0 ppm



**WELL DESIGN**

CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
<b>Surface:</b> 5-inch Steel grade box	<b>Type:</b> 6 inch stainless steel implant	<b>Type:</b> #1 Sand <b>Setting:</b> 2.5-4 ft
<b>Monitor:</b> 3/8 inch OD polyethylene tubing	<b>Pore Diameter:</b> 0.007 inch	<b>SEAL MATERIAL</b>
		<b>Type:</b> Bentonite Slurry <b>Setting:</b> 2-2.5 ft

**COMMENTS:**  
Sample collected between 3-3.5' bgs at 12:58 for TCL VOCs analysis.

**LEGEND**

	Cement/Bentonite Grout
	Bentonite Seal
	Silica Sandpack

<b>Client:</b> NYSDEC	<b>Meeker Avenue Plume Trackdown Site - Klink Comso Phase III</b>	<b>Project No.:</b> 11176390.00002
<b>URS Corporation</b>	<b>SOIL VAPOR IMPLANT CONSTRUCTION DETAILS</b>	<b>Well Number:</b> SG-200

**ATTACHMENT 5**  
**SUMMA CANISTER SAMPLING FIELD DATA SHEETS**



## Summa Canister Sampling Field Data Sheet

Site: Meeker Avenue Soil Vapor Intrusion Investigation

Samplers: Mira Abdelaziz and John Crespo

Date: 2/12/2014

Sample #	AA-20140212	SG-200	DUP-20140212	SG-199	SG-195
Location	Richardson St.	Vandervoort Ave.	Vandervoort Ave.	Vandervoort Ave.	Division St.
Summa Canister ID	3421	868	862	3406	851
Flow Controller ID	1033	1158	1077	2120	1027
Additional Tubing Added	NO	YES 1ft	YES 1ft	YES 1ft	YES 1ft
Purge Time (Start)	NA	13:54	13:54	14:12	14:32
Purge Time (Stop)	NA	13:57	13:57	14:15	14:35
Total Purge Time (min)	NA	3	3	3	3
Purge Volume (L)	NA	2	2	2	2
PID Test of Purge Air (ppm)	NA	0.0	0.0	0.0	0.0
Initial Tracer Gas Results (ppm)	NA	0.0	0.0	0.0	0.0
Pressure Gauge - before sampling	-30	-29	-29	-28.5	-27
Sample Time (Start)	13:07	14:00	14:00	14:28	14:36
Sample Time (Stop)	14:07	15:00	15:00	15:28	15:36
Total Sample Time (min)	60	60	60	60	60
Pressure Gauge - after sampling	-6	-3	-3	-2	-1
Sample Volume (L)	6	6	6	6	6
Canister Pressure Went To Ambient Pressure?	NO	NO	NO	NO	NO
Final Tracer Gas Results	NA	NA	NA	NA	NA
Associated Ambient Air Sample Number	AA-20140212	AA-20140212	AA-20140212	AA-20140212	AA-20140212
General Comments:	DUP-20140212 is duplicate of SG-200				

## Summa Canister Sampling Field Data Sheet

Site: Meeker Avenue Soil Vapor Intrusion Investigation

Samplers: Mira Abdelaziz and John Crespo

Date: 2/12/2014

Sample #	SG-196	SG-197			
Location	Division St.	Division St.			
Summa Canister ID	853	3402			
Flow Controller ID	1030	1166			
Additional Tubing Added	YES 1ft	YES 1ft			
Purge Time (Start)	14:44	15:00			
Purge Time (Stop)	14:47	15:04			
Total Purge Time (min)	3	3			
Purge Volume (L)	2	2			
PID Test of Purge Air (ppm)	0.0	0.0			
Initial Tracer Gas Results (ppm)	0.0	0.13			
Pressure Gauge - before sampling	-30	-29			
Sample Time (Start)	14:48	15:06			
Sample Time (Stop)	15:48	16:06			
Total Sample Time (min)	60	60			
Pressure Gauge - after sampling	-3	-1			
Sample Volume (L)	6	6			
Canister Pressure Went To Ambient Pressure?	NO	NO			
Final Tracer Gas Results	NA	NA			
Associated Ambient Air Sample Number	AA-20140212	AA-20140212			
General Comments:					



**ATTACHMENT 6**

**BORING LOGS and WELL CONSTRUCTION LOGS**

PROJECT/PROJECT LOCATION: Former Klink Cosmo Site

SHEET: 1 OF 5

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 11176390.00003

BORING CONTRACTOR: Associated Environmental

NORTHING: 202541.2

EASTING: 1002132.04

GROUNDWATER: 45 ft bgs

CAS. SAMPLER CORE TUBE

GROUND ELEVATION: 49.17

DATE	TIME	LEVEL	TYPE	TYPE		Split Spoon		
				DIA.		2"		
				WT.		140#		
				FALL		30"		

DATE STARTED:	12/9/13
DATE FINISHED:	12/23/13
DRILLER:	Ryan Jensen
GEOLOGIST:	Justin King

\* POCKET PENETROMETER READING

REVIEWED BY: K. McGovern

DEPTH FEET	STRATA	SAMPLE		REC%	COLOR	SOIL	MATERIAL DESCRIPTION	USCS	PID	REMARKS
		NO.	BLOW COUNT	RQD%		CONSISTENCY				

0					Lt Gray		CONCRETE	Concrete	0.0	
					Brown		SILT, trace fine sand	ML		
					Tan					
-5		1	8,12,15,19	83		Medium Dense	Fine SAND	SP	0.1	
		2	7,7,8,11	100	Brown		SILT, some fine sand	ML	0.0	
		3	8,15,21,29	100		Dense	8'-10', trace clay		0.0	
-10		4	6,13,13,41	96		Medium Dense	Fine SAND, trace silt	SP		
		5	29,18,21,18	38		Dense	SILT, trace to some fine sand, trace cobbles	ML	0.1	
-15		6	5,7,10,12	21		Medium Dense			0.0	
		7	5,5,6,9	88	Tan to Gray		Fine to medium SAND	SW	0.1	
-20		8	5,4,5,7	75					0.2	
		9	Macrocore	50	Tan				0.0	Used Macrocore sampler from 20-25'
-25		10	7,6,6,7	71					0.0	

COMMENTS: Boring hand cleared to 5 ft bgs then advanced with truck-mounted Diedrich D120 drill rig and 5-inch OD casing.

Collected geotech grab samples at 34'-35' and 113'-115' bgs, and a shelby tube grab at 119-121' bgs.



DEPTH FEET	STRATA	SAMPLE		REC %	COLOR	SOIL CONSISTENCY	MATERIAL DESCRIPTION	USCS	PID	REMARKS	
		NO.	BLOW COUNT	RQD %		ROCK HARDNESS					
-30	[Pattern]	11	8,12,14,15	71	Brown		Fine to medium SAND		0.0		
		12	4,4,7,7	54			SILT, some sand and mica, trace gravel	ML	0.0		
-35	[Pattern]	13	9,10,12,16	50	Gray Brown		Fine SAND, some silt	SM	0.0		
		14	17,16,22,43	83		Dense	Fine to medium SAND	SW	0.0		
		15	16,27,30,53	63			Very Dense	SILT, some fine sand and gravel, trace clay	ML	0.0	
									SW	0.0	
-40	[Pattern]	16	Macrocore	0				0.0	Attempted to use Macrocore at 37'		
		Advanced boring from 37'-45', no samples collected									
-45	[Pattern]	17	60,38,35,35	33					0.2	Wet	
		18	24,58,65,59	25					0.0		
-50	[Pattern]	19	26,39,58,42	67					0.7		
		20	24,27,46,62	88					1.7		
		21	10,15,24,23	25		Dense			5.8		
-55	[Pattern]	22	Macrocore	60		Very Dense	Fine to medium SAND, some gravel, trace silt		1.4	Used Macrocore sampler from 55-60'	
									3.9		

COMMENTS: Boring hand cleared to 5 ft bgs then advanced with truck-mounted Diedrich D120 drill rig and 5-inch OD casing.  
 Collected geotech grab samples at 34'-35' and 113'-115' bgs, and a shelby tube grab at 119-121' bgs.

DEPTH FEET	STRATA	SAMPLE		REC %	COLOR	SOIL CONSISTENCY	MATERIAL DESCRIPTION	USCS	PID	REMARKS
		NO.	BLOW COUNT	RQD %		ROCK HARDNESS				
-60		23	Macrocore	47			Fine SAND	SP	10.3	Used Macrocore sampler from 55-60'
							Fine to medium SAND, some gravel	SW	13.9	
									6.1	
-65		24	28,31,23,17	38					0.9	
		25	20,28,30,29	33					3.6	
-70		26	16,15,15,17	58		Dense			0.6	
		27	26,26,18,17	46					0.4	
-75		28	29,32,38,40	0		Very Dense				
		29	29,17,18,20	38		Dense			0.4	
		30	25,23,25,32	0						
-80		31	38,34,32,34	50		Very Dense			0.3	
		32	15,16,17,18	63		Dense			0.5	
		33	27,28,29,23	42		Very Dense			0.3	
-85		34	37,31,21,23	42					0.4	
		35	47,44,39,34	33					0.2	
-90		36	39,25,21,19	38		Dense			0.1	

COMMENTS: Boring hand cleared to 5 ft bgs then advanced with truck-mounted Diedrich D120 drill rig. and 5-inch OD casing.

Collected geotech grab samples at 34'-35' and 113'-115' bgs, and a shelby tube grab at 119-121' bgs.



PROJECT: Former Klink Cosmo Site

SHEET: 4 OF 5

CLIENT: New York State Department of Environmental Conservation

JOB NO. :11176390.00003

DEPTH FEET	STRATA	SAMPLE		REC %	COLOR	SOIL CONSISTENCY	MATERIAL DESCRIPTION	USCS	PID	REMARKS
		NO.	BLOW COUNT	RQD %		ROCK HARDNESS				
		37	29,29,32,39	46		Very Dense			0.7	
		38	19,18,20,44	42		Dense			0.8	
-95		39	31,25,28,35	50		Very Dense			0.7	
		40	30,24,23,26	38		Dense			0.3	
100		41	19,17,22,27	46					1.0	
		42	61,59,53,34	42		Very Dense			1.4	
		43	22,32,35,40	42	Lt. Brown		Fine to coarse SAND, some gravel and silt		1.6	
105		44	33,28,27,27	25	Reddish Brown		Fine to medium SAND, some gravel, trace to some silt		3.0	
		45	30,31,30,34	63					2.1	
110		46	16,28,31,36	63					1.7	
		47	60,49,44,54	54					10.8	
		48	28,24,26,31	75		Dense			13.1	
115		49	43,28,31,37	58	Brown	Very Dense			2.1	
		50	42,64,49,28	63	Dk. Gray with White Mottling		Fine SAND, some silt	SM	0.3	
						Hard	CLAY, some silt, low plasticity	CL		
120							Collected Shelby Tube from 119'-121'			
							Overdrilled to 124' bgs			

COMMENTS: Boring hand cleared to 5 ft bgs then advanced with truck-mounted Diedrich D120 drill rig. and 5-inch OD casing.

Collected geotech grab samples at 34'-35' and 113'-115' bgs, and a shelby tube grab at 119-121' bgs.

PROJECT: Former Klink Cosmo Site

SHEET: 5 OF 5

CLIENT: New York State Department of Environmental Conservation

JOB NO. :11176390.00003

DEPTH FEET	STRATA	SAMPLE		REC %	COLOR	SOIL CONSISTENCY	MATERIAL DESCRIPTION	USCS	PID	REMARKS
		NO.	BLOW COUNT	RQD %		ROCK HARDNESS				
125							End of boring @ 124' bgs			
130										
135										
140										
145										
150										

COMMENTS: Boring hand cleared to 5 ft bgs then advanced with truck-mounted Diedrich D120 drill rig, and 5-inch OD casing.

Collected geotech grab samples at 34'-35' and 113'-115' bgs, and a shelby tube grab at 119-121' bgs.



BORING NO. : DEC-111D

PROJECT/PROJECT LOCATION: Former Klink Cosmo Site

SHEET: 1 OF 3

CLIENT: New York State Department of Environmental Conservation

JOB NO. : 11176390.00002

BORING CONTRACTOR: Glacier Drilling

NORTHING: 201871.68 EASTING: 1001871.05

GROUNDWATER: 35 ft bgs

CAS. SAMPLER CORE TUBE

GROUND ELEVATION: 36.27

DATE	TIME	LEVEL	TYPE	TYPE				
				DIA.				
				WT.				
				FALL				

DATE STARTED: 2/5/14

DATE FINISHED: 2/6/14

DRILLER: Mark Schock

GEOLOGIST: Rob Murphy

\* POCKET PENETROMETER READING

REVIEWED BY: K. McGovern

DEPTH FEET	STRATA	SAMPLE		REC%	COLOR	SOIL	MATERIAL DESCRIPTION	USCS	PID	REMARKS
		NO.	BLOW COUNT	RQD%		CONSISTENCY				

0							Boring hand cleared to 5 feet bgs			
-5		1		100	Brown		Fine to coarse SAND, some gravel, trace cobbles and silt	SW	0.0	Dry, No Odor
-10		2		100			Large COBBLES	Cobbles	0.0	Moist
-15		3		60			Silty fine to coarse SAND, some fine angular gravel	SM	0.0	
-20							Fine to coarse SAND and GRAVEL, trace cobbles	SW/GW		Damp to Dry
-25		4		100			Fine to coarse SAND, some fine to	SW	0.0	

COMMENTS: Boring hand cleared to 5 feet bgs then advanced with track-mounted Geoprobe 8140 LS Roto Sonic drill rig using 4-inch sampler and 6-inch OD casing.

Soil samples collected from 34-35 feet bgs for TCL VOC analysis.

BORING NO. : DEC-111D

DEPTH FEET	STRATA	SAMPLE		REC %	COLOR	SOIL CONSISTENCY	MATERIAL DESCRIPTION	USCS	PID	REMARKS
		NO.	BLOW COUNT	RQD %		ROCK HARDNESS				
							coarse gravel			
							COBBLES	Cobbles	0.0	
		5		100			Silty fine to coarse SAND, some gravel and cobbles	SM	0.0	
-30		6		50					0.0	
							Fine to coarse SAND and GRAVEL	SW/GW		
-35							Sample not recovered from 35'-40'			Wet
		7		70			Fine to coarse SAND, some to trace fine to coarse gravel, trace cobbles	SW	0.0	
-40										
-45										
-50		8		80					0.0	
-55										

COMMENTS: Boring hand cleared to 5 feet bgs then advanced with track-mounted Geoprobe 8140 LS Roto Sonic drill rig using 4-inch sampler and 6-inch OD casing.

Soil samples collected from 34-35 feet bgs for TCL VOC analysis.



PROJECT: Former Klink Cosmo Site

SHEET: 3 OF 3

CLIENT: New York State Department of Environmental Conservation

JOB NO. :11176390.00002

DEPTH FEET	STRATA	SAMPLE		REC %	COLOR	SOIL CONSISTENCY	MATERIAL DESCRIPTION	USCS	PID	REMARKS
		NO.	BLOW COUNT	RQD %		ROCK HARDNESS				
-60	[Dotted Pattern]	9		100					0.0	
-70		10		50					0.0	
-80							End of boring @ 80' bgs			
-90										

COMMENTS: Boring hand cleared to 5 feet bgs then advanced with track-mounted Geoprobe 8140 LS Roto Sonic drill rig using 4-inch sampler and 6-inch OD casing.  
Soil samples collected from 34-35 feet bgs for TCL VOC analysis.

DRILLING SUMMARY											
<b>Geologist:</b> Justin King											
<b>Drilling Company:</b> Associated Environmental											
<b>Driller:</b> Ryan Jensen/Jim Van Horn											
<b>Rig Make/Model:</b> Diedrich D120											
<b>Date:</b> 12/23/2013											
GEOLOGIC LOG											
Depth(ft.)	Description										
	See Boring Log for Lithologic Description.										
WELL DESIGN											
<table border="1"> <thead> <tr> <th>CASING MATERIAL</th> <th>SCREEN MATERIAL</th> <th>FILTER MATERIAL</th> </tr> </thead> <tbody> <tr> <td>Surface: Steel grade box</td> <td>Type: 2" Type 304 Stainless Steel</td> <td>Type: #0 Sand      Setting: 103-124'</td> </tr> <tr> <td>Monitor: 2" SCH 40 PVC</td> <td>Slot Size: 0.010" Continuous Wrap</td> <td> <th>SEAL MATERIAL</th>            Type: Bentonite Slurry      Setting: 1-103'         </td> </tr> </tbody> </table>		CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL	Surface: Steel grade box	Type: 2" Type 304 Stainless Steel	Type: #0 Sand      Setting: 103-124'	Monitor: 2" SCH 40 PVC	Slot Size: 0.010" Continuous Wrap	<th>SEAL MATERIAL</th> Type: Bentonite Slurry      Setting: 1-103'	SEAL MATERIAL
CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL									
Surface: Steel grade box	Type: 2" Type 304 Stainless Steel	Type: #0 Sand      Setting: 103-124'									
Monitor: 2" SCH 40 PVC	Slot Size: 0.010" Continuous Wrap	<th>SEAL MATERIAL</th> Type: Bentonite Slurry      Setting: 1-103'	SEAL MATERIAL								
<table border="1"> <thead> <tr> <th>COMMENTS:</th> <th>LEGEND</th> </tr> </thead> <tbody> <tr> <td></td> <td>  Concrete Apron   Bentonite Slurry   Silica Sandpack         </td> </tr> </tbody> </table>		COMMENTS:	LEGEND		Concrete Apron Bentonite Slurry Silica Sandpack						
COMMENTS:	LEGEND										
	Concrete Apron Bentonite Slurry Silica Sandpack										
Client: NYSDEC	Klink Cosmo Site	Project No.: 11176390.00002									
URS Corporation	MONITORING WELL CONSTRUCTION DETAILS	Well Number: DEC-006TC									



DRILLING SUMMARY		
<b>Geologist:</b> Rob Murphy		
<b>Drilling Company:</b> Glacier Drilling		
<b>Driller:</b> Mark Schock		
<b>Rig Make/Model:</b> Geoprobe 8140 LS Roto Sonic		
<b>Date:</b> 2/7/2014		
GEOLOGIC LOG		
Depth(ft.)	Description	
	See DEC-111D Boring Log for Lithologic Description.	
WELL DESIGN		
CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
<b>Surface:</b> Steel grade box	<b>Type:</b> 2" SCH 40 PVC	<b>Type:</b> #1 Sand <b>Setting:</b> 23-45'
<b>Monitor:</b> 2" SCH 40 PVC	<b>Slot Size:</b> 0.010"	SEAL MATERIAL
		<b>Type:</b> Bentonite <b>Setting:</b> 1-23'
COMMENTS:		LEGEND
		Concrete Apron
		Bentonite Chips Seal
		Silica Sandpack
<b>Client:</b> NYSDEC	<b>Klink Cosmo Site</b>	<b>Project No.:</b> 11176390.00002
<b>URS Corporation</b>	<b>MONITORING WELL CONSTRUCTION DETAILS</b>	<b>Well Number:</b> DEC-111

**DRILLING SUMMARY**

**Geologist:**  
Rob Murphy

**Drilling Company:**  
Glacier Drilling

**Driller:**  
Mark Schock

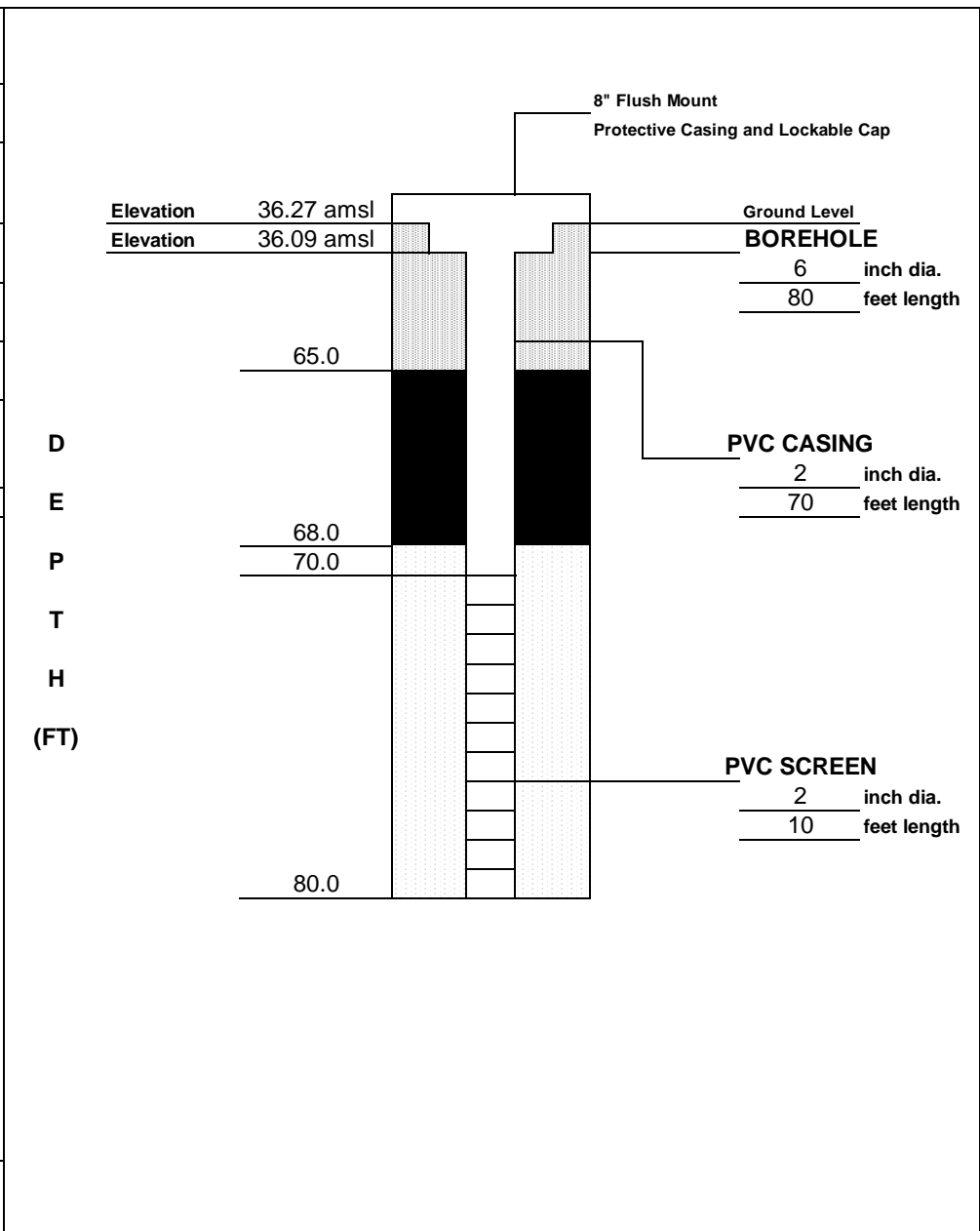
**Rig Make/Model:**  
Geoprobe 8140 LS Roto Sonic

**Date:**  
2/6/2014

**GEOLOGIC LOG**

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

**WELL DESIGN**



CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: Steel grade box	Type: 2" SCH 40 PVC	Type: #1 Sand Setting: 68-80'
Monitor: 2" SCH 40 PVC	Slot Size: 0.010"	<b>SEAL MATERIAL</b>
		Type: Bentonite Setting: 65-68'
<b>COMMENTS:</b>		<b>LEGEND</b>
		<div style="display: flex; align-items: center;"> <div style="width: 20px; height: 10px; background-color: #cccccc; border: 1px solid black; margin-right: 5px;"></div> <span>Bentonite Slurry</span> </div> <div style="display: flex; align-items: center;"> <div style="width: 20px; height: 10px; background-color: #000000; border: 1px solid black; margin-right: 5px;"></div> <span>Bentonite Chips Seal</span> </div> <div style="display: flex; align-items: center;"> <div style="width: 20px; height: 10px; background-color: #e0e0e0; border: 1px solid black; margin-right: 5px;"></div> <span>Silica Sandpack</span> </div>

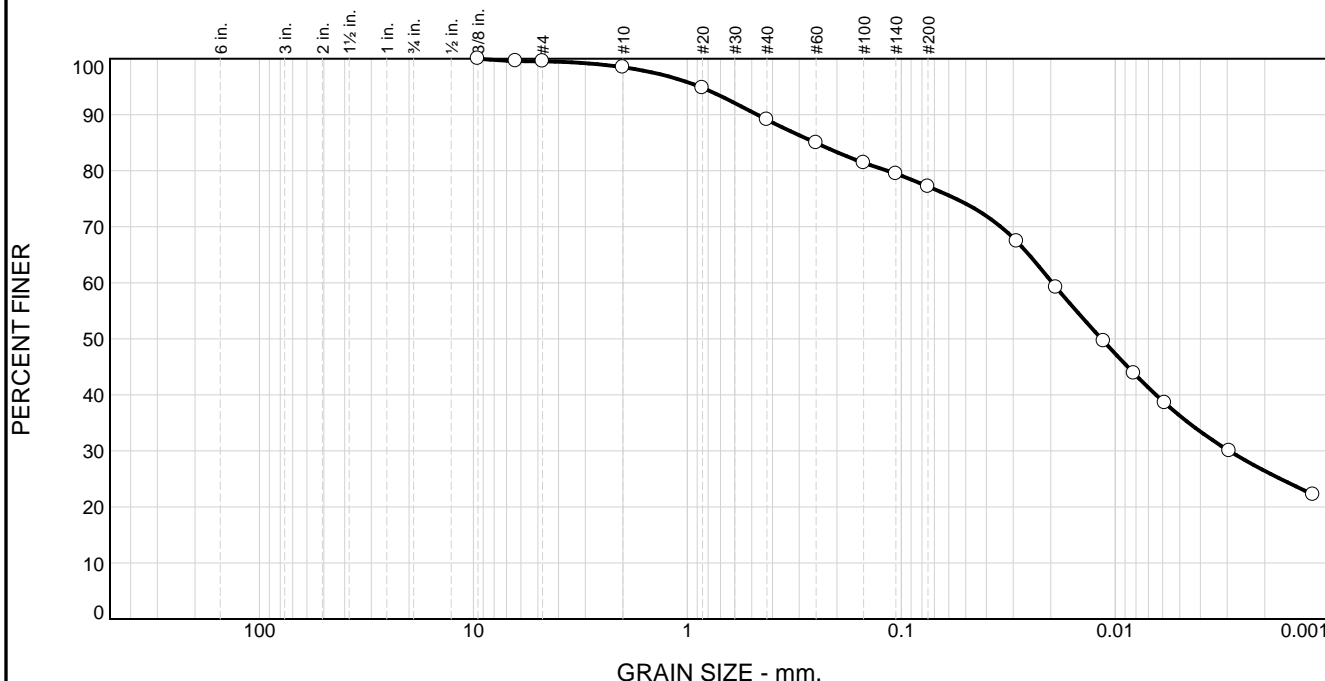
<b>Client:</b> NYSDEC	<b>Klink Cosmo Site</b>	<b>Project No.:</b> 11176390.00002
<b>URS Corporation</b>	<b>MONITORING WELL CONSTRUCTION DETAILS</b>	<b>Well Number:</b> DEC-111D



**ATTACHMENT 7**

**GEO TECHNICAL RESULTS**

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.5	1.0	9.4	11.9	40.9	36.3

TEST RESULTS (ASTM D 422)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.375	100.0		
.25	99.6		
#4	99.5		
#10	98.5		
#20	94.8		
#40	89.1		
#60	85.0		
#100	81.4		
#140	79.5		
#200	77.2		
0.0289 mm.	67.4		
0.0189 mm.	59.2		
0.0113 mm.	49.6		
0.0082 mm.	43.8		
0.0059 mm.	38.6		
0.0029 mm.	30.0		
0.0012 mm.	22.2		

\* (no specification provided)

**Material Description**

ID#14-003  
Greenish Black lean clay with sand

**Atterberg Limits (ASTM D 4318)**

PL= 19                      LL= 34                      PI= 15

**Classification**

USCS (D 2487)= CL                      AASHTO (M 145)= A-6(10)

**Coefficients**

D<sub>90</sub>= 0.4717                      D<sub>85</sub>= 0.2514                      D<sub>60</sub>= 0.0197  
D<sub>50</sub>= 0.0116                      D<sub>30</sub>= 0.0029                      D<sub>15</sub>=  
D<sub>10</sub>=                                      C<sub>u</sub>=                                      C<sub>c</sub>=

**Remarks**

Shrinkage Limit: 15%

---

Date Received: 1/17/14                      Date Tested: 1/30/14  
Tested By: JMA  
Checked By: CMP  
Title: LM

Source of Sample: Klink Cosmo Cleaners  
Sample Number: DEC-006TC

Depth: 119-121'

Date Sampled:

**3rd Rock, LLC**

Client: URS  
Project: Klink Cosmo Site

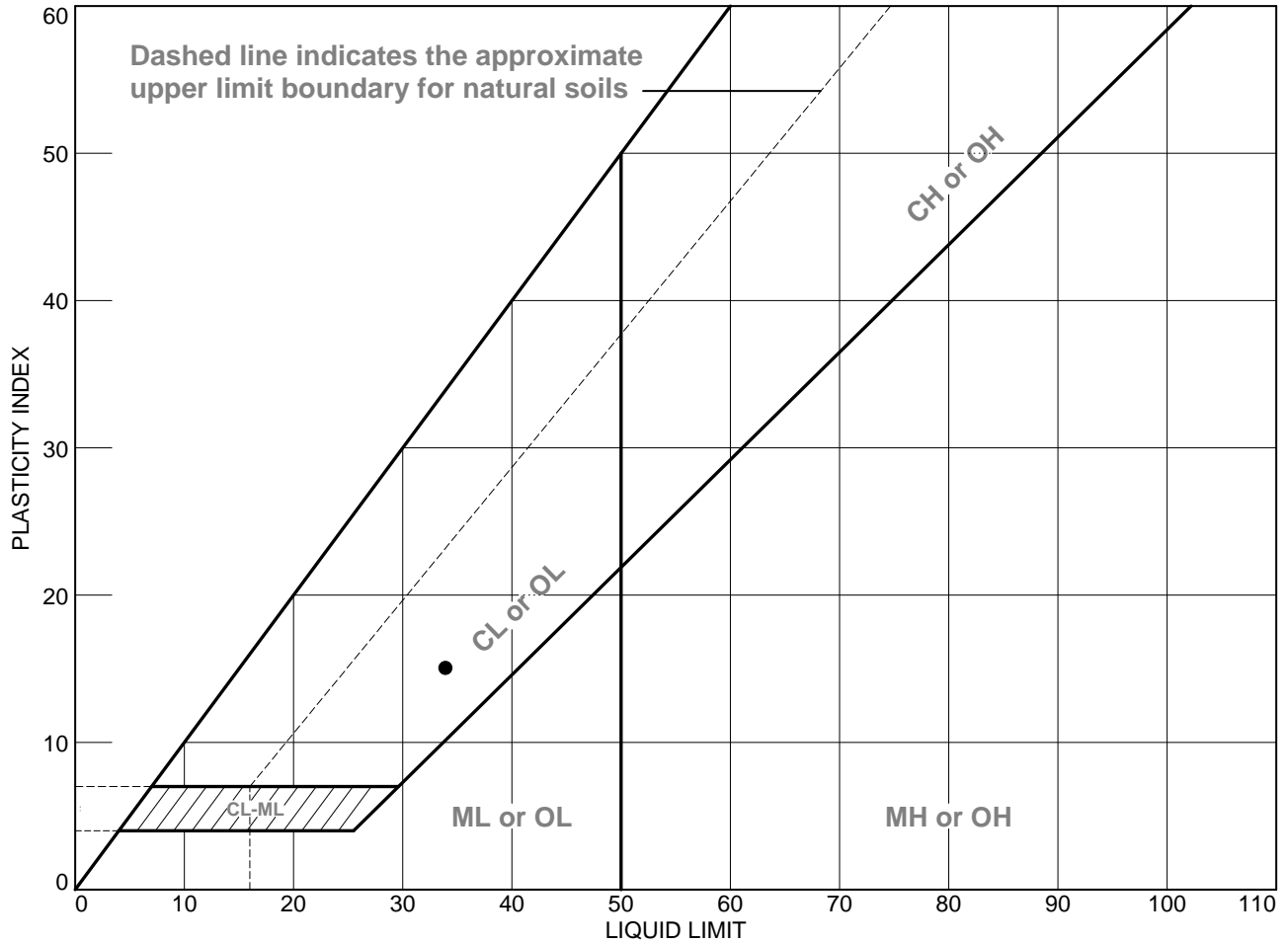
**East Aurora, NY**

Project No: 14-002

Figure



# LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Klink Cosmo Cleaners	DEC-006TC	119-121'		19	34	15	CL

**3rd Rock, LLC**

**East Aurora, NY**

**Client:** URS  
**Project:** Klink Cosmo Site

**Project No.:** 14-002

**Figure**

**Tested By:** JMA 1/30/14      **Checked By:** CMP



## FINAL PERMEABILITY REPORT

Project Name: Former Klink Cosmo Cleaners, URS	Date: 02/03/14
Project No.: 14-002	Tested By: JMA
Sample No.: DEC-006TC, 119-121'	Check By: CMP
Sample I.D.: 14-003	Date of Test: 01/20/14
Laboratory Method: ASTM D5084, Method C	Date Test Complete: 01/25/14
Comments: None	CELL NO.: 6B

### INITIAL SAMPLE DATA:

Height, in.: 2.051	Wet Density, pcf: 122.2
Diameter, in.: 2.817	Dry Density, pcf: 96.2
Moisture Content, %: 27.00	Compaction, %: NA

### FINAL SAMPLE DATA:

Height, in.: 2.001	Wet Density, pcf: 124.9
Diameter, in.: 2.811	Dry Density, pcf: 99.3
Moisture Content, %: 25.80	

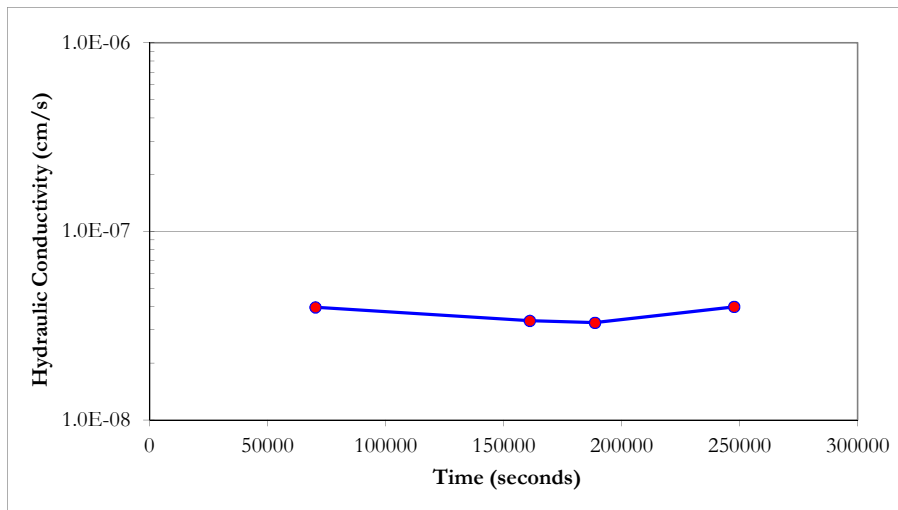
### SATURATION AND CONSOLIDATION DATA:

Consolidation Pressure: 85 psi  
 Backpressure: 80 psi  
 Saturation (B parameter): 96%

### AVERAGE PERMEABILITY RESULT (average of last 4 readings, K, cm/s):

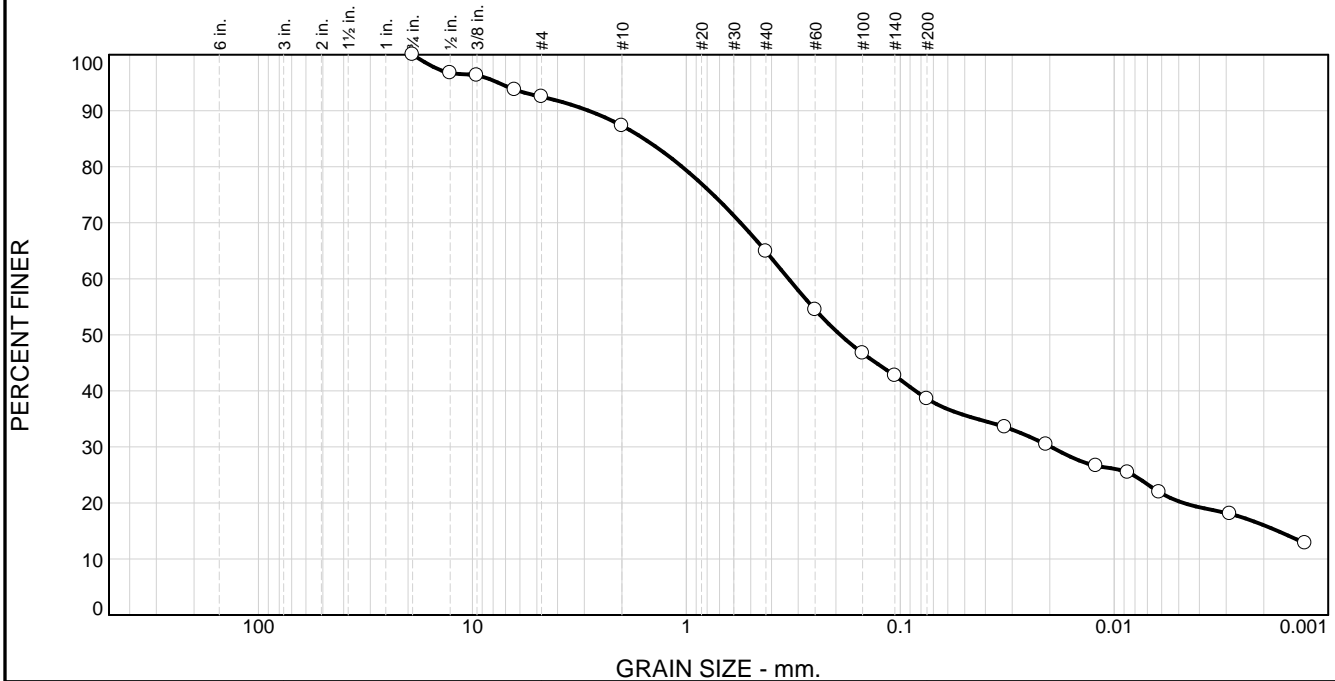
Trial #	Testing Pressures (psi)			Q (ml/sec)	Final K (cm/s)
	1	2	3		
1	84.8	80.1	79.7	8.76E-06	4.0E-08
2	84.8	80.1	79.7	7.43E-06	3.4E-08
3	84.8	80.1	79.7	7.25E-06	3.3E-08
4	84.8	80.1	79.8	6.61E-06	4.0E-08

Average K	3.6E-08
Average K , ft/day	1.0E-04





# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	7.5	5.2	22.4	26.3	18.3	20.3

TEST RESULTS (ASTM D 422)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.75	100.0		
.5	96.7		
.375	96.3		
.25	93.8		
#4	92.5		
#10	87.3		
#40	64.9		
#60	54.5		
#100	46.7		
#140	42.7		
#200	38.6		
0.0325 mm.	33.6		
0.0208 mm.	30.4		
0.0122 mm.	26.6		
0.0086 mm.	25.4		
0.0062 mm.	21.9		
0.0029 mm.	18.0		
0.0013 mm.	12.8		

\* (no specification provided)

**Material Description**

ID#14-016  
Clayey Sand

**Atterberg Limits (ASTM D 4318)**

PL= 24                      LL= 35                      PI= 11

**Classification**

USCS (D 2487)= SC                      AASHTO (M 145)= A-6(1)

**Coefficients**

D<sub>90</sub>= 2.8604                      D<sub>85</sub>= 1.5773                      D<sub>60</sub>= 0.3327  
D<sub>50</sub>= 0.1909                      D<sub>30</sub>= 0.0198                      D<sub>15</sub>= 0.0017  
D<sub>10</sub>=                                      C<sub>u</sub>=                                      C<sub>c</sub>=

Remarks

---

Date Received: 1/31/14                      Date Tested: 2/11/14

Tested By: JMA

Checked By: CMP

Title: LM

Source of Sample: Klink Cosmo Cleaners  
Sample Number: DEC-006TC

Depth: 34-35'

Date Sampled:

3rd Rock, LLC

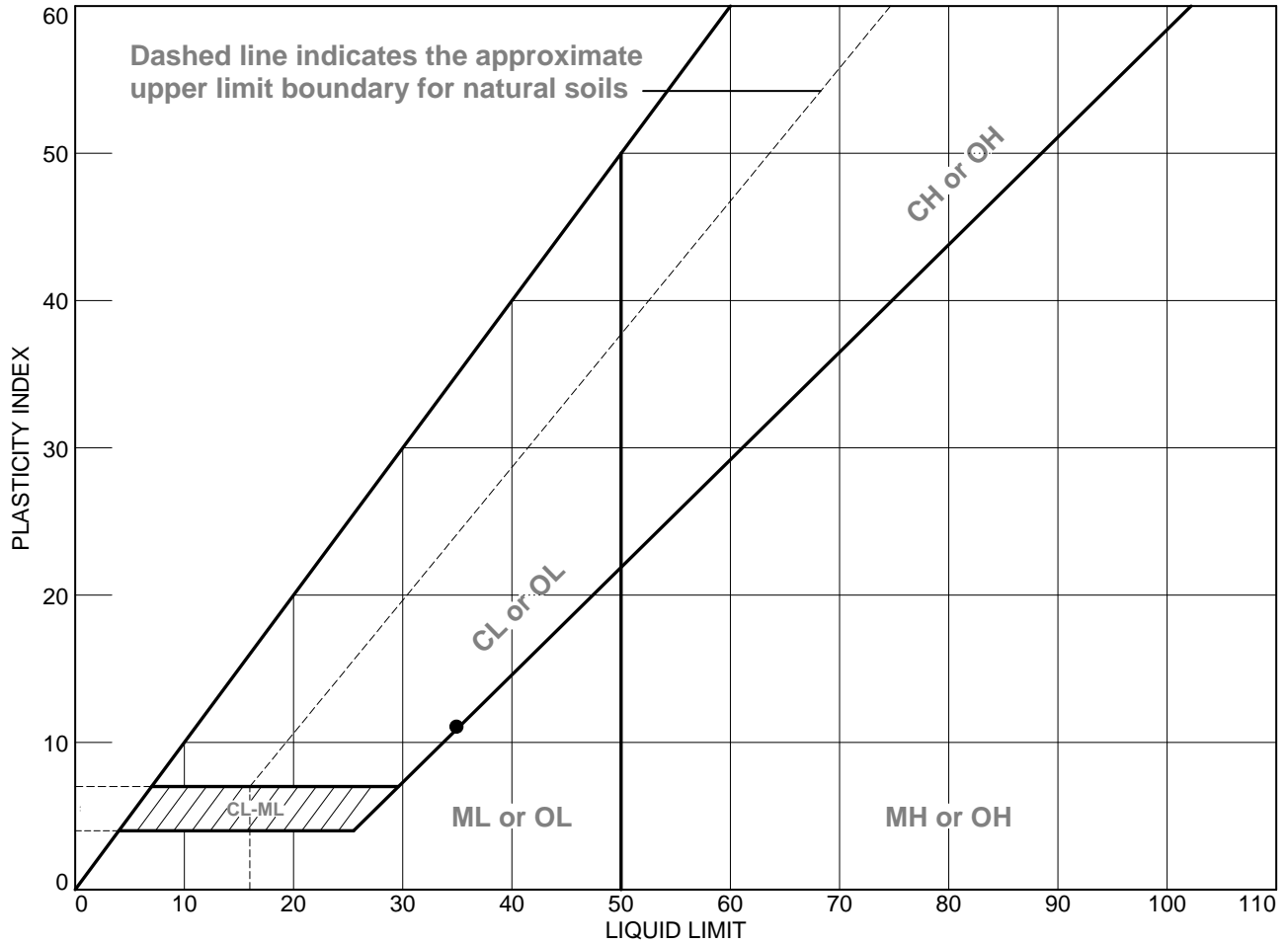
Client: URS  
Project: Klink Cosmo Site

East Aurora, NY

Project No: 14-002

Figure

# LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Klink Cosmo Cleaners	DEC-006TC	34-35'		24	35	11	SC

**3rd Rock, LLC**

**East Aurora, NY**

**Client:** URS  
**Project:** Klink Cosmo Site

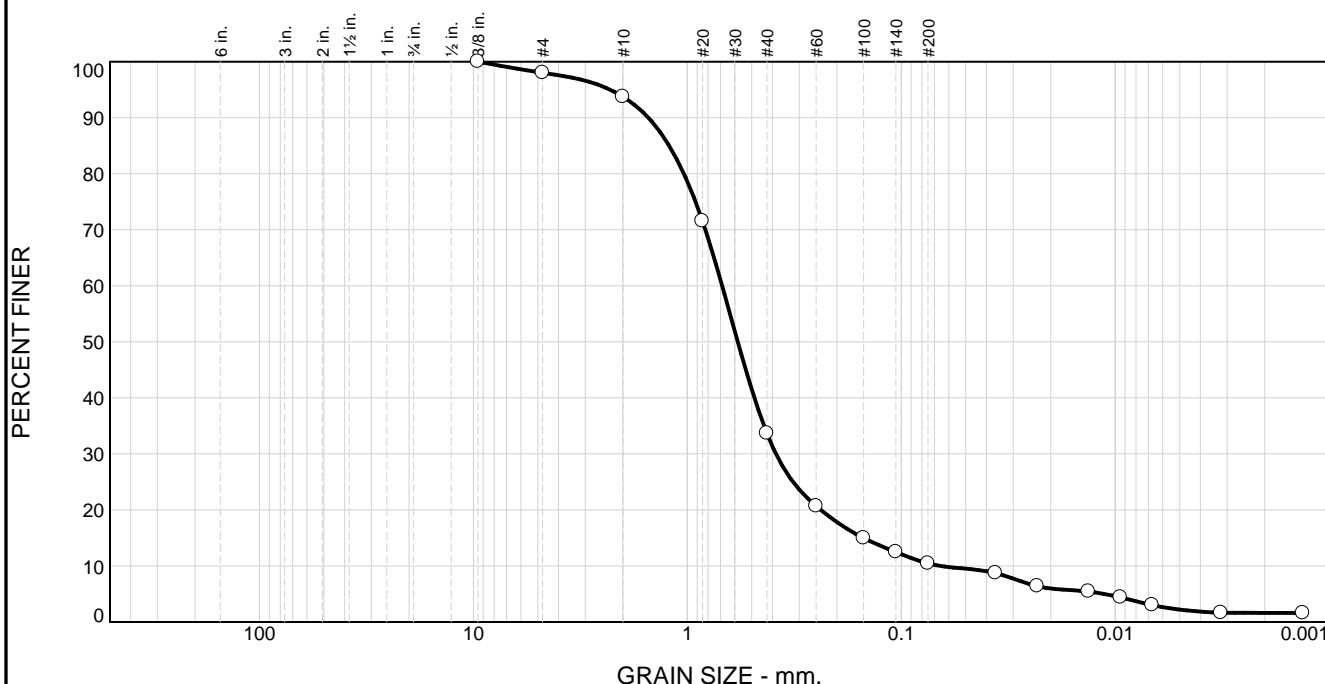
**Project No.:** 14-002

**Figure**

**Tested By:** JMA 1/31/14      **Checked By:** CMP



# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.0	4.2	60.1	23.2	8.3	2.2

TEST RESULTS (ASTM D 422)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.375	100.0		
#4	98.0		
#10	93.8		
#20	71.6		
#40	33.7		
#60	20.7		
#100	15.0		
#140	12.5		
#200	10.5		
0.0363 mm.	8.7		
0.0231 mm.	6.4		
0.0133 mm.	5.4		
0.0095 mm.	4.4		
0.0067 mm.	3.0		
0.0032 mm.	1.7		
0.0013 mm.	1.6		

\* (no specification provided)

**Material Description**

ID#14-002

**Atterberg Limits (ASTM D 4318)**

PL=                      LL=                      PI=

**Classification**

USCS (D 2487)=                      AASHTO (M 145)=

**Coefficients**

D<sub>90</sub>= 1.5213                      D<sub>85</sub>= 1.2165                      D<sub>60</sub>= 0.6879  
D<sub>50</sub>= 0.5812                      D<sub>30</sub>= 0.3854                      D<sub>15</sub>= 0.1503  
D<sub>10</sub>= 0.0655                      C<sub>u</sub>= 10.51                      C<sub>c</sub>= 3.30

Remarks

Date Received: 1/17/14                      Date Tested: 1/29/14  
Tested By: JMA  
Checked By: CMP  
Title: LM

Source of Sample: Klink Cosmo Cleaners  
Sample Number: DEC-006TC

Depth: 113-115'

Date Sampled:

**3rd Rock, LLC**

Client: URS  
Project: Klink Cosmo Site

**East Aurora, NY**

Project No: 14-002

Figure

**ATTACHMENT 8**

**WELL DEVELOPMENT AND PURGE LOGS**



# WELL DEVELOPMENT LOG

# URS Corporation

PROJECT TITLE: Klink Cosmo Site WELL NO.: DEC-006TC  
 PROJECT NO.: 11176390.00002 Page: 1 of 2  
 STAFF: Mira Abdelaziz  
 DATE(S): 1/23/2014

		WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	= <u>121.00</u>	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	= <u>49.52</u>	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	= <u>71.48</u>	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	= <u>0.17</u>	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	= <u>12.15</u>	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	= <u>36.45</u>	6"	1.50
7. VOLUME OF WATER REMOVED (GAL.)	= <u>300</u>	8"	2.60

OR  
 $V=0.0408 \times (\text{CASING DIAMETER})^2$

ACCUMULATED VOLUME PURGED (GALLONS)

PARAMETERS	10	20	30	40	50	60	70	80	90	100	110
pH	6.22	6.36	6.48	7.07	7.11	7.13	7.11	7.14	7.12	7.21	7.19
SPEC. COND. (mS)	3.22	3.20	2.98	3.00	3.03	2.83	2.87	3.01	3.07	3.11	3.01
TEMPERATURE (°C)	6.3	8.9	9.3	9.7	10.1	10.3	11.3	10.9	11.1	11.2	11.1
TURBIDITY (NTU)	>1,000	963	413	111	>1,000	716	286	53.8	>1,000	428	50.3
TIME	8:48	9:10	9:26	9:49	10:05	10:33	10:46	11:09	11:18	11:29	11:45
DTW					49.55						49.54

COMMENTS: Well developed using Waterra inertial pump with dedicated/disposable HDPE tubing and foot valve.  
 Clear no odor

# WELL DEVELOPMENT LOG

# URS Corporation

PROJECT TITLE: Klink Cosmo Site WELL NO.: DEC-006TC

PROJECT NO.: 11176390.00002 Page: 2 of 2

STAFF: Mira Abdelaziz

DATE(S): 1/23/2014

	=		WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	<u>121.00</u>	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	<u>49.52</u>	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	<u>71.48</u>	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	<u>0.17</u>	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	<u>12.15</u>	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	<u>36.45</u>	6"	1.50
7. VOLUME OF WATER REMOVED (GAL.)	=	<u>200</u>	8"	2.60

OR  
V=0.0408 x (CASING DIAMETER)<sup>2</sup>

ACCUMULATED VOLUME PURGED (GALLONS)

PARAMETERS	120	130	140	150	160	170	180	190	200		
pH	7.20	7.23	7.21	7.21	7.25	7.24	7.21	7.26	7.20		
SPEC. COND. (mS)	3.08	3.06	3.09	3.10	3.11	3.06	3.03	3.08	3.11		
TEMPERATURE (°C)	11.0	11.6	12.3	11.3	11.7	11.6	11.8	12.1	12.6		
TURBIDITY (NTU)	>1,000	113	55.6	31.3	71.8	40.9	33.6	21.7	20.9		
TIME	12:01	12:28	12:50	13:06	13:13	13:28	13:36	13:50	14:06		
DTW	49.53				49.54						

COMMENTS: Well developed using Waterra inertial pump with dedicated/disposable HDPE tubing and foot valve.

Clear turbid, no odor



# WELL DEVELOPMENT LOG

# URS Corporation

PROJECT TITLE: Klink Cosmo Site WELL NO.: DEC-111

PROJECT NO.: 11176390.00002 Page: 1 of 2

STAFF: Mira Abdelaziz

DATE(S): 2/19/2014

		WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	= <u>41.65</u>	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	= <u>34.43</u>	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	= <u>7.22</u>	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	= <u>0.17</u>	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	= <u>1.23</u>	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	= <u>3.68</u>	6"	1.50
7. VOLUME OF WATER REMOVED (GAL.)	= <u>110</u>	8"	2.60

OR  
V=0.0408 x (CASING DIAMETER)<sup>2</sup>

ACCUMULATED VOLUME PURGED (GALLONS)

PARAMETERS	5	10	15	20	25	30	35	40	45	50	55
pH	7.16	7.15	7.10	7.06	7.03	7.06	7.01	7.13	7.16	7.21	7.14
SPEC. COND. (mS)	0.54	0.50	0.46	0.41	0.38	0.35	0.30	0.32	0.31	0.36	0.34
TEMPERATURE (°C)	12.3	12.6	12.9	13.1	14.0	14.6	14.9	15.1	15.2	15.3	15.3
TURBIDITY (NTU)	>1,000	>1,000	>1,000	>1,000	563	361	>1,000	816	223	116	83.0
TIME	7:20	7:25	7:30	7:35	7:40	7:45	7:50	7:55	8:00	8:05	8:10
DTW	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45

COMMENTS: Well developed using Waterra inertial pump with dedicated/disposable HDPE tubing and foot valve.

# WELL DEVELOPMENT LOG

# URS Corporation

PROJECT TITLE: Klink Cosmo Site WELL NO.: DEC-111

PROJECT NO.: 11176390.00002 Page: 2 of 2

STAFF: Mira Abdelaziz

DATE(S): 2/19/2014

	=		WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	<u>41.65</u>	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	<u>34.43</u>	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	<u>7.22</u>	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	<u>0.17</u>	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	<u>1.23</u>	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	=	<u>3.68</u>	6"	1.50
7. VOLUME OF WATER REMOVED (GAL.)	=	<u>110</u>	8"	2.60

OR  
V=0.0408 x (CASING DIAMETER)<sup>2</sup>

ACCUMULATED VOLUME PURGED (GALLONS)

PARAMETERS	60	65	70	75	80	85	90	95	100	105	110
pH	7.11	7.09	7.07	7.13	7.06	7.09	7.06	7.07	7.03	7.02	7.06
SPEC. COND. (mS)	0.31	0.34	0.29	0.36	0.31	0.34	0.33	0.29	0.28	0.31	0.32
TEMPERATURE (°C)	15.4	15.5	15.6	15.5	15.6	15.8	15.6	15.6	15.6	15.7	15.8
TURBIDITY (NTU)	41.0	321	111	38.0	21.0	26.0	110	98.0	53.0	36.0	28.0
TIME	8:15	8:20	8:25	8:30	8:35	8:40	8:45	8:50	8:55	9:00	9:05
DTW	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45	34.45

COMMENTS: Well developed using Waterra inertial pump with dedicated/disposable HDPE tubing and foot valve.



# WELL DEVELOPMENT LOG

# URS Corporation

PROJECT TITLE: Klink Cosmo Site WELL NO.: DEC-111D

PROJECT NO.: 11176390.00002 Page: 1 of 2

STAFF: Mira Abdelaziz

DATE(S): 2/19/2014

		WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	= <u>79.62</u>	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	= <u>34.49</u>	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	= <u>45.13</u>	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	= <u>0.17</u>	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	= <u>7.67</u>	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	= <u>23.02</u>	6"	1.50
7. VOLUME OF WATER REMOVED (GAL.)	= <u>110</u>	8"	2.60

OR  
V=0.0408 x (CASING DIAMETER)<sup>2</sup>

ACCUMULATED VOLUME PURGED (GALLONS)

PARAMETERS	5	10	15	20	25	30	35	40	45	50	55
pH	8.50	8.46	8.58	8.21	8.06	7.83	7.72	7.63	7.59	7.51	7.43
SPEC. COND. (mS)	0.58	0.54	0.51	0.49	0.43	0.40	0.38	0.37	0.33	0.30	0.28
TEMPERATURE (°C)	11.6	11.9	12.6	12.8	13.0	13.2	13.5	13.6	13.7	13.8	13.8
TURBIDITY (NTU)	>1,000	>1,000	>1,000	>1,000	>1,000	863	816	759	681	418	366
TIME	9:30	9:35	9:40	9:45	9:50	9:55	10:00	10:05	10:10	10:15	10:20
DTW	34.52	34.52	34.52	34.52	34.52	34.52	34.52	34.52	34.52	34.52	34.52

COMMENTS: Well developed using Waterra inertial pump with dedicated/disposable HDPE tubing and foot valve.

# WELL DEVELOPMENT LOG

# URS Corporation

PROJECT TITLE: Klink Cosmo Site WELL NO.: DEC-111D

PROJECT NO.: 11176390.00002 Page: 2 of 2

STAFF: Mira Abdelaziz

DATE(S): 2/19/2014

		WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	= <u>79.62</u>	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	= <u>34.49</u>	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	= <u>45.13</u>	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	= <u>0.17</u>	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	= <u>7.67</u>	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x 3)	= <u>23.02</u>	6"	1.50
7. VOLUME OF WATER REMOVED (GAL.)	= <u>110</u>	8"	2.60

OR  
V=0.0408 x (CASING DIAMETER)<sup>2</sup>

ACCUMULATED VOLUME PURGED (GALLONS)

PARAMETERS	60	65	70	75	80	85	90	95	100	105	110
pH	7.46	7.50	7.44	7.41	7.38	7.31	7.29	7.21	7.29	7.33	7.29
SPEC. COND. (mS)	0.33	0.34	0.39	0.41	0.38	0.36	0.34	0.40	0.38	0.36	0.33
TEMPERATURE (°C)	13.0	13.3	13.3	13.3	13.4	13.4	14.0	14.3	15.1	15.3	15.4
TURBIDITY (NTU)	838	516	313	180	716	444	218	178	53.0	49.0	22.0
TIME	10:25	10:30	10:35	10:40	10:45	10:50	10:55	11:00	11:05	11:10	11:15
DTW	34.52	34.52	34.52	34.52	34.52	34.52	34.52	34.52	34.52	34.52	34.52

COMMENTS: Well developed using Waterra inertial pump with dedicated/disposable HDPE tubing and foot valve.











**ATTACHMENT 9**

**MONITORING WELL INSPECTION FORMS and SOIL  
VAPOR IMPLANT INSPECTION FORMS**





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 10:27  
 WELL ID: DEC-004  
 INSPECTOR (PRINT): Kevin McGovern

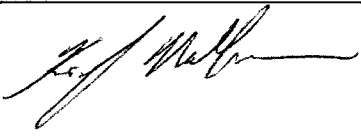
## EXTERIOR INSPECTION CONDITION

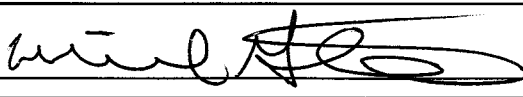
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 37.22 DEPTH TO BOTTOM: 49.5  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:20  
 WELL ID: DEC-006D  
 INSPECTOR (PRINT): Kevin McGovern

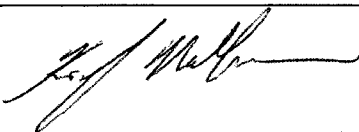
## EXTERIOR INSPECTION CONDITION

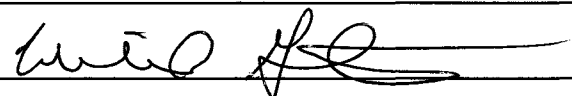
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 46.9 DEPTH TO BOTTOM: 57.5  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:25:00 AM  
 WELL ID: DEC-006DD  
 INSPECTOR (PRINT): Kevin McGovern

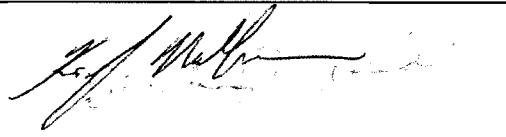
## EXTERIOR INSPECTION CONDITION

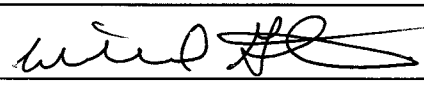
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION:                     Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR:                     Good  
 WELL RISER:                     Good  
 ANNULAR SPACE:                     clean  
 J PLUG:                     Good  
 WATER LEVEL:                     46.29 DEPTH TO BOTTOM:                     93.00  
 HARD/SOFT BOTTOM:                     Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:28:00 AM  
 WELL ID: DEC-006TC  
 INSPECTOR (PRINT): Kevin McGovern

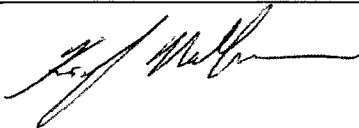
## EXTERIOR INSPECTION CONDITION

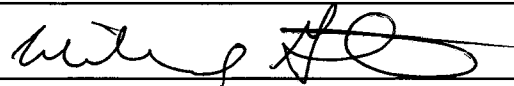
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 47.22 DEPTH TO BOTTOM: 120.15  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:35:00 AM  
 WELL ID: DEC-0071  
 INSPECTOR (PRINT): Kevin McGovern

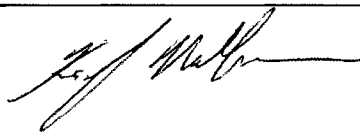
## EXTERIOR INSPECTION CONDITION

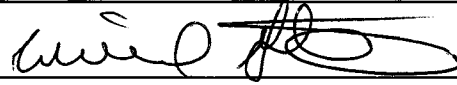
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 41.4 DEPTH TO BOTTOM: 55.30  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:39:00 AM  
 WELL ID: DEC-007D  
 INSPECTOR (PRINT): Kevin McGovern

## EXTERIOR INSPECTION CONDITION

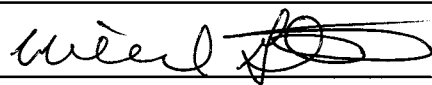
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION:                     Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR:                     Good  
 WELL RISER:                     Good  
 ANNULAR SPACE:                     clean  
 J PLUG:                     Good  
 WATER LEVEL:                     40.7 DEPTH TO BOTTOM:                     90.30  
 HARD/SOFT BOTTOM:                     Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
                    None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:45:00 AM  
 WELL ID: DEC-008  
 INSPECTOR (PRINT): Kevin McGovern


## EXTERIOR INSPECTION CONDITION


PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION:                     Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR:                     Good  
 WELL RISER:                     Good  
 ANNULAR SPACE:                     clean  
 J PLUG:                     Good  
 WATER LEVEL:                     38.9 DEPTH TO BOTTOM:                     48.00  
 HARD/SOFT BOTTOM:                     Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
                    None

ADDITIONAL COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 10:37:00 AM  
 WELL ID: DEC-009  
 INSPECTOR (PRINT): Kevin McGovern

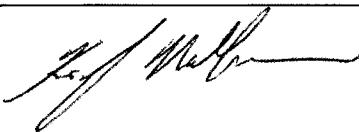
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 38.9 DEPTH TO BOTTOM: 48.50  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 10:40:00 AM  
 WELL ID: DEC-009D  
 INSPECTOR (PRINT): Kevin McGovern


## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 38.25 DEPTH TO BOTTOM: 67.20  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 2:00:00 PM  
 WELL ID: DEC-010  
 INSPECTOR (PRINT): Kevin McGovern

## EXTERIOR INSPECTION CONDITION

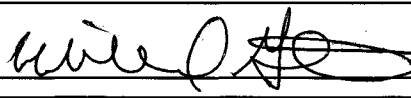
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 38.95 DEPTH TO BOTTOM: 49.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 2:05:00 PM  
 WELL ID: DEC-010D  
 INSPECTOR (PRINT): Kevin McGovern

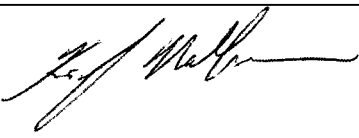
## EXTERIOR INSPECTION CONDITION

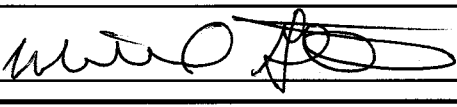
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 38.65 DEPTH TO BOTTOM: 74.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 2:20:00 PM  
 WELL ID: DEC-011  
 INSPECTOR (PRINT): Kevin McGovern

## EXTERIOR INSPECTION CONDITION

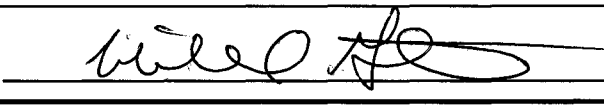
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 37.15 DEPTH TO BOTTOM: 46.90  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





# MONITORING WELL INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 1117690.00002  
DATE: 3/6/2014  
TIME: 2:21:00 PM  
WELL ID: DEC-011D  
INSPECTOR (PRINT): Kevin McGovern

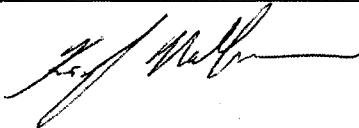
### EXTERIOR INSPECTION CONDITION


PROTECTIVE CASING/ CURB BOX: Good  
LOCK/HASP CONDITION: NA LOCK KEY #: NA  
HINGE/ LID: Good GASKET/SEAL : Good  
SECURITY BOLTS TYPE: Pentagon  
SECURITY BOLTS : Good THREAD CONDITION: Good  
WELL PAD: Good BOLLARDS: NA  
LABEL/ ID CONDITION: Poor  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

### INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
WELL RISER: Good  
ANNULAR SPACE: Good  
J PLUG: Good  
WATER LEVEL: 37.05 DEPTH TO BOTTOM: 74.00  
HARD/SOFT BOTTOM: Hard  
MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 3:00:00 PM  
 WELL ID: DEC-012  
 INSPECTOR (PRINT): Kevin McGovern

## EXTERIOR INSPECTION CONDITION

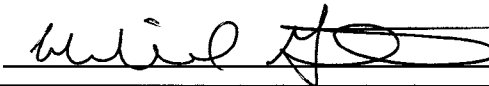
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: One loop operational  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Non-Existent  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 37.4 DEPTH TO BOTTOM: 49.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





# MONITORING WELL INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 1117690.00002  
DATE: 3/7/2014  
TIME: 11.:20  
WELL ID: DEC-013  
INSPECTOR (PRINT): Kevin McGovern

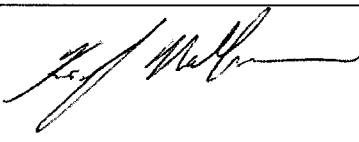
## EXTERIOR INSPECTION CONDITION

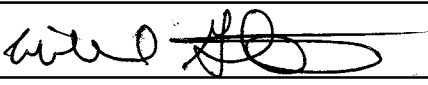
PROTECTIVE CASING/ CURB BOX: Good  
LOCK/HASP CONDITION: NA LOCK KEY #: NA  
HINGE/ LID: Good GASKET/SEAL : Good  
SECURITY BOLTS TYPE: Hex Pentagon  
SECURITY BOLTS : Good THREAD CONDITION: Good  
WELL PAD: Good BOLLARDS: NA  
LABEL/ ID CONDITION: Poor  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
WELL RISER: Good  
ANNULAR SPACE: clean  
J PLUG: Good  
WATER LEVEL: 37.35 DEPTH TO BOTTOM: 47.00  
HARD/SOFT BOTTOM: Hard  
MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 11.:23  
 WELL ID: DEC-013D  
 INSPECTOR (PRINT): Kevin McGovern


## EXTERIOR INSPECTION CONDITION


PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 36.85 DEPTH TO BOTTOM: 84.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:17:00 AM  
 WELL ID: DEC-014R  
 INSPECTOR (PRINT): Kevin McGovern

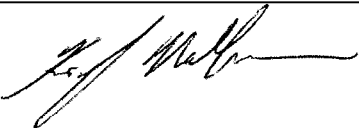
## EXTERIOR INSPECTION CONDITION

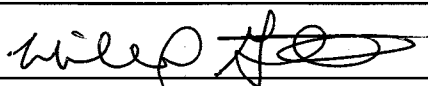
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 33.98 DEPTH TO BOTTOM: 44.60  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:18:00 AM  
 WELL ID: DEC-014D  
 INSPECTOR (PRINT): Kevin McGovern

## EXTERIOR INSPECTION CONDITION

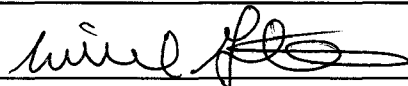
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 33.99 DEPTH TO BOTTOM: 87.20  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:35:00 AM  
 WELL ID: DEC-015R  
 INSPECTOR (PRINT): Kevin McGovern

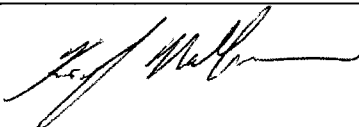
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 36.65 DEPTH TO BOTTOM: 43.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:37:00 AM  
 WELL ID: DEC-015D  
 INSPECTOR (PRINT): Kevin McGovern

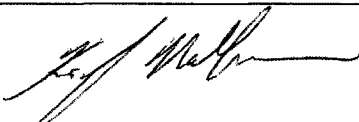
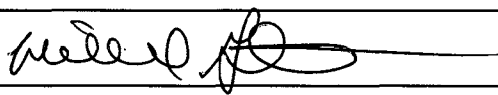
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 37.25 DEPTH TO BOTTOM: 45.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 10:10:00 AM  
 WELL ID: DEC-022D  
 INSPECTOR (PRINT): Kevin McGovern

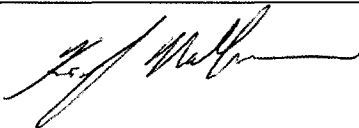
## EXTERIOR INSPECTION CONDITION

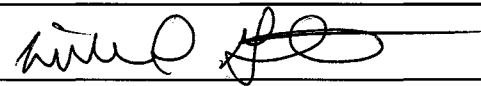
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Non-Existing  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 49.8 DEPTH TO BOTTOM: 60.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 10:20:00 AM  
 WELL ID: DEC-027  
 INSPECTOR (PRINT): Kevin McGovern

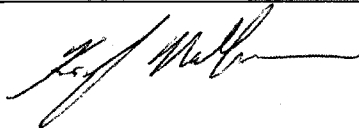
## EXTERIOR INSPECTION CONDITION

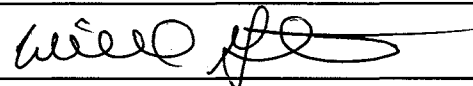
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Non-Existing  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 40.56 DEPTH TO BOTTOM: 49.30  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 11:00:00 AM  
 WELL ID: DEC-028  
 INSPECTOR (PRINT): Kevin McGovern

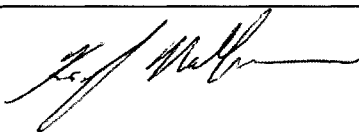
## EXTERIOR INSPECTION CONDITION

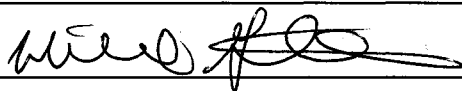
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Hex Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 38.26 DEPTH TO BOTTOM: 49.40  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 11:05:00 AM  
 WELL ID: DEC-028D  
 INSPECTOR (PRINT): Kevin McGovern


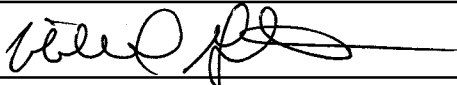
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 37.75 DEPTH TO BOTTOM: 80.90  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 11:10:00 AM  
 WELL ID: DEC-028TC  
 INSPECTOR (PRINT): Kevin McGovern


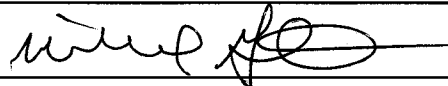
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: clean  
 J PLUG: Good  
 WATER LEVEL: 37.1 DEPTH TO BOTTOM: 113.10  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:45:00 AM  
 WELL ID: DEC-029  
 INSPECTOR (PRINT): Kevin McGovern


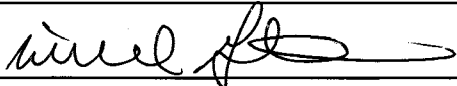
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 36.95 DEPTH TO BOTTOM: 50.30  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:46:00 AM  
 WELL ID: DEC-029D  
 INSPECTOR (PRINT): Kevin McGovern

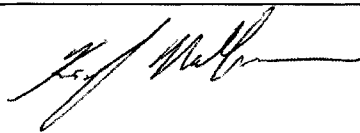

## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: NA - Inaccessible  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: \_\_\_\_\_ GASKET/SEAL : NA  
 SECURITY BOLTS TYPE: \_\_\_\_\_  
 SECURITY BOLTS : \_\_\_\_\_ THREAD CONDITION: \_\_\_\_\_  
 WELL PAD: \_\_\_\_\_ BOLLARDS: NA  
 LABEL/ ID CONDITION: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: NA  
 WELL RISER: \_\_\_\_\_  
 ANNULAR SPACE: \_\_\_\_\_  
 J PLUG: \_\_\_\_\_  
 WATER LEVEL: \_\_\_\_\_ DEPTH TO BOTTOM: \_\_\_\_\_  
 HARD/SOFT BOTTOM: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

ADDITIONAL COMMENTS: Inaccessible  
Beneath Vehicle

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:47:00 AM  
 WELL ID: DEC-029TC  
 INSPECTOR (PRINT): Kevin McGovern

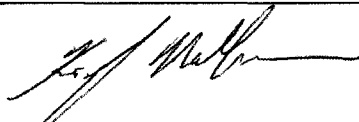
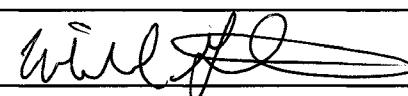
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: NA - Inaccessible  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: \_\_\_\_\_ GASKET/SEAL : NA  
 SECURITY BOLTS TYPE: \_\_\_\_\_  
 SECURITY BOLTS : \_\_\_\_\_ THREAD CONDITION: \_\_\_\_\_  
 WELL PAD: \_\_\_\_\_ BOLLARDS: NA  
 LABEL/ ID CONDITION: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: NA  
 WELL RISER: \_\_\_\_\_  
 ANNULAR SPACE: \_\_\_\_\_  
 J PLUG: \_\_\_\_\_  
 WATER LEVEL: \_\_\_\_\_ DEPTH TO BOTTOM: \_\_\_\_\_  
 HARD/SOFT BOTTOM: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

ADDITIONAL COMMENTS: Inaccessible  
Beneath Vehicle

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 11:30:00 AM  
 WELL ID: DEC-030  
 INSPECTOR (PRINT): Kevin McGovern

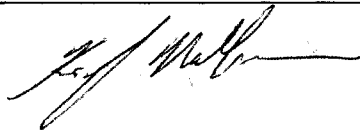
## EXTERIOR INSPECTION CONDITION

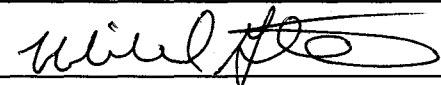
PROTECTIVE CASING/ CURB BOX: NA - Inaccessible  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: \_\_\_\_\_ GASKET/SEAL : NA  
 SECURITY BOLTS TYPE: \_\_\_\_\_  
 SECURITY BOLTS : \_\_\_\_\_ THREAD CONDITION: \_\_\_\_\_  
 WELL PAD: \_\_\_\_\_ BOLLARDS: NA  
 LABEL/ ID CONDITION: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: NA  
 WELL RISER: \_\_\_\_\_  
 ANNULAR SPACE: \_\_\_\_\_  
 J PLUG: \_\_\_\_\_  
 WATER LEVEL: \_\_\_\_\_ DEPTH TO BOTTOM: \_\_\_\_\_  
 HARD/SOFT BOTTOM: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

ADDITIONAL COMMENTS: Inaccessible  
Behing Barb Wire Fence

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 11:30:00 AM  
 WELL ID: DEC-030D  
 INSPECTOR (PRINT): Kevin McGovern

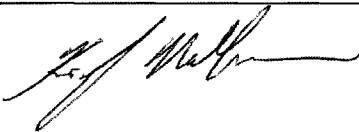
## EXTERIOR INSPECTION CONDITION

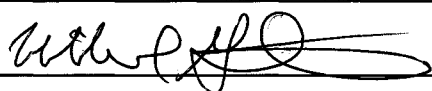
PROTECTIVE CASING/ CURB BOX: NA - Inaccessible  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: \_\_\_\_\_ GASKET/SEAL : NA  
 SECURITY BOLTS TYPE: \_\_\_\_\_  
 SECURITY BOLTS : \_\_\_\_\_ THREAD CONDITION: \_\_\_\_\_  
 WELL PAD: \_\_\_\_\_ BOLLARDS: NA  
 LABEL/ ID CONDITION: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: NA  
 WELL RISER: \_\_\_\_\_  
 ANNULAR SPACE: \_\_\_\_\_  
 J PLUG: \_\_\_\_\_  
 WATER LEVEL: \_\_\_\_\_ DEPTH TO BOTTOM: \_\_\_\_\_  
 HARD/SOFT BOTTOM: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

ADDITIONAL COMMENTS: Inaccessible  
Behind Barb Wire Fence

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 3:15:00 PM  
 WELL ID: DEC-031  
 INSPECTOR (PRINT): Kevin McGovern

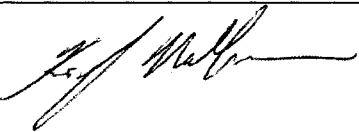
## EXTERIOR INSPECTION CONDITION

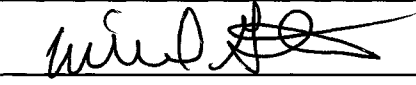
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 32.65 DEPTH TO BOTTOM: 43.50  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 3:17:00 PM  
 WELL ID: DEC-031D  
 INSPECTOR (PRINT): Kevin McGovern

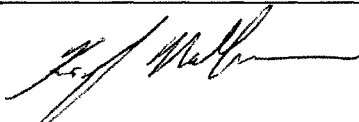
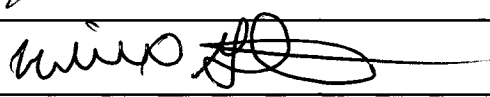
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 32.50 DEPTH TO BOTTOM: 80.50  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 3:20:00 PM  
 WELL ID: DEC-031TC  
 INSPECTOR (PRINT): Kevin McGovern

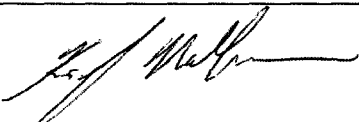

## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 32.80 DEPTH TO BOTTOM: 114.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 3:25:00 PM  
 WELL ID: DEC-032  
 INSPECTOR (PRINT): Kevin McGovern

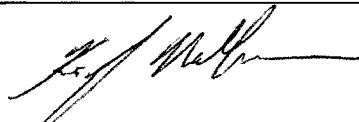
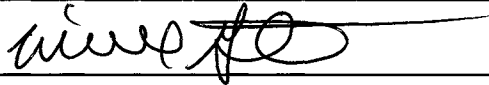
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 26.20 DEPTH TO BOTTOM: 43.60  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 7:30:00 AM  
 WELL ID: DEC-033  
 INSPECTOR (PRINT): Kevin McGovern

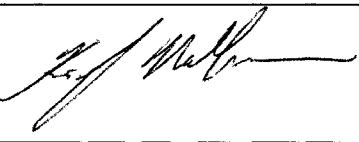
## EXTERIOR INSPECTION CONDITION

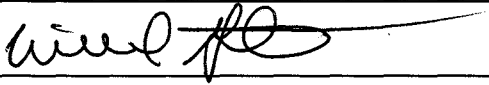
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
Replaced Bolts

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 33.80 DEPTH TO BOTTOM: 39.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
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 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 10:00:00 AM  
 WELL ID: DEC-039  
 INSPECTOR (PRINT): Kevin McGovern

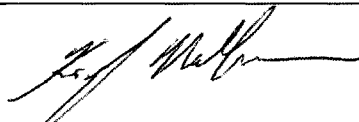
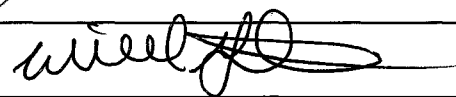
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Only two bolt holes  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 43.15 DEPTH TO BOTTOM: 51.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:50:00 AM  
 WELL ID: DEC-042  
 INSPECTOR (PRINT): Kevin McGovern

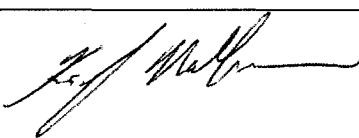

## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 40.15 DEPTH TO BOTTOM: 49.30  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
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# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:10:00 AM  
 WELL ID: DEC-043  
 INSPECTOR (PRINT): Kevin McGovern

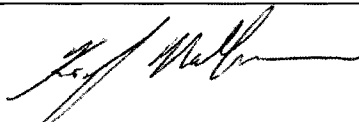
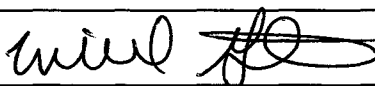
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor/ None  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 35.65 DEPTH TO BOTTOM: 50.05  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
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# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:13:00 AM  
 WELL ID: DEC-043D  
 INSPECTOR (PRINT): Kevin McGovern

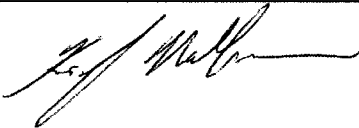
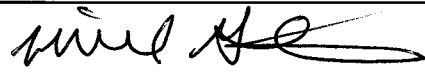
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: NA - Inaccessible  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: \_\_\_\_\_ GASKET/SEAL : NA  
 SECURITY BOLTS TYPE: \_\_\_\_\_  
 SECURITY BOLTS : \_\_\_\_\_ THREAD CONDITION: \_\_\_\_\_  
 WELL PAD: \_\_\_\_\_ BOLLARDS: NA  
 LABEL/ ID CONDITION: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: NA  
 WELL RISER: \_\_\_\_\_  
 ANNULAR SPACE: \_\_\_\_\_  
 J PLUG: \_\_\_\_\_  
 WATER LEVEL: \_\_\_\_\_ DEPTH TO BOTTOM: \_\_\_\_\_  
 HARD/SOFT BOTTOM: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

ADDITIONAL COMMENTS: Inaccessible  
Beneath 3'-4' Ice

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 3:05:00 PM  
 WELL ID: DEC-044  
 INSPECTOR (PRINT): Kevin McGovern

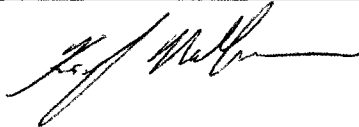
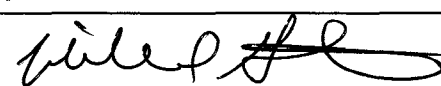
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 35.08 DEPTH TO BOTTOM: 44.50  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



# MONITORING WELL INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 1117690.00002  
DATE: 3/6/2014  
TIME: 3:07:00 PM  
WELL ID: DEC-044D  
INSPECTOR (PRINT): Kevin McGovern


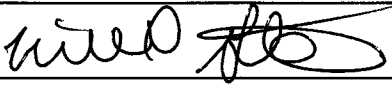
### EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
LOCK/HASP CONDITION: NA LOCK KEY #: NA  
HINGE/ LID: Good GASKET/SEAL : Good  
SECURITY BOLTS TYPE: Pentagon  
SECURITY BOLTS : Good THREAD CONDITION: Good  
WELL PAD: Good BOLLARDS: NA  
LABEL/ ID CONDITION:                     Poor  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

### INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR:                     Good  
WELL RISER:                     Good  
ANNULAR SPACE:                     Good  
J PLUG:                     Good  
WATER LEVEL:                     34.65 DEPTH TO BOTTOM:                     81.00  
HARD/SOFT BOTTOM:                     Hard  
MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

INSPECTOR (SIGNATURE):   
PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:00:00 AM  
 WELL ID: DEC-045  
 INSPECTOR (PRINT): Kevin McGovern


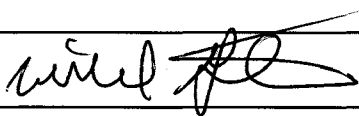
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: 2 of 3 loops operational  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 30.40 DEPTH TO BOTTOM: 45.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:02:00 AM  
 WELL ID: DEC-045D  
 INSPECTOR (PRINT): Kevin McGovern

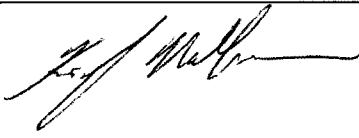
## EXTERIOR INSPECTION CONDITION

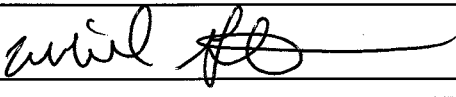
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Only 1 loop operational  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 30.05 DEPTH TO BOTTOM: 80.50  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 7:42:00 AM  
 WELL ID: DEC-046  
 INSPECTOR (PRINT): Kevin McGovern

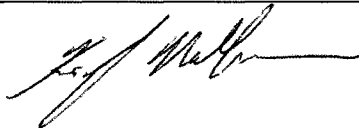
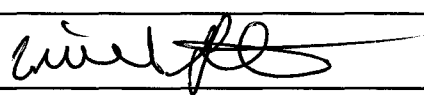
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: NA - Inaccessible  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: \_\_\_\_\_ GASKET/SEAL : NA  
 SECURITY BOLTS TYPE: \_\_\_\_\_  
 SECURITY BOLTS : \_\_\_\_\_ THREAD CONDITION: \_\_\_\_\_  
 WELL PAD: \_\_\_\_\_ BOLLARDS: NA  
 LABEL/ ID CONDITION: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: NA  
 WELL RISER: \_\_\_\_\_  
 ANNULAR SPACE: \_\_\_\_\_  
 J PLUG: \_\_\_\_\_  
 WATER LEVEL: \_\_\_\_\_ DEPTH TO BOTTOM: \_\_\_\_\_  
 HARD/SOFT BOTTOM: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

ADDITIONAL COMMENTS: Inaccessible  
Beneath Vehicle

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 7:43:00 AM  
 WELL ID: DEC-046D  
 INSPECTOR (PRINT): Kevin McGovern

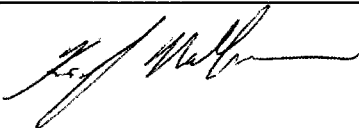
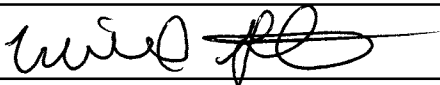
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: NA - Inaccessible  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: \_\_\_\_\_ GASKET/SEAL : NA  
 SECURITY BOLTS TYPE: \_\_\_\_\_  
 SECURITY BOLTS : \_\_\_\_\_ THREAD CONDITION: \_\_\_\_\_  
 WELL PAD: \_\_\_\_\_ BOLLARDS: NA  
 LABEL/ ID CONDITION: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: NA  
 WELL RISER: \_\_\_\_\_  
 ANNULAR SPACE: \_\_\_\_\_  
 J PLUG: \_\_\_\_\_  
 WATER LEVEL: \_\_\_\_\_ DEPTH TO BOTTOM: \_\_\_\_\_  
 HARD/SOFT BOTTOM: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

ADDITIONAL COMMENTS: Inaccessible  
Beneath Vehicle

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 7:38:00 AM  
 WELL ID: DEC-047  
 INSPECTOR (PRINT): Kevin McGovern


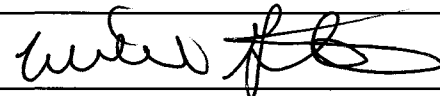
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor/ Non Existent  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 28.55 DEPTH TO BOTTOM: 43.60  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



# MONITORING WELL INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 1117690.00002  
DATE: 3/7/2014  
TIME: 7:45:00 AM  
WELL ID: DEC-048  
INSPECTOR (PRINT): Kevin McGovern

### EXTERIOR INSPECTION CONDITION


PROTECTIVE CASING/ CURB BOX: Good  
LOCK/HASP CONDITION: NA LOCK KEY #: NA  
HINGE/ LID: Good GASKET/SEAL : Good  
SECURITY BOLTS TYPE: Pentagon  
SECURITY BOLTS : Good THREAD CONDITION: Good  
WELL PAD: Good BOLLARDS: NA  
LABEL/ ID CONDITION: Poor  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

### INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
WELL RISER: Good  
ANNULAR SPACE: Good  
J PLUG: Good  
WATER LEVEL: 26.50 DEPTH TO BOTTOM: 42.00  
HARD/SOFT BOTTOM: Hard  
MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:25:00 AM  
 WELL ID: DEC-064  
 INSPECTOR (PRINT): Kevin McGovern

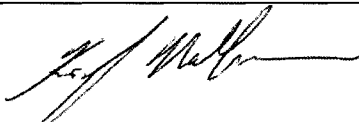
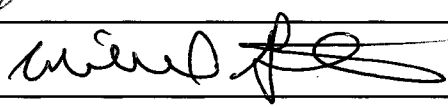
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 35.36 DEPTH TO BOTTOM: 45.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:25:00 AM  
 WELL ID: DEC-064D  
 INSPECTOR (PRINT): Kevin McGovern

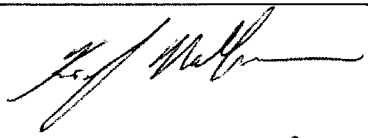
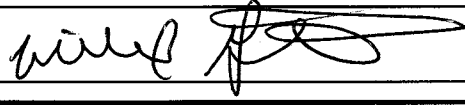
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Needs to be cleaned out  
 J PLUG: Good  
 WATER LEVEL: 35.55 DEPTH TO BOTTOM: 80.50  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 2:50:00 PM  
 WELL ID: DEC-065  
 INSPECTOR (PRINT): Kevin McGovern

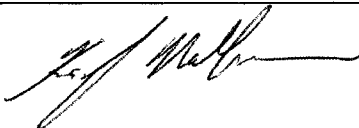
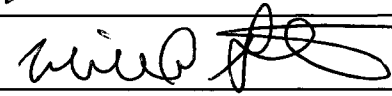
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 37.00 DEPTH TO BOTTOM: 44.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 2:55:00 PM  
 WELL ID: DEC-065D  
 INSPECTOR (PRINT): Kevin McGovern

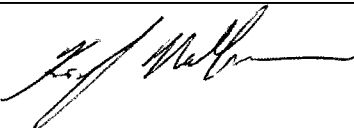
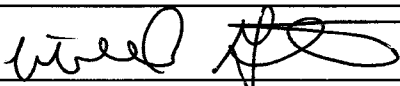
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 37.30 DEPTH TO BOTTOM: 81.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 3:25:00 PM  
 WELL ID: DEC-066  
 INSPECTOR (PRINT): Kevin McGovern

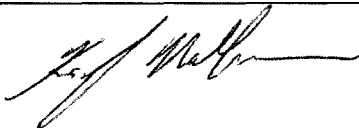
## EXTERIOR INSPECTION CONDITION


PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 29.90 DEPTH TO BOTTOM: 46.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 3:27:00 PM  
 WELL ID: DEC-066D  
 INSPECTOR (PRINT): Kevin McGovern

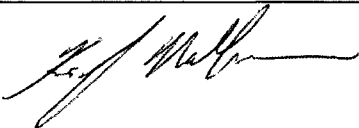
## EXTERIOR INSPECTION CONDITION

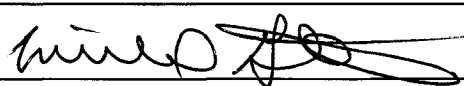
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 29.35 DEPTH TO BOTTOM: 81.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/6/2014  
 TIME: 1:55:00 PM  
 WELL ID: DEC-071  
 INSPECTOR (PRINT): Kevin McGovern

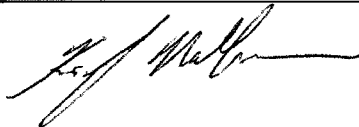
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 37.80 DEPTH TO BOTTOM: 48.50  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



# MONITORING WELL INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 1117690.00002  
DATE: 3/7/2014  
TIME: 9:15:00 AM  
WELL ID: DEC-088  
INSPECTOR (PRINT): Kevin McGovern

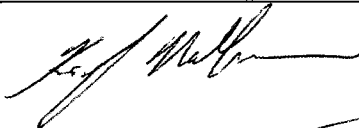
## EXTERIOR INSPECTION CONDITION

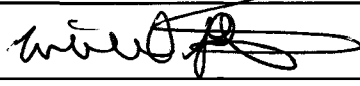
PROTECTIVE CASING/ CURB BOX: Good  
LOCK/HASP CONDITION: NA LOCK KEY #: NA  
HINGE/ LID: Good GASKET/SEAL : Good  
SECURITY BOLTS TYPE: Pentagon  
SECURITY BOLTS : Good THREAD CONDITION: Good  
WELL PAD: Good BOLLARDS: NA  
LABEL/ ID CONDITION: Poor/ Non-Existent  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
WELL RISER: Good  
ANNULAR SPACE: Good  
J PLUG: Good  
WATER LEVEL: 39.00 DEPTH TO BOTTOM: 49.00  
HARD/SOFT BOTTOM: Hard  
MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 9:16:00 AM  
 WELL ID: DEC-088D  
 INSPECTOR (PRINT): Kevin McGovern


## EXTERIOR INSPECTION CONDITION

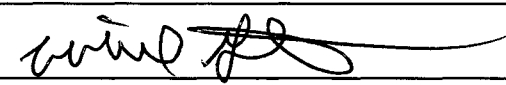
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor/ Non-Existent  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 38.00 DEPTH TO BOTTOM: 86.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:52:00 AM  
 WELL ID: DEC-089  
 INSPECTOR (PRINT): Kevin McGovern

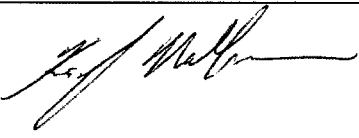
## EXTERIOR INSPECTION CONDITION

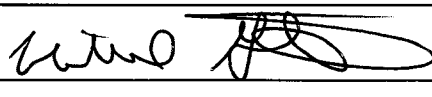
PROTECTIVE CASING/ CURB BOX: NA - Inaccessible  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: \_\_\_\_\_ GASKET/SEAL : NA  
 SECURITY BOLTS TYPE: \_\_\_\_\_  
 SECURITY BOLTS : \_\_\_\_\_ THREAD CONDITION: \_\_\_\_\_  
 WELL PAD: \_\_\_\_\_ BOLLARDS: NA  
 LABEL/ ID CONDITION: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: NA  
 WELL RISER: \_\_\_\_\_  
 ANNULAR SPACE: \_\_\_\_\_  
 J PLUG: \_\_\_\_\_  
 WATER LEVEL: \_\_\_\_\_ DEPTH TO BOTTOM: \_\_\_\_\_  
 HARD/SOFT BOTTOM: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

ADDITIONAL COMMENTS: Inaccessible  
Beneath Vehicle

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:52:00 AM  
 WELL ID: DEC-089D  
 INSPECTOR (PRINT): Kevin McGovern

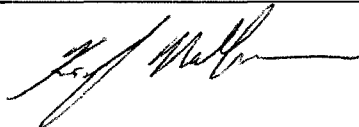
## EXTERIOR INSPECTION CONDITION

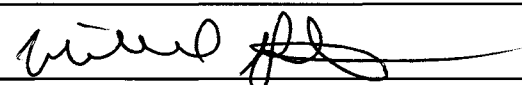
PROTECTIVE CASING/ CURB BOX: NA - Inaccessible  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: \_\_\_\_\_ GASKET/SEAL : NA  
 SECURITY BOLTS TYPE: \_\_\_\_\_  
 SECURITY BOLTS : \_\_\_\_\_ THREAD CONDITION: \_\_\_\_\_  
 WELL PAD: \_\_\_\_\_ BOLLARDS: NA  
 LABEL/ ID CONDITION: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: NA  
 WELL RISER: \_\_\_\_\_  
 ANNULAR SPACE: \_\_\_\_\_  
 J PLUG: \_\_\_\_\_  
 WATER LEVEL: \_\_\_\_\_ DEPTH TO BOTTOM: \_\_\_\_\_  
 HARD/SOFT BOTTOM: \_\_\_\_\_  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
 \_\_\_\_\_  
 \_\_\_\_\_

ADDITIONAL COMMENTS: Inaccessible  
Beneath Vehicle

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:10:00 AM  
 WELL ID: DEC-090  
 INSPECTOR (PRINT): Kevin McGovern

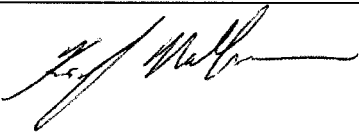
## EXTERIOR INSPECTION CONDITION

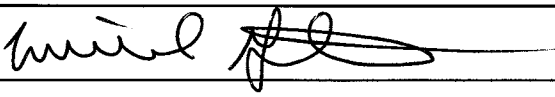
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Good  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 32.10 DEPTH TO BOTTOM: 45.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 8:12:00 AM  
 WELL ID: DEC-090D  
 INSPECTOR (PRINT): Kevin McGovern

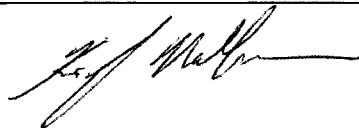
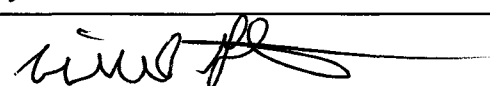
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Good  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 32.42 DEPTH TO BOTTOM: 79.90  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 7:50:00 AM  
 WELL ID: DEC-091  
 INSPECTOR (PRINT): Kevin McGovern

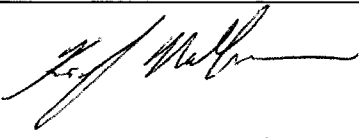
## EXTERIOR INSPECTION CONDITION

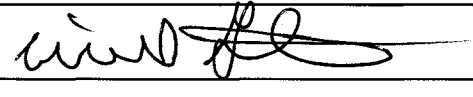
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 25.61 DEPTH TO BOTTOM: 44.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 7:51:00 AM  
 WELL ID: DEC-091D  
 INSPECTOR (PRINT): Kevin McGovern

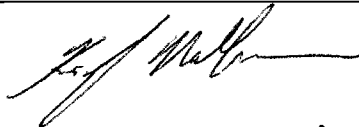
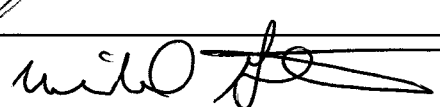
## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 25.50 DEPTH TO BOTTOM: 87.50  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 10:50:00 AM  
 WELL ID: DEC-097  
 INSPECTOR (PRINT): Kevin McGovern

## EXTERIOR INSPECTION CONDITION

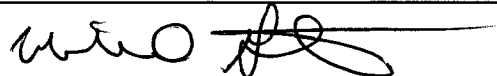
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 38.20 DEPTH TO BOTTOM: 44.00  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 10:54:00 AM  
 WELL ID: DEC-097D  
 INSPECTOR (PRINT): Kevin McGovern

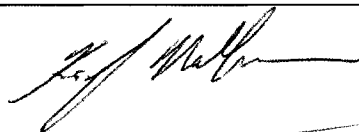
## EXTERIOR INSPECTION CONDITION


PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Poor  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 38.36 DEPTH TO BOTTOM: 63.60  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 11:40:00 AM  
 WELL ID: DEC-111  
 INSPECTOR (PRINT): Kevin McGovern

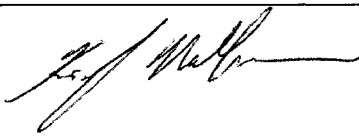

## EXTERIOR INSPECTION CONDITION

PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Non-existent  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 34.20 DEPTH TO BOTTOM: 41.30  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE):   
 PROJECT MANAGER APPROVAL: 





257 WEST GENESEE STREET, SUITE 400  
 BUFFALO, NEW YORK 14202-2657  
 PHONE: (716) 856-5636

# MONITORING WELL INSPECTION FORM

SITE NAME: Meeker Ave. (Klink Cosmo)  
 JOB#: 1117690.00002  
 DATE: 3/7/2014  
 TIME: 11:45:00 AM  
 WELL ID: DEC-111D  
 INSPECTOR (PRINT): Kevin McGovern

## EXTERIOR INSPECTION CONDITION

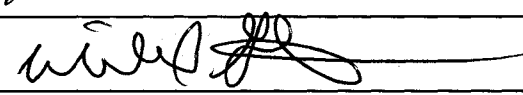
PROTECTIVE CASING/ CURB BOX: Good  
 LOCK/HASP CONDITION: NA LOCK KEY #: NA  
 HINGE/ LID: Good GASKET/SEAL : Good  
 SECURITY BOLTS TYPE: Pentagon  
 SECURITY BOLTS : Good THREAD CONDITION: Good  
 WELL PAD: Good BOLLARDS: NA  
 LABEL/ ID CONDITION: Non-existent  
 MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, gasket replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

WELL CASING INTERIOR: Good  
 WELL RISER: Good  
 ANNULAR SPACE: Good  
 J PLUG: Good  
 WATER LEVEL: 34.19 DEPTH TO BOTTOM: 79.30  
 HARD/SOFT BOTTOM: Hard  
 MAINTENANCE PERFORMED (e.g., removed water, removed bentonite, sorbed sheen, replaced J plug, etc.)  
None

ADDITIONAL COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_

INSPECTOR (SIGNATURE): 

PROJECT MANAGER APPROVAL: 



# SOIL VAPOR IMPLANT INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 11176390.00002  
DATE: 2/7/2014  
TIME: 9:15  
SOIL VAPOR IMPLANT ID SG-195  
INSPECTOR (PRINT): Mira Abdelaziz

## EXTERIOR INSPECTION CONDITION

CURB BOX: Intact  
CURB BOX/ LID: New Lid GASKET/SEAL : Good  
BOLTS TYPE: 9/16" THREAD CONDITION: Good  
BOLTS: Good Condition  
WELL PAD: Intact  
LABEL/ ID: Will label once weather permits  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

CURB BOX INTERIOR: Clean  
SOIL VAPOR IMPLANT TUBING: Clean & enough to sample  
ANNULAR SPACE: Enough space  
IMPLANT TUBING CAP: Intact  
MAINTENANCE PERFORMED TO INTERIOR: N/A - NEW

ADDITIONAL COMMENTS:

INSPECTOR (SIGNATURE): *Mira Abdelaziz*  
PROJECT MANAGER APPROVAL: *[Signature]*



# SOIL VAPOR IMPLANT INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 11176390.00002  
DATE: 2/7/2014  
TIME: 9:50  
SOIL VAPOR IMPLANT ID SG-196  
INSPECTOR (PRINT): Mira Abdelaziz

## EXTERIOR INSPECTION CONDITION

CURB BOX: Intact  
CURB BOX/ LID: New Lid GASKET/SEAL : Good  
BOLTS TYPE: 9/16" THREAD CONDITION: Good  
BOLTS: Good Condition  
WELL PAD: Intact  
LABEL/ ID: Will label once weather permits  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

CURB BOX INTERIOR: Clean  
SOIL VAPOR IMPLANT TUBING: Clean & enough to sample  
ANNULAR SPACE: Enough space  
IMPLANT TUBING CAP: Intact  
MAINTENANCE PERFORMED TO INTERIOR: N/A - NEW

ADDITIONAL COMMENTS:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

INSPECTOR (SIGNATURE): *Mira Abdelaziz* for Mira  
PROJECT MANAGER APPROVAL: *Mira Abdelaziz*





# SOIL VAPOR IMPLANT INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 11176390.00002  
DATE: 2/7/2014  
TIME: 10:40  
SOIL VAPOR IMPLANT ID SG-197  
INSPECTOR (PRINT): Mira Abdelaziz

## EXTERIOR INSPECTION CONDITION

CURB BOX: Intact  
CURB BOX/ LID: New Lid GASKET/SEAL : Good  
BOLTS TYPE: 9/16" THREAD CONDITION: Good  
BOLTS: Good Condition  
WELL PAD: Intact  
LABEL/ ID: Will label once weather permits  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

CURB BOX INTERIOR: Clean  
SOIL VAPOR IMPLANT TUBING: Clean & enough to sample  
ANNULAR SPACE: Enough space  
IMPLANT TUBING CAP: Intact  
MAINTENANCE PERFORMED TO INTERIOR: N/A NEW

ADDITIONAL COMMENTS:

INSPECTOR (SIGNATURE): *Mira Abdelaziz* - for Mira  
PROJECT MANAGER APPROVAL: *Mira Abdelaziz*



# SOIL VAPOR IMPLANT INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 11176390.00002  
DATE: 2/7/2014  
TIME: 11:30  
SOIL VAPOR IMPLANT ID SG-199  
INSPECTOR (PRINT): Mira Abdelaziz

## EXTERIOR INSPECTION CONDITION

CURB BOX: Intact  
CURB BOX/ LID: New Lid GASKET/SEAL : Good  
BOLTS TYPE: 9/16" THREAD CONDITION: Good  
BOLTS: Good Condition  
WELL PAD: Intact  
LABEL/ ID: Will label once weather permits  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

CURB BOX INTERIOR: Clean  
SOIL VAPOR IMPLANT TUBING: Clean & enough to sample  
ANNULAR SPACE: Enough space  
IMPLANT TUBING CAP: Intact  
MAINTENANCE PERFORMED TO INTERIOR: N/A - NEW

ADDITIONAL COMMENTS:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

INSPECTOR (SIGNATURE): *Mira Abdelaziz*  
PROJECT MANAGER APPROVAL: *[Signature]*



# SOIL VAPOR IMPLANT INSPECTION FORM

257 WEST GENESEE STREET, SUITE 400  
BUFFALO, NEW YORK 14202-2657  
PHONE: (716) 856-5636

SITE NAME: Meeker Ave. (Klink Cosmo)  
JOB#: 11176390.00002  
DATE: 2/7/2014  
TIME: 12:35  
SOIL VAPOR IMPLANT ID SG-200  
INSPECTOR (PRINT): Mira Abdelaziz

## EXTERIOR INSPECTION CONDITION

CURB BOX: Intact  
CURB BOX/ LID: New Lid GASKET/SEAL : Good  
BOLTS TYPE: 9/16" THREAD CONDITION: Good  
BOLTS: Good Condition  
WELL PAD: Intact  
LABEL/ ID: Will label once weather permits  
MAINTENANCE PERFORMED (e.g., anti seize applied, re-tapping bolt holes, bolt replacement, etc.)  
None

## INTERIOR INSPECTION CONDITION

CURB BOX INTERIOR: Clean  
SOIL VAPOR IMPLANT TUBING: Clean & enough to sample  
ANNULAR SPACE: Enough space  
IMPLANT TUBING CAP: Intact  
MAINTENANCE PERFORMED TO INTERIOR: n/a - new

ADDITIONAL COMMENTS:

INSPECTOR (SIGNATURE): *Mira Abdelaziz*  
PROJECT MANAGER APPROVAL: *[Signature]*



**ATTACHMENT 10**

**DAILY CONSTRUCTION REPORT FOR FLAG  
REPLACEMENT**

# URS Corporation

257 West Genesee Street, Suite 400  
 Buffalo, New York 14202-2657  
 Telephone: (716)-856-5636  
 Fax: (716)-856-2545

Date: 5/6/2014

DAY	S	M	T	W	TH	F	S
-----	---	---	---	---	----	---	---

## DAILY CONSTRUCTION REPORT

PROJECT: Former Klink Cosmo Cleaners Site  
 CONTRACTOR: AARCO Environmental Services Corp.  
 URS JOB No.: 11176390.00002  
 URS PROJECT MANAGER: Mike Gutmann

WEATHER	Bright Sun	Clear	Overcast	Rain	Snow
TEMP	To 32	32-50	50-70	70-85	85 and up
WIND	Still	Moder	High	Report No.	
HUMIDITY	Dry	Moder	Humid		

AVERAGE FIELD FORCE				
Name of Contractor	Non-manual	Manual	Remarks	
AARCO			1 Supervisor 2 Laborers	Luis Cubias Dave Schoneboom Gerard Sallows

VISITORS			
Time	Representing	Representing	Remarks

EQUIPMENT AT THE SITE: masonry dump, air compressor, field truck, jack hammer, demo saw, and misc. tools

CONSTRUCTION ACTIVITIES:	
06:46 - On-site - performed tailgate safety meeting	
07:35 - Began setting up for flag replacement at DEC-111 and 111D	
08:00 - Began saw cutting concrete and jack hammering flag at DEC-111 and 111D	
10:00 - Measurements for flag at DEC-111 and 111D (10' x 5' x 7")	
10:15 - Began setting up for flag replacement at DEC-006TC and began cutting and jack hammering	
Measurements for flag at DEC-006TC (5' x 5' x 6")	
12:00 - Brooklyn Ready Mix arrived on-site	
12:30 - Dave Harrington and myself identified 4 additional flags that he wanted replaced	
14:45 - Caught up with AARCO at DEC-111 and 111D where they were floating the concrete flag and cleaning up the site.	
16:00 - AARCO completed flag replacement at DEC-111 and 111D.	
16:05 - AARCO completed the flag at DEC-006TC and moved to caulk the flag at SG-189	
16:35 - Completed the well inspection forms	
16:45 - AARCO departed off-site for the day	
Additional flags identified to be replaced:	SG-075
	SG-008
	SG-106
	SG-105
See attached photos	

Sheet 1 of 4

X - designates info on  
backside of page

By: David Cofield Jr.  
 Reviewed by: Mike Gutmann

Title: Inspector  
 Title: Project Manager

**DAILY CONSTRUCTION REPORT (cont'd)**

REPORT No. \_\_\_\_\_

PROJECT: Former Klink Cosmo Cleaners Site  
CONTRACTOR: AARCO Environmental Services Corp.  
URS JOB No.: 11176390.00002

DATE: 5/6/2014

**CONSTRUCTION ACTIVITIES (cont'd):**



5/6/2014 - Flag at DEC-111 and DEC-111D prior to replacement



5/6/2014 - Flag replacement at DEC-111 and DEC-111D



**DAILY CONSTRUCTION REPORT (cont'd)**

REPORT No. \_\_\_\_\_

PROJECT: Former Klink Cosmo Cleaners Site  
CONTRACTOR: AARCO Environmental Services Corp.  
URS JOB No.: 11176390.00002

DATE: 5/6/2014

**CONSTRUCTION ACTIVITIES (cont'd):**



5/6/2014 - Completed flag at DEC-111 and DEC-111D



5/6/2014 - Flag DEC-006TC prior to replacement

**DAILY CONSTRUCTION REPORT (cont'd)**

REPORT No. \_\_\_\_\_

PROJECT: Former Klink Cosmo Cleaners Site  
CONTRACTOR: AARCO Environmental Services Corp.  
URS JOB No.: 11176390.00002

DATE: 5/6/2014

**CONSTRUCTION ACTIVITIES (cont'd):**



5/6/2014 - Completed flag at DEC-006TC

**ATTACHMENT 11**

**INVESTIGATION DERIVED WASTE (IDW) DISPOSAL  
DOCUMENTATION**



Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

# 11-18144-8

**NON-HAZARDOUS  
WATER MANIFEST**

1. Generator's US EPA ID No.

R.I.D.O.Y.O.O.9.8352

Manifest Doc. No.

57561

2. Page 1

of

3. Generator's Name and Mailing Address

U.S. Corporation Porter Ave Brooklyn NY

Keith Caserio  
Arthur Daviz Harrington  
625 Broadway  
ALBANY, NY

4. Generator's Phone ( )

5. Transporter 1 Company Name

AARCO ENVIRONMENTAL SERVICES CORP.

6. US EPA ID Number

N.Y.R. 0.0.0.1.0.7.3.2.6

A. Transporter's Phone

631-586-5900

7. Transporter 2 Company Name

8. US EPA ID Number

.....

B. Transporter's Phone

9. Designated Facility Name and Site Address

Triumph Gate Environmental  
42-14 17th Ave Astoria Queens NY

10. US EPA ID Number

.....

C. Facility's Phone

718-274-3339

11. Waste Shipping Name and Description

a. Non Haz Solids Drill Cutting

12. Containers  
No. Type

.02 DN

13. Total Quantity

.800

14. Unit Wt/Vol

b. ....

c. ....

d. ....

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

EMERGENCY PHONE # 631-586-5900

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Scott Mican for NYSDEC

Signature

[Signature]

Month Day Year

1.2 1.0 1.0

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

Kathy Christie

Signature

[Signature]

Month Day Year

1.2 1.0 1.0

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

. . .

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

. . .

GENERATOR'S COPY

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WATER MANIFEST		1. Generator's US EPA ID No.	Manifest Doc. No.	2. Page 1 of 1		
3. Generator's Name and Mailing Address ATTN: David Harrington 625 Broadway, Albany, NY WYSDER BROADWAY ALBANY, NY		6. US EPA ID Number N.Y. R. 0. 0. 0. 1. 0. 7. 3. 2. 6		A. Transporter's Phone 631-586-5900		
4. Generator's Phone (518) 462-9261		8. US EPA ID Number R.I.D. 0. 4. 0. 0. 9. 8. 3. 5. 2		B. Transporter's Phone		
5. Transporter 1 Company Name AARCO ENVIRONMENTAL SERVICES CORP.		10. US EPA ID Number		C. Facility's Phone 718 274 3339		
7. Transporter 2 Company Name		9. Designated Facility Name and Site Address Triumvirate Env. 42-14 147th Avenue Astoria, NY 11005				
11. Waste Shipping Name and Description		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	
a. Non-hazardous solvent (Drill cuttings)		.2	DM	.800	P	
b. Non-hazardous		..	.	..		
c.		..	.	..		
d.		..	.	..		
D. Additional Descriptions for Materials Listed Above			E. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information EMERGENCY PHONE # 631-586-5900						
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.						
Printed/Typed Name Scott Harrington, WYSDER		Signature [Signature]		Month 12	Day 11	Year 13
17. Transporter 1 Acknowledgment of Receipt of Materials						
Printed/Typed Name GARY CHRISTIE		Signature [Signature]		Month 12	Day 11	Year 13
18. Transporter 2 Acknowledgment of Receipt of Materials						
Printed/Typed Name		Signature		Month	Day	Year
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.						
Printed/Typed Name		Signature		Month	Day	Year

GENERATOR  
TRANSPORTER  
FACILITY

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS  
WATER MANIFEST**

1. Generator's US EPA ID No.

Manifest Doc. No.

2. Page 1

of 1

N/A

57658

3. Generator's Name and Mailing Address

NYSDEC  
605 Broadway  
Albany, NY

Lombardy St  
Dolton, IL

4. Generator's Phone ( )

485-1559

5. Transporter 1 Company Name

AARCO ENVIRONMENTAL SERVICES CORP.

6.

US EPA ID Number

N.Y.R. 0.0.0.1.0.7.3.2.6

A. Transporter's Phone

631-586-5900

7. Transporter 2 Company Name

8.

US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Trimmerale  
Astoria, NY

10.

US EPA ID Number

C. Facility's Phone

11. Waste Shipping Name and Description

a. Non-hazardous Solids  
(Drill Cuttings)

12. Containers

No.

Type

13. Total Quantity

14. Unit Wt/Vol

201 DM . . . . . P

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

EMERGENCY PHONE # 631-586-5900

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Justin King for NYSDEC

Signature

[Signature]

Month Day Year

12 12 13

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

Days Pacheco

Signature

[Signature]

Month Day Year

12 12 13

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

. . .

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

. . .

GENERATOR

TRANSPORTER

FACILITY



Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS  
WATER MANIFEST**

1. Generator's US EPA ID No.

Manifest Doc. No.

**57674**

2. Page 1  
of

3. Generator's Name and Mailing Address

David Harrington  
625 ~~8th~~ 625 Broadway, Albany

NYS DEC  
Albany NY

Lombard St  
+  
Dortch Av

4. Generator's Phone ( 518 ) 402-9267

5. Transporter 1 Company Name

**AARCO ENVIRONMENTAL SERVICES CORP.**

6.

US EPA ID Number

**N. Y. R. 0. 0. 0. 1. 0. 7. 3. 2. 6**

A. Transporter's Phone

**631-586-5900**

7. Transporter 2 Company Name

8.

US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

ANW +  
200 East 109th Street  
11335

10.

US EPA ID Number

C. Facility's Phone

917-324-0166

11. Waste Shipping Name and Description

a.

Non-hazardous liquids (Drill cuttings)

12. Containers  
No. Type

0 03 D

13. Total  
Quantity

.....

14. Unit  
Wt/Vol

.....

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

**EMERGENCY PHONE # 631-586-5900**

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Justin King For NYSDEC

Signature

*[Signature]*

Month Day Year

11/21/31.3

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

Dayle J. Arco

Signature

*[Signature]*

Month Day Year

11/21/31.3

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

.....

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

.....

GENERATOR

TRANSPORTER

FACILITY

**GENERATOR'S COPY**

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS  
WATER MANIFEST**

1. Generator's US EPA ID No.  
.....

Manifest Doc. No.

**57673**

2. Page 1  
of

3. Generator's Name and Mailing Address

David Hamilton  
675 Broadway Albany NY

NYSDEC  
Broadway  
Albany NY

Lombard  
Palmer PO

4. Generator's Phone (98) 401-9762

5. Transporter 1 Company Name

**AARCO ENVIRONMENTAL SERVICES CORP.**

6. US EPA ID Number

**N.Y.R. 0.0.0.1.0.7.3.2.6**

A. Transporter's Phone

**631-586-5900**

7. Transporter 2 Company Name

8. US EPA ID Number  
.....

B. Transporter's Phone

9. Designated Facility Name and Site Address

Freemantle  
12/1/10, NY

10. US EPA ID Number  
.....

C. Facility's Phone

11. Waste Shipping Name and Description

12. Containers  
No. Type

13. Total  
Quantity

14. Unit  
Wt/Vol

a. Non-Hazardous solids (Drill cuttings)

001 Dr

.....

P

b. ....

.....

.....

.....

c. ....

.....

.....

.....

d. ....

.....

.....

.....

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

**EMERGENCY PHONE # 631-586-5900**

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Justin King for NYSDEC

Signature

[Signature]

Month Day Year

11.2.13.13

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

Daryl Padeco

Signature

[Signature]

Month Day Year

11.2.13.13

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

.....

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

.....

GENERATOR

TRANSPORTER

FACILITY

**GENERATOR'S COPY**

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS  
WATER MANIFEST**

1. Generator's US EPA ID No.

Manifest Doc. No.

**57633**

2. Page 1  
of

3. Generator's Name and Mailing Address

Lambardy a Carter  
Brooklyn  
NY

4. Generator's Phone ( )

5. Transporter 1 Company Name  
**AARCO ENVIRONMENTAL SERVICES CORP.**

6. US EPA ID Number  
**N. Y. R. 0. 0. 0. 1. 0. 7. 3. 2. 6**

A. Transporter's Phone  
**631-586-5900**

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

10. US EPA ID Number

C. Facility's Phone

11. Waste Shipping Name and Description

12. Containers

13. Total  
Quantity

14. Unit  
Wt/Vol

a.	12. Containers		13. Total Quantity	14. Unit Wt/Vol
	No.	Type		
1	DM	4.00	P	
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

**EMERGENCY PHONE # 631-586-5900**

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

John King for NYSDOC

Signature

[Signature]

Month Day Year

1 2 1 7 1 8

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

GARY CHRISTIE

Signature

[Signature]

Month Day Year

1 2 1 7 1 8

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

. . .

19. Discrepancy Indication Space

OK to NYSDOC

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

. . .

GENERATOR

TRANSPORTER

FACILITY



11-18144-8

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

### NON-HAZARDOUS WATER MANIFEST

1. Generator's US EPA ID No.

Manifest Doc. No.

2. Page 1  
of

57638

11-18144-8

3. Generator's Name and Mailing Address

Mailed All Brooklyn NY

David Harrington  
675 Broadway, Albany

NYSOC  
Broadway  
Albany, NY

4. Generator's Phone

(518) 402 9767

5. Transporter 1 Company Name

AARCO ENVIRONMENTAL SERVICES CORP.

6. US EPA ID Number

N.Y.R. 0.0.0.1.0.7.3.2.6

A. Transporter's Phone

631-586-5900

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

10. US EPA ID Number

C. Facility's Phone

11. Waste Shipping Name and Description

12. Containers

13. Total  
Quantity

14. Unit  
Wt/Vol

a. Non-Haz Drill cuttings

No. Type

6

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

EMERGENCY PHONE # 631-586-5900

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Signature

Month Day Year

Karla King For NYSOC

11.7.19.13

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

Scott Spriet

11.7.13

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

GENERATOR

TRANSPORTER

FACILITY

GENERATOR'S COPY

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS  
WATER MANIFEST**

1. Generator's US EPA ID No.

Manifest Doc. No.

**57708**

2. Page 1  
of

3. Generator's Name and Mailing Address

URS  
Meeker Ave  
Brockton NY

David Harrington  
NYSDEC

4. Generator's Phone ( )

518 402 9767

625 Broadway, Albany

5. Transporter 1 Company Name

**AARCO ENVIRONMENTAL SERVICES CORP.**

6. US EPA ID Number

**N.Y.R. 0.0.0.1.0.7.3.2.6**

A. Transporter's Phone

**631-586-5900**

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Asent Farmingdale  
308 NY-109 NY  
11735

10. US EPA ID Number

C. Facility's Phone

11. Waste Shipping Name and Description

12. Containers  
No. Type

13. Total  
Quantity

14. Unit  
Wt/Vol

a. Non-Haz Oil cuttings (liquid)

6

6

6

b. . . . .

c. . . . .

d. 9 50

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

**EMERGENCY PHONE # 631-586-5900**

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Justin King for NYSDEC

Signature

[Signature]

Month Day Year

. . . . .

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

Scott

Signature

[Signature]

Month Day Year

. . . . .

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

[Blank]

Signature

[Blank]

Month Day Year

. . . . .

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

[Blank]

Signature

[Blank]

Month Day Year

. . . . .

GENERATOR

TRANSPORTER

FACILITY

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS  
WATER MANIFEST**

1. Generator's US EPA ID No.

Manifest Doc. No.

2. Page 1  
of

57710

3. Generator's Name and Mailing Address

LRS Macker Ave Brooklyn NY 11222

David Harrington  
NYSDEC

625 Broadway, Albany

4. Generator's Phone (401) 781-6300 518 402 9767

5. Transporter 1 Company Name

AARCO ENVIRONMENTAL SERVICES CORP.

6.

US EPA ID Number

N. Y. R. 0. 0. 0. 1. 0. 7. 3. 2. 6

A. Transporter's Phone

631-586-5900

7. Transporter 2 Company Name

8.

US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Transpaco environmental  
4214 14 Ave NY NY 11105

10.

US EPA ID Number

RE.04.00.9.8.3.5.2

C. Facility's Phone

11. Waste Shipping Name and Description

a. Non-Haz Drill cuttings (sol.)

b. 110000

c. 20000

d. 110000

12. Containers  
No. Type

13. Total  
Quantity

14. Unit  
Wt/Vol

1 200 200 100 6

.. . . . .

.. . . . .

.. . . . .

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

**EMERGENCY PHONE # 631-586-5900**

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Justin King For NYSDEC

Signature

[Signature]

Month Day Year

12 20 13

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

Tom Sevel

Signature

[Signature]

Month Day Year

12 20 13

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

. . . . .

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

. . . . .

GENERATOR

TRANSPORTER

FACILITY



**ATTACHMENT 12**  
**DATA USABILITY SUMMARY REPORTS**

**DATA USABILITY SUMMARY REPORT**

**WORK ASSIGNMENT C007540-4.1**

**KLINK COSMO CLEANERS**

**EAST WILLIAMSBURG INDUSTRIAL AREA**

**BOROUGH OF BROOKLYN**

**KINGS COUNTY, NEW YORK**

**NYSDEC SITE ID# 224130**

**Analyses Performed by:**

**SPECTRUM ANALYTICAL, INC.**

**NORTH KINGSTOWN, RI**

**Prepared for:**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**DIVISION OF ENVIRONMENTAL REMEDIATION**

**Prepared by:**

**URS CORPORATION**

**257 WEST GENESEE STREET, SUITE 400**

**BUFFALO, NY 14202-2657**

**MAY 2014**

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1.0 INTRODUCTION.....	1
2.0 ANALYTICAL METHODOLOGIES/DATA VALIDATION PROCEDURES ...	1
3.0 DATA DELIVERABLE COMPLETENESS.....	2
4.0 SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES.....	2
5.0 NON-CONFORMANCES .....	2
6.0 SAMPLE RESULTS AND REPORTING .....	3
7.0 SUMMARY.....	3

## TABLES (Following Text)

Table 1	Summary of Data Qualifications
Table 2	Validated Soil Sample Results
Table 3	Validated Groundwater Sample Results
Table 4	Validated Field QC Sample Results

## ATTACHMENTS

Attachment A	Validated Form 1's
Attachment B	Support Documentation



## 1.0 INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B-Guidance for Data Deliverables and the Development of Data Usability and Summary Reports*, May 2010. Discussed in this DUSR are analytical data for 6 soil samples, 3 groundwater samples, 1 groundwater field duplicate, 1 groundwater matrix spike/matrix spike duplicate (MS/MSD) pair, and 1 trip blank collected by URS personnel on February 6 to March 7, 2014 from the Former Klink Cosmo Cleaners site, Work Assignment C007540-4.1 are discussed in this DUSR.

## 2.0 ANALYTICAL METHODOLOGIES/DATA VALIDATION PROCEDURES

All soil and groundwater samples were sent to Spectrum Analytical, Inc. located in North Kingstown, RI for analysis, and were analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs) plus tentatively identified compounds (TICs) by United States Environmental Protection Agency (USEPA) Method 8260C.

A limited data validation was performed in accordance with the guidelines in the following USEPA Region II document:

- *Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B*, SOP HW-24, Rev. 2, August 2008.

The limited validation included: a review of completeness of all required deliverables; holding times; a review of quality control (QC) results [blanks, instrument tunings, calibration standards, duplicate analyses, and laboratory control sample (LCS) recoveries] to determine if the data are within the protocol-required limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

Qualifications applied to the data include 'J' (estimated concentration), 'UJ' (estimated quantitation limit), and 'R' (rejected/data unusable). Definitions of USEPA Region II data qualifiers are presented at the end of this text. A summary of data qualifications is provided on Table 1. The validated analytical results are presented on Tables 2, 3, and 4. Copies of the validated laboratory results (i.e.,

Form 1's) are presented in Attachment A. Documentation supporting the qualification of data is presented in Attachment B. Only analytical deviations affecting data usability are discussed in this report.

### **3.0 DATA DELIVERABLE COMPLETENESS**

Full deliverable data packages (i.e., NYSDEC Category B or equivalent) were provided by the laboratory, which included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

### **4.0 SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES**

All samples were received by the laboratory intact, properly preserved, and under proper chain-of-custody (COC). All samples were analyzed within the required holding times.

### **5.0 NON-CONFORMANCES**

#### **Instrument Calibration**

The average relative response factors (RRF) for 1,4-dioxane in the initial calibration (ICAL) and/or the continuing calibration (CCAL) standards associated with the soil and groundwater samples were below the QC limit (0.05). The non-detected results for 1,4-dioxane in all soil, groundwater, and field QC samples have been qualified 'R'.

The ICAL percent relative standard deviation (%RSD) for methylene chloride was greater than the QC limit. The detected results for methylene chloride in the associated samples listed on Table 1 have been qualified 'J'.

The percent difference (%D) between the ICAL average RRF and the RRF in one or more of the CCAL standards associated with the soil samples exceeded the QC limit of 20% for one or more of the following VOCs: 2-butanone, 4-methyl-2-pentanone, bromoform, dichlorodifluoromethane, and methyl acetate. The non-detect result for these compounds in the associated soil samples listed on Table 1 were qualified 'UJ'.

The %D between the ICAL average RRF and the RRF in the CCAL standard associated with the groundwater samples exceeded the QC limit of 20% for the following VOCs: acetone, bromomethane, chloromethane, and trans-1,3-dichloropropene. The non-detect result for

these compounds in the groundwater and field QC samples listed on Table 1 were qualified 'UJ'.

Documentation supporting the qualification of data (i.e., Forms 5, 6 and 7) is presented in Attachment B.

#### **Laboratory Control Samples (LCS)**

The %R for chloromethane in the groundwater LCS was below the lower QC limit. The non-detect results for idomethane in the associated groundwater and field QC samples as listed on Table 1 were qualified 'UJ'.

Documentation supporting the qualification of data (i.e., Form 3) is presented in Attachment B.

### **6.0 SAMPLE RESULTS AND REPORTING**

All quantitation/detection limits were reported in accordance with method requirements and were adjusted for sample volume, moisture content, and dilution factors. Results below the quantitation limits were qualified 'J' by the laboratory.

#### **Field Duplicate Samples**

A field duplicate was collected for groundwater sample DEC-111. Generally, similar detections and concentrations were observed in the sample and its respective field duplicate.

Note, the USEPA Region II validation guidelines do not require qualification of analytical results based upon field duplicate precision.

### **7.0 SUMMARY**

All sample analyses were found to be compliant with the method criteria, except where previously noted. Those results qualified 'J' or 'UJ' are considered conditionally usable. Results qualified 'R' are considered unusable. All other sample results are usable as reported. URS does not recommend the recollection of any samples at this time.

**Prepared By:** Ann Marie Kropovitch, Chemist



**Date:**

5/8/14

**Reviewed By:** Peter R. Fairbanks, Senior Chemist



**Date:**

5/8/14



## **DEFINITIONS OF USEPA REGION II DATA QUALIFIERS**

- U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- B – The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the quantitation limit.
- D – The positive value is the result of an analysis at a secondary dilution factor.

**TABLE 1**  
**SUMMARY OF DATA QUALIFICATIONS**  
**FORMER KLINK COSMO CLEANERS SITE**

<b>Sample ID</b>	<b>Analytical Deviation</b>	<b>Qualifications</b>
All soil, groundwater, and field QC samples	RRF < 0.05 for 1,4-dioxane.	Qualify non-detected results 'R'.
Soil samples SG-196 (3.5-4.0), SG-199 (3-3.5), and SG-200 (3.5-4.0)	ICAL %RSD > 20% for methylene chloride.	Qualify detected results 'J'.
Soil samples DEC-111D (34-35), SG-195 (7.5-8.0), SG-196 (3.5-4.0), and SG-197 (1.5-2.0)	CCAL %D > 20% for 2-butanone and dichlorodifluoromethane.	Qualify non-detected results 'UJ'.
Soil samples SG-199 (3-3.5) and SG-200 (3.5-4.0)	CCAL %D > 20% for 2-butanone, 4-methyl-2-pentanone, bromoform, dichlorodifluoromethane, and methyl acetate.	Qualify non-detected results 'UJ'.
All groundwater and field QC samples	LCS %R for idomethane < QC limit.	Qualify non-detected results 'UJ'.
All groundwater and field QC samples	CCAL %D > 20% for acetone, bromomethane, chloromethane, and trans-1,3-dichloropropene.	Qualify non-detected results 'UJ'.

**TABLE 2**  
**VALIDATED SOIL SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		DEC-111D	SG-195	SG-196	SG-197	SG-199
Sample ID		DEC-111D-34-35	SG-195(7.5-8.0)	SG-196(3.5-4.0)	SG-197(1.5-2.0)	SG-199(3-3.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		34.0-35.0	7.5-8.0	3.5-4.0	1.5-2.0	3.0-3.5
Date Sampled		02/06/14	02/07/14	02/07/14	02/07/14	02/07/14
Parameter	Units					
<b>Volatile Organic Compounds</b>						
1,1,1,2-Tetrachloroethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,1,1-Trichloroethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,1,2-Trichloroethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,1-Dichloroethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,1-Dichloroethene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,1-Dichloropropene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2,3-Trichlorobenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2,3-Trichloropropane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2,4-Trichlorobenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2,4-Trimethylbenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2-Dichlorobenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2-Dichloroethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2-Dichloroethene (cis)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2-Dichloroethene (trans)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,2-Dichloropropane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,3-Dichlorobenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,3-Dichloropropane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,3-Dichloropropene (cis)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are PQL



**TABLE 2  
VALIDATED SOIL SAMPLE RESULTS  
KLINK COSMO CLEANERS**

Location ID		DEC-111D	SG-195	SG-196	SG-197	SG-199
Sample ID		DEC-111D-34-35	SG-195(7.5-8.0)	SG-196(3.5-4.0)	SG-197(1.5-2.0)	SG-199(3-3.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		34.0-35.0	7.5-8.0	3.5-4.0	1.5-2.0	3.0-3.5
Date Sampled		02/06/14	02/07/14	02/07/14	02/07/14	02/07/14
Parameter	Units					
<b>Volatile Organic Compounds</b>						
1,3-Dichloropropene (trans)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,4-Dichlorobenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2,2-Dichloropropane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
2-Chlorotoluene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
2-Hexanone	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
4-Chlorotoluene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
4-Isopropyltoluene (p-Cymene)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
4-Methyl-2-pentanone	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 UJ
Acetone	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Benzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Bromobenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Bromochloromethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Bromodichloromethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Bromoform	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 UJ
Bromomethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Carbon disulfide	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Carbon tetrachloride	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Chlorobenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Chloroethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Chloroform	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Chloromethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Cyclohexane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are PQL

**TABLE 2**  
**VALIDATED SOIL SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		DEC-111D	SG-195	SG-196	SG-197	SG-199
Sample ID		DEC-111D-34-35	SG-195(7.5-8.0)	SG-196(3.5-4.0)	SG-197(1.5-2.0)	SG-199(3-3.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		34.0-35.0	7.5-8.0	3.5-4.0	1.5-2.0	3.0-3.5
Date Sampled		02/06/14	02/07/14	02/07/14	02/07/14	02/07/14
Parameter	Units					
<b>Volatile Organic Compounds</b>						
Dibromochloromethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Dibromomethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Dichlorodifluoromethane	MG/KG	0.0052 UJ	0.0055 UJ	0.005 UJ	0.0054 UJ	0.0053 UJ
Ethylbenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Hexachlorobutadiene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Iodomethane (Methyl iodide)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Isopropylbenzene (Cumene)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Methyl acetate	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 UJ
Methyl ethyl ketone (2-Butanone)	MG/KG	0.0052 UJ	0.0055 UJ	0.005 UJ	0.0054 UJ	0.0053 UJ
Methyl tert-butyl ether	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Methylcyclohexane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Methylene chloride	MG/KG	0.0052 U	0.0055 U	0.0022 J	0.0054 U	0.0025 J
Naphthalene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
sec-Butylbenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Styrene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
tert-Butylbenzene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Tetrachloroethene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Toluene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Trichloroethene	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Trichlorofluoromethane	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Vinyl acetate	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Vinyl chloride	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U
Xylene (total)	MG/KG	0.0052 U	0.0055 U	0.005 U	0.0054 U	0.0053 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are PQL

**TABLE 2**  
**VALIDATED SOIL SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

<b>Location ID</b>		<b>SG-200</b>
<b>Sample ID</b>		<b>SG-200(3.5-4)</b>
<b>Matrix</b>		<b>Soil</b>
<b>Depth Interval (ft)</b>		<b>3.5-4.0</b>
<b>Date Sampled</b>		<b>02/07/14</b>
<b>Parameter</b>	<b>Units</b>	
<b>Volatile Organic Compounds</b>		
1,1,1,2-Tetrachloroethane	MG/KG	0.0052 U
1,1,1-Trichloroethane	MG/KG	0.0052 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0052 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0052 U
1,1,2-Trichloroethane	MG/KG	0.0052 U
1,1-Dichloroethane	MG/KG	0.0052 U
1,1-Dichloroethene	MG/KG	0.0052 U
1,1-Dichloropropene	MG/KG	0.0052 U
1,2,3-Trichlorobenzene	MG/KG	0.0052 U
1,2,3-Trichloropropane	MG/KG	0.0052 U
1,2,4-Trichlorobenzene	MG/KG	0.0052 U
1,2,4-Trimethylbenzene	MG/KG	0.0052 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0052 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0052 U
1,2-Dichlorobenzene	MG/KG	0.0052 U
1,2-Dichloroethane	MG/KG	0.0052 U
1,2-Dichloroethene (cis)	MG/KG	0.0052 U
1,2-Dichloroethene (trans)	MG/KG	0.0052 U
1,2-Dichloropropane	MG/KG	0.0052 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0052 U
1,3-Dichlorobenzene	MG/KG	0.0052 U
1,3-Dichloropropane	MG/KG	0.0052 U
1,3-Dichloropropene (cis)	MG/KG	0.0052 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are PQL



**TABLE 2  
VALIDATED SOIL SAMPLE RESULTS  
KLINK COSMO CLEANERS**

<b>Location ID</b>		<b>SG-200</b>
<b>Sample ID</b>		<b>SG-200(3.5-4)</b>
<b>Matrix</b>		<b>Soil</b>
<b>Depth Interval (ft)</b>		<b>3.5-4.0</b>
<b>Date Sampled</b>		<b>02/07/14</b>
<b>Parameter</b>	<b>Units</b>	
<b>Volatile Organic Compounds</b>		
1,3-Dichloropropene (trans)	MG/KG	0.0052 U
1,4-Dichlorobenzene	MG/KG	0.0052 U
1,4-Dioxane	MG/KG	R
2,2-Dichloropropane	MG/KG	0.0052 U
2-Chlorotoluene	MG/KG	0.0052 U
2-Hexanone	MG/KG	0.0052 U
4-Chlorotoluene	MG/KG	0.0052 U
4-Isopropyltoluene (p-Cymene)	MG/KG	0.0052 U
4-Methyl-2-pentanone	MG/KG	0.0052 UJ
Acetone	MG/KG	0.0052 U
Benzene	MG/KG	0.0052 U
Bromobenzene	MG/KG	0.0052 U
Bromochloromethane	MG/KG	0.0052 U
Bromodichloromethane	MG/KG	0.0052 U
Bromoform	MG/KG	0.0052 UJ
Bromomethane	MG/KG	0.0052 U
Carbon disulfide	MG/KG	0.0052 U
Carbon tetrachloride	MG/KG	0.0052 U
Chlorobenzene	MG/KG	0.0052 U
Chloroethane	MG/KG	0.0052 U
Chloroform	MG/KG	0.0052 U
Chloromethane	MG/KG	0.0052 U
Cyclohexane	MG/KG	0.0052 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are PQL

**TABLE 2**  
**VALIDATED SOIL SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

<b>Location ID</b>		<b>SG-200</b>
<b>Sample ID</b>		<b>SG-200(3.5-4)</b>
<b>Matrix</b>		<b>Soil</b>
<b>Depth Interval (ft)</b>		<b>3.5-4.0</b>
<b>Date Sampled</b>		<b>02/07/14</b>
<b>Parameter</b>	<b>Units</b>	
<b>Volatile Organic Compounds</b>		
Dibromochloromethane	MG/KG	0.0052 U
Dibromomethane	MG/KG	0.0052 U
Dichlorodifluoromethane	MG/KG	0.0052 UJ
Ethylbenzene	MG/KG	0.0052 U
Hexachlorobutadiene	MG/KG	0.0052 U
Iodomethane (Methyl iodide)	MG/KG	0.0052 U
Isopropylbenzene (Cumene)	MG/KG	0.0052 U
Methyl acetate	MG/KG	0.0052 UJ
Methyl ethyl ketone (2-Butanone)	MG/KG	0.0052 UJ
Methyl tert-butyl ether	MG/KG	0.0052 U
Methylcyclohexane	MG/KG	0.0052 U
Methylene chloride	MG/KG	0.0026 J
Naphthalene	MG/KG	0.0052 U
sec-Butylbenzene	MG/KG	0.0052 U
Styrene	MG/KG	0.0052 U
tert-Butylbenzene	MG/KG	0.0052 U
Tetrachloroethene	MG/KG	0.0052 U
Toluene	MG/KG	0.0052 U
Trichloroethene	MG/KG	0.0052 U
Trichlorofluoromethane	MG/KG	0.0052 U
Vinyl acetate	MG/KG	0.0052 U
Vinyl chloride	MG/KG	0.0052 U
Xylene (total)	MG/KG	0.0052 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are PQL

**TABLE 3  
VALIDATED GROUNDWATER SAMPLE RESULTS  
KLINK COSMO CLEANERS**

Location ID		DEC-006TC	DEC-111	DEC-111	DEC-111D
Sample ID		DEC-006TC	DEC-111	DUP20120306	DEC-111D
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		03/07/14	03/06/14	03/06/14	03/06/14
Parameter	Units			Field Duplicate (1-1)	
<b>Volatile Organic Compounds</b>					
1,1,1,2-Tetrachloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	8.5
1,1,2,2-Tetrachloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	14
1,1-Dichloroethene	UG/L	2.1 J	5.0 U	5.0 U	53
1,1-Dichloropropene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2,3-Trichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2,3-Trichloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trimethylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	140
1,2-Dichloroethene (cis)	UG/L	3.2 J	3.2 J	2.4 J	11
1,2-Dichloroethene (trans)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropene (cis)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are PQL



**TABLE 3  
VALIDATED GROUNDWATER SAMPLE RESULTS  
KLINK COSMO CLEANERS**

Location ID		DEC-006TC	DEC-111	DEC-111	DEC-111D
Sample ID		DEC-006TC	DEC-111	DUP20120306	DEC-111D
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		03/07/14	03/06/14	03/06/14	03/06/14
Parameter	Units			Field Duplicate (1-1)	
<b>Volatile Organic Compounds</b>					
1,3-Dichloropropene (trans)	UG/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
1,4-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	UG/L	R	R	R	R
2,2-Dichloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
4-Chlorotoluene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
4-Isopropyltoluene (p-Cymene)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	UG/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Benzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromomethane	UG/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Carbon disulfide	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	UG/L	5.0 U	1.0 J	0.88 J	5.0 U
Chloromethane	UG/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Cyclohexane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are PQL

**TABLE 3  
VALIDATED GROUNDWATER SAMPLE RESULTS  
KLINK COSMO CLEANERS**

Location ID		DEC-006TC	DEC-111	DEC-111	DEC-111D
Sample ID		DEC-006TC	DEC-111	DUP20120306	DEC-111D
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		03/07/14	03/06/14	03/06/14	03/06/14
Parameter	Units			Field Duplicate (1-1)	
<b>Volatile Organic Compounds</b>					
Dibromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromomethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Iodomethane (Methyl iodide)	UG/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Isopropylbenzene (Cumene)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Methyl acetate	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Methyl tert-butyl ether	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Methylcyclohexane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
sec-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
tert-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	UG/L	4,900 D	1,300 D	950 D	18
Toluene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	UG/L	380 D	8.4	6.5	220 D
Trichlorofluoromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl acetate	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylene (total)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are PQL

**TABLE 4**  
**VALIDATED FIELD QC SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		FIELDQC
Sample ID		TRIP BLANK
Matrix		Water Quality
Depth Interval (ft)		-
Date Sampled		03/07/14
Parameter	Units	Trip Blank (1-1)
<b>Volatile Organic Compounds</b>		
1,1,1,2-Tetrachloroethane	UG/L	5.0 U
1,1,1-Trichloroethane	UG/L	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U
1,1-Dichloroethane	UG/L	5.0 U
1,1-Dichloroethene	UG/L	5.0 U
1,1-Dichloropropene	UG/L	5.0 U
1,2,3-Trichlorobenzene	UG/L	5.0 U
1,2,3-Trichloropropane	UG/L	5.0 U
1,2,4-Trichlorobenzene	UG/L	5.0 U
1,2,4-Trimethylbenzene	UG/L	5.0 U
1,2-Dibromo-3-chloropropane	UG/L	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	5.0 U
1,2-Dichlorobenzene	UG/L	5.0 U
1,2-Dichloroethane	UG/L	5.0 U
1,2-Dichloroethene (cis)	UG/L	5.0 U
1,2-Dichloroethene (trans)	UG/L	5.0 U
1,2-Dichloropropane	UG/L	5.0 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	5.0 U
1,3-Dichlorobenzene	UG/L	5.0 U
1,3-Dichloropropane	UG/L	5.0 U
1,3-Dichloropropene (cis)	UG/L	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

Detection Limits shown are MDL

**TABLE 4**  
**VALIDATED FIELD QC SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		FIELDQC
Sample ID		TRIP BLANK
Matrix		Water Quality
Depth Interval (ft)		-
Date Sampled		03/07/14
Parameter	Units	Trip Blank (1-1)
<b>Volatile Organic Compounds</b>		
1,3-Dichloropropene (trans)	UG/L	5.0 UJ
1,4-Dichlorobenzene	UG/L	5.0 U
1,4-Dioxane	UG/L	R
2,2-Dichloropropane	UG/L	5.0 U
2-Chlorotoluene	UG/L	5.0 U
2-Hexanone	UG/L	5.0 U
4-Chlorotoluene	UG/L	5.0 U
4-Isopropyltoluene (p-Cymene)	UG/L	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U
Acetone	UG/L	5.0 UJ
Benzene	UG/L	5.0 U
Bromobenzene	UG/L	5.0 U
Bromochloromethane	UG/L	5.0 U
Bromodichloromethane	UG/L	5.0 U
Bromoform	UG/L	5.0 U
Bromomethane	UG/L	5.0 UJ
Carbon disulfide	UG/L	5.0 U
Carbon tetrachloride	UG/L	5.0 U
Chlorobenzene	UG/L	5.0 U
Chloroethane	UG/L	5.0 U
Chloroform	UG/L	5.0 U
Chloromethane	UG/L	5.0 UJ
Cyclohexane	UG/L	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

**Detection Limits shown are MDL**



**TABLE 4**  
**VALIDATED FIELD QC SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		FIELDQC
Sample ID		TRIP BLANK
Matrix		Water Quality
Depth Interval (ft)		-
Date Sampled		03/07/14
Parameter	Units	Trip Blank (1-1)
<b>Volatile Organic Compounds</b>		
Dibromochloromethane	UG/L	5.0 U
Dibromomethane	UG/L	5.0 U
Dichlorodifluoromethane	UG/L	5.0 U
Ethylbenzene	UG/L	5.0 U
Hexachlorobutadiene	UG/L	5.0 U
Iodomethane (Methyl iodide)	UG/L	5.0 UJ
Isopropylbenzene (Cumene)	UG/L	5.0 U
Methyl acetate	UG/L	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	5.0 U
Methyl tert-butyl ether	UG/L	5.0 U
Methylcyclohexane	UG/L	5.0 U
Methylene chloride	UG/L	5.0 U
Naphthalene	UG/L	5.0 U
sec-Butylbenzene	UG/L	5.0 U
Styrene	UG/L	5.0 U
tert-Butylbenzene	UG/L	5.0 U
Tetrachloroethene	UG/L	5.0 U
Toluene	UG/L	5.0 U
Trichloroethene	UG/L	5.0 U
Trichlorofluoromethane	UG/L	5.0 U
Vinyl acetate	UG/L	5.0 U
Vinyl chloride	UG/L	5.0 U
Xylene (total)	UG/L	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 4/21/14

Checked By: PRF 4/23/14

**Detection Limits shown are MDL**

**ATTACHMENT A**  
**VALIDATED FORM 1's**

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111D-34-35

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-01B  
 Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1M7793.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 5.3 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
75-71-8	Dichlorodifluoromethane		5.2	U <i>J</i>
74-87-3	Chloromethane		5.2	U
75-01-4	Vinyl chloride		5.2	U
74-83-9	Bromomethane		5.2	U
75-00-3	Chloroethane		5.2	U
75-69-4	Trichlorofluoromethane		5.2	U
75-35-4	1,1-Dichloroethene		5.2	U
67-64-1	Acetone		5.2	U
74-88-4	Iodomethane		5.2	U
75-15-0	Carbon disulfide		5.2	U
75-09-2	Methylene chloride		5.2	U
156-60-5	trans-1,2-Dichloroethene		5.2	U
1634-04-4	Methyl tert-butyl ether		5.2	U
75-34-3	1,1-Dichloroethane		5.2	U
108-05-4	Vinyl acetate		5.2	U
78-93-3	2-Butanone		5.2	U <i>J</i>
156-59-2	cis-1,2-Dichloroethene		5.2	U
594-20-7	2,2-Dichloropropane		5.2	U
74-97-5	Bromochloromethane		5.2	U
67-66-3	Chloroform		5.2	U
71-55-6	1,1,1-Trichloroethane		5.2	U
563-58-6	1,1-Dichloropropene		5.2	U
56-23-5	Carbon tetrachloride		5.2	U
107-06-2	1,2-Dichloroethane		5.2	U
71-43-2	Benzene		5.2	U
79-01-6	Trichloroethene		5.2	U
78-87-5	1,2-Dichloropropane		5.2	U
74-95-3	Dibromomethane		5.2	U
75-27-4	Bromodichloromethane		5.2	U
10061-01-5	cis-1,3-Dichloropropene		5.2	U
108-10-1	4-Methyl-2-pentanone		5.2	U
108-88-3	Toluene		5.2	U
10061-02-6	trans-1,3-Dichloropropene		5.2	U
79-00-5	1,1,2-Trichloroethane		5.2	U
142-28-9	1,3-Dichloropropane		5.2	U

*Handwritten signature and date: 4/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111D-34-35

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-01B  
 Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1M7793.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 5.3 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
127-18-4	Tetrachloroethene		5.2	U
591-78-6	2-Hexanone		5.2	U
124-48-1	Dibromochloromethane		5.2	U
106-93-4	1,2-Dibromoethane		5.2	U
108-90-7	Chlorobenzene		5.2	U
630-20-6	1,1,1,2-Tetrachloroethane		5.2	U
100-41-4	Ethylbenzene		5.2	U
179601-23-1	m,p-Xylene		5.2	U
95-47-6	o-Xylene		5.2	U
1330-20-7	Xylene (Total)		5.2	U
100-42-5	Styrene		5.2	U
75-25-2	Bromoform		5.2	U
98-82-8	Isopropylbenzene		5.2	U
79-34-5	1,1,2,2-Tetrachloroethane		5.2	U
108-86-1	Bromobenzene		5.2	U
96-18-4	1,2,3-Trichloropropane		5.2	U
95-49-8	2-Chlorotoluene		5.2	U
108-67-8	1,3,5-Trimethylbenzene		5.2	U
106-43-4	4-Chlorotoluene		5.2	U
98-06-6	tert-Butylbenzene		5.2	U
95-63-6	1,2,4-Trimethylbenzene		5.2	U
135-98-8	sec-Butylbenzene		5.2	U
99-87-6	4-Isopropyltoluene		5.2	U
541-73-1	1,3-Dichlorobenzene		5.2	U
106-46-7	1,4-Dichlorobenzene		5.2	U
95-50-1	1,2-Dichlorobenzene		5.2	U
96-12-8	1,2-Dibromo-3-chloropropane		5.2	U
120-82-1	1,2,4-Trichlorobenzene		5.2	U
87-68-3	Hexachlorobutadiene		5.2	U
87-61-6	1,2,3-Trichlorobenzene		5.2	U
91-20-3	Naphthalene		5.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.2	U
123-91-1	1,4-Dioxane		100	U
110-82-7	Cyclohexane		5.2	U
79-20-9	Methyl acetate		5.2	U

*R*  
*done 5/8/14*



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111D-34-35

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-01B  
 Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1M7793.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 5.3 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
110-82-7	Cyclohexane		5.2	U
79-20-9	Methyl acetate		5.2	U
108-87-2	Methylcyclohexane		5.2	U

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
DEC-111D-34-35

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-01B  
 Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1M7793.D  
 Level: (TRACE or LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 5.3 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-195(7.5-8.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-04B  
 Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1M7796.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 10 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
75-71-8	Dichlorodifluoromethane		5.5	U <i>J</i>
74-87-3	Chloromethane		5.5	U
75-01-4	Vinyl chloride		5.5	U
74-83-9	Bromomethane		5.5	U
75-00-3	Chloroethane		5.5	U
75-69-4	Trichlorofluoromethane		5.5	U
75-35-4	1,1-Dichloroethene		5.5	U
67-64-1	Acetone		5.5	U
74-88-4	Iodomethane		5.5	U
75-15-0	Carbon disulfide		5.5	U
75-09-2	Methylene chloride		5.5	U
156-60-5	trans-1,2-Dichloroethene		5.5	U
1634-04-4	Methyl tert-butyl ether		5.5	U
75-34-3	1,1-Dichloroethane		5.5	U
108-05-4	Vinyl acetate		5.5	U
78-93-3	2-Butanone		5.5	U <i>J</i>
156-59-2	cis-1,2-Dichloroethene		5.5	U
594-20-7	2,2-Dichloropropane		5.5	U
74-97-5	Bromochloromethane		5.5	U
67-66-3	Chloroform		5.5	U
71-55-6	1,1,1-Trichloroethane		5.5	U
563-58-6	1,1-Dichloropropene		5.5	U
56-23-5	Carbon tetrachloride		5.5	U
107-06-2	1,2-Dichloroethane		5.5	U
71-43-2	Benzene		5.5	U
79-01-6	Trichloroethene		5.5	U
78-87-5	1,2-Dichloropropane		5.5	U
74-95-3	Dibromomethane		5.5	U
75-27-4	Bromodichloromethane		5.5	U
10061-01-5	cis-1,3-Dichloropropene		5.5	U
108-10-1	4-Methyl-2-pentanone		5.5	U
108-88-3	Toluene		5.5	U
10061-02-6	trans-1,3-Dichloropropene		5.5	U
79-00-5	1,1,2-Trichloroethane		5.5	U
142-28-9	1,3-Dichloropropane		5.5	U

*check  
11/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-195(7.5-8.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-04B  
 Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1M7796.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 10 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
127-18-4	Tetrachloroethene		5.5	U
591-78-6	2-Hexanone		5.5	U
124-48-1	Dibromochloromethane		5.5	U
106-93-4	1,2-Dibromoethane		5.5	U
108-90-7	Chlorobenzene		5.5	U
630-20-6	1,1,1,2-Tetrachloroethane		5.5	U
100-41-4	Ethylbenzene		5.5	U
179601-23-1	m,p-Xylene		5.5	U
95-47-6	o-Xylene		5.5	U
1330-20-7	Xylene (Total)		5.5	U
100-42-5	Styrene		5.5	U
75-25-2	Bromoform		5.5	U
98-82-8	Isopropylbenzene		5.5	U
79-34-5	1,1,2,2-Tetrachloroethane		5.5	U
108-86-1	Bromobenzene		5.5	U
96-18-4	1,2,3-Trichloropropane		5.5	U
95-49-8	2-Chlorotoluene		5.5	U
108-67-8	1,3,5-Trimethylbenzene		5.5	U
106-43-4	4-Chlorotoluene		5.5	U
98-06-6	tert-Butylbenzene		5.5	U
95-63-6	1,2,4-Trimethylbenzene		5.5	U
135-98-8	sec-Butylbenzene		5.5	U
99-87-6	4-Isopropyltoluene		5.5	U
541-73-1	1,3-Dichlorobenzene		5.5	U
106-46-7	1,4-Dichlorobenzene		5.5	U
95-50-1	1,2-Dichlorobenzene		5.5	U
96-12-8	1,2-Dibromo-3-chloropropane		5.5	U
120-82-1	1,2,4-Trichlorobenzene		5.5	U
87-68-3	Hexachlorobutadiene		5.5	U
87-61-6	1,2,3-Trichlorobenzene		5.5	U
91-20-3	Naphthalene		5.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.5	U
123-91-1	1,4-Dioxane		<del>110</del>	U
110-82-7	Cyclohexane		5.5	U
79-20-9	Methyl acetate		5.5	U

R *data*  
5/8/14



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-195(7.5-8.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-04B  
 Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1M7796.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 10 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
110-82-7	Cyclohexane		5.5	U
79-20-9	Methyl acetate		5.5	U
108-87-2	Methylcyclohexane		5.5	U

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
SG-195(7.5-8.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-04B  
Sample wt/vol: 5.10 (g/mL) G Lab File ID: V1M7796.D  
Level: (TRACE or LOW/MED) LOW Date Received: 02/10/2014  
% Moisture: not dec. 10 Date Analyzed: 02/12/2014  
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-196(3.5-4.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-03B  
 Sample wt/vol: 5.50 (g/mL) G Lab File ID: V1M7795.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 9.3 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
75-71-8	Dichlorodifluoromethane		5.0	U 3
74-87-3	Chloromethane		5.0	U
75-01-4	Vinyl chloride		5.0	U
74-83-9	Bromomethane		5.0	U
75-00-3	Chloroethane		5.0	U
75-69-4	Trichlorofluoromethane		5.0	U
75-35-4	1,1-Dichloroethene		5.0	U
67-64-1	Acetone		5.0	U
74-88-4	Iodomethane		5.0	U
75-15-0	Carbon disulfide		5.0	U
75-09-2	Methylene chloride		2.2	U 3
156-60-5	trans-1,2-Dichloroethene		5.0	U
1634-04-4	Methyl tert-butyl ether		5.0	U
75-34-3	1,1-Dichloroethane		5.0	U
108-05-4	Vinyl acetate		5.0	U
78-93-3	2-Butanone		5.0	U 3
156-59-2	cis-1,2-Dichloroethene		5.0	U
594-20-7	2,2-Dichloropropane		5.0	U
74-97-5	Bromochloromethane		5.0	U
67-66-3	Chloroform		5.0	U
71-55-6	1,1,1-Trichloroethane		5.0	U
563-58-6	1,1-Dichloropropene		5.0	U
56-23-5	Carbon tetrachloride		5.0	U
107-06-2	1,2-Dichloroethane		5.0	U
71-43-2	Benzene		5.0	U
79-01-6	Trichloroethene		5.0	U
78-87-5	1,2-Dichloropropane		5.0	U
74-95-3	Dibromomethane		5.0	U
75-27-4	Bromodichloromethane		5.0	U
10061-01-5	cis-1,3-Dichloropropene		5.0	U
108-10-1	4-Methyl-2-pentanone		5.0	U
108-88-3	Toluene		5.0	U
10061-02-6	trans-1,3-Dichloropropene		5.0	U
79-00-5	1,1,2-Trichloroethane		5.0	U
142-28-9	1,3-Dichloropropane		5.0	U

*Handwritten signature*  
4/11/14

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-196(3.5-4.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-03B  
 Sample wt/vol: 5.50 (g/mL) G Lab File ID: V1M7795.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 9.3 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
127-18-4	Tetrachloroethene		5.0	U
591-78-6	2-Hexanone		5.0	U
124-48-1	Dibromochloromethane		5.0	U
106-93-4	1,2-Dibromoethane		5.0	U
108-90-7	Chlorobenzene		5.0	U
630-20-6	1,1,1,2-Tetrachloroethane		5.0	U
100-41-4	Ethylbenzene		5.0	U
179601-23-1	m,p-Xylene		5.0	U
95-47-6	o-Xylene		5.0	U
1330-20-7	Xylene (Total)		5.0	U
100-42-5	Styrene		5.0	U
75-25-2	Bromoform		5.0	U
98-82-8	Isopropylbenzene		5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		5.0	U
108-86-1	Bromobenzene		5.0	U
96-18-4	1,2,3-Trichloropropane		5.0	U
95-49-8	2-Chlorotoluene		5.0	U
108-67-8	1,3,5-Trimethylbenzene		5.0	U
106-43-4	4-Chlorotoluene		5.0	U
98-06-6	tert-Butylbenzene		5.0	U
95-63-6	1,2,4-Trimethylbenzene		5.0	U
135-98-8	sec-Butylbenzene		5.0	U
99-87-6	4-Isopropyltoluene		5.0	U
541-73-1	1,3-Dichlorobenzene		5.0	U
106-46-7	1,4-Dichlorobenzene		5.0	U
95-50-1	1,2-Dichlorobenzene		5.0	U
96-12-8	1,2-Dibromo-3-chloropropane		5.0	U
120-82-1	1,2,4-Trichlorobenzene		5.0	U
87-68-3	Hexachlorobutadiene		5.0	U
87-61-6	1,2,3-Trichlorobenzene		5.0	U
91-20-3	Naphthalene		5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.0	U
123-91-1	1,4-Dioxane		<del>100</del>	U
110-82-7	Cyclohexane		5.0	U
79-20-9	Methyl acetate		5.0	U

*Handwritten:* 5/8/14



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-196(3.5-4.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-03B  
 Sample wt/vol: 5.50 (g/mL) G Lab File ID: V1M7795.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 9.3 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
110-82-7	Cyclohexane		5.0	U
79-20-9	Methyl acetate		5.0	U
108-87-2	Methylcyclohexane		5.0	U

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
SG-196(3.5-4.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-03B  
Sample wt/vol: 5.50 (g/mL) G Lab File ID: V1M7795.D  
Level: (TRACE or LOW/MED) LOW Date Received: 02/10/2014  
% Moisture: not dec. 9.3 Date Analyzed: 02/12/2014  
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-197(1.5-2.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-02B  
 Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1M7794.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 12 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
75-71-8	Dichlorodifluoromethane		5.4	U <i>J</i>
74-87-3	Chloromethane		5.4	U
75-01-4	Vinyl chloride		5.4	U
74-83-9	Bromomethane		5.4	U
75-00-3	Chloroethane		5.4	U
75-69-4	Trichlorofluoromethane		5.4	U
75-35-4	1,1-Dichloroethene		5.4	U
67-64-1	Acetone		5.4	U
74-88-4	Iodomethane		5.4	U
75-15-0	Carbon disulfide		5.4	U
75-09-2	Methylene chloride		5.4	U
156-60-5	trans-1,2-Dichloroethene		5.4	U
1634-04-4	Methyl tert-butyl ether		5.4	U
75-34-3	1,1-Dichloroethane		5.4	U
108-05-4	Vinyl acetate		5.4	U
78-93-3	2-Butanone		5.4	U <i>J</i>
156-59-2	cis-1,2-Dichloroethene		5.4	U
594-20-7	2,2-Dichloropropane		5.4	U
74-97-5	Bromochloromethane		5.4	U
67-66-3	Chloroform		5.4	U
71-55-6	1,1,1-Trichloroethane		5.4	U
563-58-6	1,1-Dichloropropene		5.4	U
56-23-5	Carbon tetrachloride		5.4	U
107-06-2	1,2-Dichloroethane		5.4	U
71-43-2	Benzene		5.4	U
79-01-6	Trichloroethene		5.4	U
78-87-5	1,2-Dichloropropane		5.4	U
74-95-3	Dibromomethane		5.4	U
75-27-4	Bromodichloromethane		5.4	U
10061-01-5	cis-1,3-Dichloropropene		5.4	U
108-10-1	4-Methyl-2-pentanone		5.4	U
108-88-3	Toluene		5.4	U
10061-02-6	trans-1,3-Dichloropropene		5.4	U
79-00-5	1,1,2-Trichloroethane		5.4	U
142-28-9	1,3-Dichloropropane		5.4	U

*Handwritten signature and date: 2/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-197(1.5-2.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-02B  
 Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1M7794.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 12 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
127-18-4	Tetrachloroethene		5.4	U
591-78-6	2-Hexanone		5.4	U
124-48-1	Dibromochloromethane		5.4	U
106-93-4	1,2-Dibromoethane		5.4	U
108-90-7	Chlorobenzene		5.4	U
630-20-6	1,1,1,2-Tetrachloroethane		5.4	U
100-41-4	Ethylbenzene		5.4	U
179601-23-1	m,p-Xylene		5.4	U
95-47-6	o-Xylene		5.4	U
1330-20-7	Xylene (Total)		5.4	U
100-42-5	Styrene		5.4	U
75-25-2	Bromoform		5.4	U
98-82-8	Isopropylbenzene		5.4	U
79-34-5	1,1,2,2-Tetrachloroethane		5.4	U
108-86-1	Bromobenzene		5.4	U
96-18-4	1,2,3-Trichloropropane		5.4	U
95-49-8	2-Chlorotoluene		5.4	U
108-67-8	1,3,5-Trimethylbenzene		5.4	U
106-43-4	4-Chlorotoluene		5.4	U
98-06-6	tert-Butylbenzene		5.4	U
95-63-6	1,2,4-Trimethylbenzene		5.4	U
135-98-8	sec-Butylbenzene		5.4	U
99-87-6	4-Isopropyltoluene		5.4	U
541-73-1	1,3-Dichlorobenzene		5.4	U
106-46-7	1,4-Dichlorobenzene		5.4	U
95-50-1	1,2-Dichlorobenzene		5.4	U
96-12-8	1,2-Dibromo-3-chloropropane		5.4	U
120-82-1	1,2,4-Trichlorobenzene		5.4	U
87-68-3	Hexachlorobutadiene		5.4	U
87-61-6	1,2,3-Trichlorobenzene		5.4	U
91-20-3	Naphthalene		5.4	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.4	U
123-91-1	1,4-Dioxane		110	U
110-82-7	Cyclohexane		5.4	U
79-20-9	Methyl acetate		5.4	U

R *Handwritten signature*  
5/8/14



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-197(1.5-2.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-02B  
 Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1M7794.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/10/2014  
 % Moisture: not dec. 12 Date Analyzed: 02/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
110-82-7	Cyclohexane		5.4	U
79-20-9	Methyl acetate		5.4	U
108-87-2	Methylcyclohexane		5.4	U

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
SG-197(1.5-2.0)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-02B  
Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1M7794.D  
Level: (TRACE or LOW/MED) LOW Date Received: 02/10/2014  
% Moisture: not dec. 12 Date Analyzed: 02/12/2014  
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-199(3-3.5)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-06B  
 Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1M7809.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/12/2014  
 % Moisture: not dec. 9.9 Date Analyzed: 02/19/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
75-71-8	Dichlorodifluoromethane		5.3	U <i>3</i>
74-87-3	Chloromethane		5.3	U
75-01-4	Vinyl chloride		5.3	U
74-83-9	Bromomethane		5.3	U
75-00-3	Chloroethane		5.3	U
75-69-4	Trichlorofluoromethane		5.3	U
75-35-4	1,1-Dichloroethene		5.3	U
67-64-1	Acetone		5.3	U
74-88-4	Iodomethane		5.3	U
75-15-0	Carbon disulfide		5.3	U
75-09-2	Methylene chloride		2.5	<i>7.3</i>
156-60-5	trans-1,2-Dichloroethene		5.3	U
1634-04-4	Methyl tert-butyl ether		5.3	U
75-34-3	1,1-Dichloroethane		5.3	U
108-05-4	Vinyl acetate		5.3	U
78-93-3	2-Butanone		5.3	U <i>3</i>
156-59-2	cis-1,2-Dichloroethene		5.3	U
594-20-7	2,2-Dichloropropane		5.3	U
74-97-5	Bromochloromethane		5.3	U
67-66-3	Chloroform		5.3	U
71-55-6	1,1,1-Trichloroethane		5.3	U
563-58-6	1,1-Dichloropropene		5.3	U
56-23-5	Carbon tetrachloride		5.3	U
107-06-2	1,2-Dichloroethane		5.3	U
71-43-2	Benzene		5.3	U
79-01-6	Trichloroethene		5.3	U
78-87-5	1,2-Dichloropropane		5.3	U
74-95-3	Dibromomethane		5.3	U
75-27-4	Bromodichloromethane		5.3	U
10061-01-5	cis-1,3-Dichloropropene		5.3	U
108-10-1	4-Methyl-2-pentanone		5.3	U <i>3</i>
108-88-3	Toluene		5.3	U
10061-02-6	trans-1,3-Dichloropropene		5.3	U
79-00-5	1,1,2-Trichloroethane		5.3	U
142-28-9	1,3-Dichloropropane		5.3	U

*Handwritten signature and date: 4/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-199(3-3.5)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-06B  
 Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1M7809.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/12/2014  
 % Moisture: not dec. 9.9 Date Analyzed: 02/19/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
127-18-4	Tetrachloroethene		5.3	U
591-78-6	2-Hexanone		5.3	U
124-48-1	Dibromochloromethane		5.3	U
106-93-4	1,2-Dibromoethane		5.3	U
108-90-7	Chlorobenzene		5.3	U
630-20-6	1,1,1,2-Tetrachloroethane		5.3	U
100-41-4	Ethylbenzene		5.3	U
179601-23-1	m,p-Xylene		5.3	U
95-47-6	o-Xylene		5.3	U
1330-20-7	Xylene (Total)		5.3	U
100-42-5	Styrene		5.3	U
75-25-2	Bromoform		5.3	U
98-82-8	Isopropylbenzene		5.3	U
79-34-5	1,1,2,2-Tetrachloroethane		5.3	U
108-86-1	Bromobenzene		5.3	U
96-18-4	1,2,3-Trichloropropane		5.3	U
95-49-8	2-Chlorotoluene		5.3	U
108-67-8	1,3,5-Trimethylbenzene		5.3	U
106-43-4	4-Chlorotoluene		5.3	U
98-06-6	tert-Butylbenzene		5.3	U
95-63-6	1,2,4-Trimethylbenzene		5.3	U
135-98-8	sec-Butylbenzene		5.3	U
99-87-6	4-Isopropyltoluene		5.3	U
541-73-1	1,3-Dichlorobenzene		5.3	U
106-46-7	1,4-Dichlorobenzene		5.3	U
95-50-1	1,2-Dichlorobenzene		5.3	U
96-12-8	1,2-Dibromo-3-chloropropane		5.3	U
120-82-1	1,2,4-Trichlorobenzene		5.3	U
87-68-3	Hexachlorobutadiene		5.3	U
87-61-6	1,2,3-Trichlorobenzene		5.3	U
91-20-3	Naphthalene		5.3	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.3	U
123-91-1	1,4-Dioxane		<del>110</del>	U
110-82-7	Cyclohexane		5.3	U
79-20-9	Methyl acetate		5.3	U

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 OAH  
 5/8/14



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-199(3-3.5)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-06B  
 Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1M7809.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/12/2014  
 % Moisture: not dec. 9.9 Date Analyzed: 02/19/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
110-82-7	Cyclohexane		5.3	U
79-20-9	Methyl acetate		5.3	U <i>5</i>
108-87-2	Methylcyclohexane		5.3	U

*OK 4/17/14*

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
SG-199(3-3.5)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-06B  
Sample wt/vol: 5.20 (g/mL) G Lab File ID: V1M7809.D  
Level: (TRACE or LOW/MED) LOW Date Received: 02/12/2014  
% Moisture: not dec. 9.9 Date Analyzed: 02/19/2014  
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-200(3.5-4)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-05B  
 Sample wt/vol: 5.60 (g/mL) G Lab File ID: V1M7808.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/12/2014  
 % Moisture: not dec. 13 Date Analyzed: 02/19/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
75-71-8	Dichlorodifluoromethane		5.2	U <i>3</i>
74-87-3	Chloromethane		5.2	U
75-01-4	Vinyl chloride		5.2	U
74-83-9	Bromomethane		5.2	U
75-00-3	Chloroethane		5.2	U
75-69-4	Trichlorofluoromethane		5.2	U
75-35-4	1,1-Dichloroethene		5.2	U
67-64-1	Acetone		5.2	U
74-88-4	Iodomethane		5.2	U
75-15-0	Carbon disulfide		5.2	U
75-09-2	Methylene chloride		2.6	U <i>3</i>
156-60-5	trans-1,2-Dichloroethene		5.2	U
1634-04-4	Methyl tert-butyl ether		5.2	U
75-34-3	1,1-Dichloroethane		5.2	U
108-05-4	Vinyl acetate		5.2	U
78-93-3	2-Butanone		5.2	U <i>3</i>
156-59-2	cis-1,2-Dichloroethene		5.2	U
594-20-7	2,2-Dichloropropane		5.2	U
74-97-5	Bromochloromethane		5.2	U
67-66-3	Chloroform		5.2	U
71-55-6	1,1,1-Trichloroethane		5.2	U
563-58-6	1,1-Dichloropropene		5.2	U
56-23-5	Carbon tetrachloride		5.2	U
107-06-2	1,2-Dichloroethane		5.2	U
71-43-2	Benzene		5.2	U
79-01-6	Trichloroethene		5.2	U
78-87-5	1,2-Dichloropropane		5.2	U
74-95-3	Dibromomethane		5.2	U
75-27-4	Bromodichloromethane		5.2	U
10061-01-5	cis-1,3-Dichloropropene		5.2	U
108-10-1	4-Methyl-2-pentanone		5.2	U <i>3</i>
108-88-3	Toluene		5.2	U
10061-02-6	trans-1,3-Dichloropropene		5.2	U
79-00-5	1,1,2-Trichloroethane		5.2	U
142-28-9	1,3-Dichloropropane		5.2	U

*Handwritten signature and date: 4/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-200(3.5-4)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-05B  
 Sample wt/vol: 5.60 (g/mL) G Lab File ID: V1M7808.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/12/2014  
 % Moisture: not dec. 13 Date Analyzed: 02/19/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
127-18-4	Tetrachloroethene		5.2	U
591-78-6	2-Hexanone		5.2	U
124-48-1	Dibromochloromethane		5.2	U
106-93-4	1,2-Dibromoethane		5.2	U
108-90-7	Chlorobenzene		5.2	U
630-20-6	1,1,1,2-Tetrachloroethane		5.2	U
100-41-4	Ethylbenzene		5.2	U
179601-23-1	m,p-Xylene		5.2	U
95-47-6	o-Xylene		5.2	U
1330-20-7	Xylene (Total)		5.2	U
100-42-5	Styrene		5.2	U
75-25-2	Bromoform		5.2	U
98-82-8	Isopropylbenzene		5.2	U
79-34-5	1,1,2,2-Tetrachloroethane		5.2	U
108-86-1	Bromobenzene		5.2	U
96-18-4	1,2,3-Trichloropropane		5.2	U
95-49-8	2-Chlorotoluene		5.2	U
108-67-8	1,3,5-Trimethylbenzene		5.2	U
106-43-4	4-Chlorotoluene		5.2	U
98-06-6	tert-Butylbenzene		5.2	U
95-63-6	1,2,4-Trimethylbenzene		5.2	U
135-98-8	sec-Butylbenzene		5.2	U
99-87-6	4-Isopropyltoluene		5.2	U
541-73-1	1,3-Dichlorobenzene		5.2	U
106-46-7	1,4-Dichlorobenzene		5.2	U
95-50-1	1,2-Dichlorobenzene		5.2	U
96-12-8	1,2-Dibromo-3-chloropropane		5.2	U
120-82-1	1,2,4-Trichlorobenzene		5.2	U
87-68-3	Hexachlorobutadiene		5.2	U
87-61-6	1,2,3-Trichlorobenzene		5.2	U
91-20-3	Naphthalene		5.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.2	U
123-91-1	1,4-Dioxane		108	U
110-82-7	Cyclohexane		5.2	U
79-20-9	Methyl acetate		5.2	U

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1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
SG-200(3.5-4)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-05B  
 Sample wt/vol: 5.60 (g/mL) G Lab File ID: V1M7808.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 02/12/2014  
 % Moisture: not dec. 13 Date Analyzed: 02/19/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/KG	
110-82-7	Cyclohexane		5.2	U
79-20-9	Methyl acetate		5.2	U <i>J</i>
108-87-2	Methylcyclohexane		5.2	U

*J*  
2/17/14

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 SG-200(3.5-4)

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: N0163-05B  
 Sample wt/vol: 5.60 (g/mL) G Lab File ID: V1M7808.D  
 Level: (TRACE or LOW/MED) LOW Date Received: 02/12/2014  
 % Moisture: not dec. 13 Date Analyzed: 02/19/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Purge Volume: 10.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-006TC

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-04A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3501.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
75-71-8	Dichlorodifluoromethane		5.0	U
74-87-3	Chloromethane		5.0	U <i>S</i>
75-01-4	Vinyl chloride		5.0	U
74-83-9	Bromomethane		5.0	U <i>S</i>
75-00-3	Chloroethane		5.0	U
75-69-4	Trichlorofluoromethane		5.0	U
75-35-4	1,1-Dichloroethene		2.1	J
67-64-1	Acetone		5.0	U <i>S</i>
74-88-4	Iodomethane		5.0	U <i>S</i>
75-15-0	Carbon disulfide		5.0	U
75-09-2	Methylene chloride		5.0	U
156-60-5	trans-1,2-Dichloroethene		5.0	U
1634-04-4	Methyl tert-butyl ether		5.0	U
75-34-3	1,1-Dichloroethane		5.0	U
108-05-4	Vinyl acetate		5.0	U
78-93-3	2-Butanone		5.0	U
156-59-2	cis-1,2-Dichloroethene		3.2	J
594-20-7	2,2-Dichloropropane		5.0	U
74-97-5	Bromochloromethane		5.0	U
67-66-3	Chloroform		5.0	U
71-55-6	1,1,1-Trichloroethane		5.0	U
563-58-6	1,1-Dichloropropene		5.0	U
56-23-5	Carbon tetrachloride		5.0	U
107-06-2	1,2-Dichloroethane		5.0	U
71-43-2	Benzene		5.0	U
79-01-6	Trichloroethene	<i>380</i>	<del>430</del>	<i>E/D</i>
78-87-5	1,2-Dichloropropane		5.0	U
74-95-3	Dibromomethane		5.0	U
75-27-4	Bromodichloromethane		5.0	U
10061-01-5	cis-1,3-Dichloropropene		5.0	U
108-10-1	4-Methyl-2-pentanone		5.0	U
108-88-3	Toluene		5.0	U
10061-02-6	trans-1,3-Dichloropropene		5.0	U <i>S</i>
79-00-5	1,1,2-Trichloroethane		5.0	U
142-28-9	1,3-Dichloropropane		5.0	U

*duy*  
*4/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DEC-006TC

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-04A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3501.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
127-18-4	Tetrachloroethene	4900	<del>4100</del>	<del>U</del>
591-78-6	2-Hexanone		5.0	U
124-48-1	Dibromochloromethane		5.0	U
106-93-4	1,2-Dibromoethane		5.0	U
108-90-7	Chlorobenzene		5.0	U
630-20-6	1,1,1,2-Tetrachloroethane		5.0	U
100-41-4	Ethylbenzene		5.0	U
179601-23-1	m,p-Xylene		5.0	U
95-47-6	o-Xylene		5.0	U
1330-20-7	Xylene (Total)		5.0	U
100-42-5	Styrene		5.0	U
75-25-2	Bromoform		5.0	U
98-82-8	Isopropylbenzene		5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		5.0	U
108-86-1	Bromobenzene		5.0	U
96-18-4	1,2,3-Trichloropropane		5.0	U
95-49-8	2-Chlorotoluene		5.0	U
108-67-8	1,3,5-Trimethylbenzene		5.0	U
106-43-4	4-Chlorotoluene		5.0	U
98-06-6	tert-Butylbenzene		5.0	U
95-63-6	1,2,4-Trimethylbenzene		5.0	U
135-98-8	sec-Butylbenzene		5.0	U
99-87-6	4-Isopropyltoluene		5.0	U
541-73-1	1,3-Dichlorobenzene		5.0	U
106-46-7	1,4-Dichlorobenzene		5.0	U
95-50-1	1,2-Dichlorobenzene		5.0	U
96-12-8	1,2-Dibromo-3-chloropropane		5.0	U
120-82-1	1,2,4-Trichlorobenzene		5.0	U
87-68-3	Hexachlorobutadiene		5.0	U
87-61-6	1,2,3-Trichlorobenzene		5.0	U
91-20-3	Naphthalene		5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.0	U
123-91-1	1,4-Dioxane		<del>100</del>	<del>U</del> R
110-82-7	Cyclohexane		5.0	U
79-20-9	Methyl acetate		5.0	U

*Handwritten:* 1/17/14



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-006TC

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-04A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3501.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
108-87-2	Methylcyclohexane		5.0	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
DEC-006TC

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-04A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3501.D  
 Level: (TRACE or LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-006TCDL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-04ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3528.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/13/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
75-71-8	Dichlorodifluoromethane		250	U
74-87-3	Chloromethane		250	U
75-01-4	Vinyl chloride		250	U
74-83-9	Bromomethane		250	U
75-00-3	Chloroethane		250	U
75-69-4	Trichlorofluoromethane		250	U
75-35-4	1,1-Dichloroethene		250	U
67-64-1	Acetone		250	U
74-88-4	Iodomethane		250	U
75-15-0	Carbon disulfide		250	U
75-09-2	Methylene chloride		250	U
156-60-5	trans-1,2-Dichloroethene		250	U
1634-04-4	Methyl tert-butyl ether		250	U
75-34-3	1,1-Dichloroethane		250	U
108-05-4	Vinyl acetate		250	U
78-93-3	2-Butanone		250	U
156-59-2	cis-1,2-Dichloroethene		250	U
594-20-7	2,2-Dichloropropane		250	U
74-97-5	Bromochloromethane		250	U
67-66-3	Chloroform		250	U
71-55-6	1,1,1-Trichloroethane		250	U
563-58-6	1,1-Dichloropropene		250	U
56-23-5	Carbon tetrachloride		250	U
107-06-2	1,2-Dichloroethane		250	U
71-43-2	Benzene		250	U
79-01-6	Trichloroethene		380	D
78-87-5	1,2-Dichloropropane		250	U
74-95-3	Dibromomethane		250	U
75-27-4	Bromodichloromethane		250	U
10061-01-5	cis-1,3-Dichloropropene		250	U
108-10-1	4-Methyl-2-pentanone		250	U
108-88-3	Toluene		250	U
10061-02-6	trans-1,3-Dichloropropene		250	U
79-00-5	1,1,2-Trichloroethane		250	U
142-28-9	1,3-Dichloropropane		250	U

*Handwritten signature and date: 4/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-006TCDL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-04ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3528.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/13/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
127-18-4	Tetrachloroethene		4900	D
591-78-6	2-Hexanone		250	U
124-48-1	Dibromochloromethane		250	U
106-93-4	1,2-Dibromoethane		250	U
108-90-7	Chlorobenzene		250	U
630-20-6	1,1,1,2-Tetrachloroethane		250	U
100-41-4	Ethylbenzene		250	U
179601-23-1	m,p-Xylene		250	U
95-47-6	o-Xylene		250	U
1330-20-7	Xylene (Total)		250	U
100-42-5	Styrene		250	U
75-25-2	Bromoform		250	U
98-82-8	Isopropylbenzene		250	U
79-34-5	1,1,2,2-Tetrachloroethane		250	U
108-86-1	Bromobenzene		250	U
96-18-4	1,2,3-Trichloropropane		250	U
95-49-8	2-Chlorotoluene		250	U
108-67-8	1,3,5-Trimethylbenzene		250	U
106-43-4	4-Chlorotoluene		250	U
98-06-6	tert-Butylbenzene		250	U
95-63-6	1,2,4-Trimethylbenzene		250	U
135-98-8	sec-Butylbenzene		250	U
99-87-6	4-Isopropyltoluene		250	U
541-73-1	1,3-Dichlorobenzene		250	U
106-46-7	1,4-Dichlorobenzene		250	U
95-50-1	1,2-Dichlorobenzene		250	U
96-12-8	1,2-Dibromo-3-chloropropane		250	U
120-82-1	1,2,4-Trichlorobenzene		250	U
87-68-3	Hexachlorobutadiene		250	U
87-61-6	1,2,3-Trichlorobenzene		250	U
91-20-3	Naphthalene		250	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		250	U
123-91-1	1,4-Dioxane		5000	U R
110-82-7	Cyclohexane		250	U
79-20-9	Methyl acetate		250	U

*Handwritten:* 4/17/14



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-006TCDL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-04ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3528.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/13/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
108-87-2	Methylcyclohexane		250	U

*Handwritten signature and date: 4/17/14*

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 DEC-006TCDL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-04ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3528.D  
 Level: (TRACE or LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/13/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

*Handwritten signature*  
 4/11/14

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-02A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3499.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
75-71-8	Dichlorodifluoromethane		5.0	U
74-87-3	Chloromethane		5.0	U <i>J</i>
75-01-4	Vinyl chloride		5.0	U
74-83-9	Bromomethane		5.0	U <i>J</i>
75-00-3	Chloroethane		5.0	U
75-69-4	Trichlorofluoromethane		5.0	U
75-35-4	1,1-Dichloroethene		5.0	U
67-64-1	Acetone		5.0	U <i>J</i>
74-88-4	Iodomethane		5.0	U <i>J</i>
75-15-0	Carbon disulfide		5.0	U
75-09-2	Methylene chloride		5.0	U
156-60-5	trans-1,2-Dichloroethene		5.0	U
1634-04-4	Methyl tert-butyl ether		5.0	U
75-34-3	1,1-Dichloroethane		5.0	U
108-05-4	Vinyl acetate		5.0	U
78-93-3	2-Butanone		5.0	U
156-59-2	cis-1,2-Dichloroethene		3.2	J
594-20-7	2,2-Dichloropropane		5.0	U
74-97-5	Bromochloromethane		5.0	U
67-66-3	Chloroform		1.0	J
71-55-6	1,1,1-Trichloroethane		5.0	U
563-58-6	1,1-Dichloropropene		5.0	U
56-23-5	Carbon tetrachloride		5.0	U
107-06-2	1,2-Dichloroethane		5.0	U
71-43-2	Benzene		5.0	U
79-01-6	Trichloroethene		8.4	U
78-87-5	1,2-Dichloropropane		5.0	U
74-95-3	Dibromomethane		5.0	U
75-27-4	Bromodichloromethane		5.0	U
10061-01-5	cis-1,3-Dichloropropene		5.0	U
108-10-1	4-Methyl-2-pentanone		5.0	U
108-88-3	Toluene		5.0	U
10061-02-6	trans-1,3-Dichloropropene		5.0	U <i>J</i>
79-00-5	1,1,2-Trichloroethane		5.0	U
142-28-9	1,3-Dichloropropane		5.0	U

*copy 4/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-02A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3499.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
127-18-4	Tetrachloroethene	<del>1300</del>	<del>1300</del>	<del>U</del> <b>13</b>
591-78-6	2-Hexanone		5.0	U
124-48-1	Dibromochloromethane		5.0	U
106-93-4	1,2-Dibromoethane		5.0	U
108-90-7	Chlorobenzene		5.0	U
630-20-6	1,1,1,2-Tetrachloroethane		5.0	U
100-41-4	Ethylbenzene		5.0	U
179601-23-1	m,p-Xylene		5.0	U
95-47-6	o-Xylene		5.0	U
1330-20-7	Xylene (Total)		5.0	U
100-42-5	Styrene		5.0	U
75-25-2	Bromoform		5.0	U
98-82-8	Isopropylbenzene		5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		5.0	U
108-86-1	Bromobenzene		5.0	U
96-18-4	1,2,3-Trichloropropane		5.0	U
95-49-8	2-Chlorotoluene		5.0	U
108-67-8	1,3,5-Trimethylbenzene		5.0	U
106-43-4	4-Chlorotoluene		5.0	U
98-06-6	tert-Butylbenzene		5.0	U
95-63-6	1,2,4-Trimethylbenzene		5.0	U
135-98-8	sec-Butylbenzene		5.0	U
99-87-6	4-Isopropyltoluene		5.0	U
541-73-1	1,3-Dichlorobenzene		5.0	U
106-46-7	1,4-Dichlorobenzene		5.0	U
95-50-1	1,2-Dichlorobenzene		5.0	U
96-12-8	1,2-Dibromo-3-chloropropane		5.0	U
120-82-1	1,2,4-Trichlorobenzene		5.0	U
87-68-3	Hexachlorobutadiene		5.0	U
87-61-6	1,2,3-Trichlorobenzene		5.0	U
91-20-3	Naphthalene		5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.0	U
123-91-1	1,4-Dioxane		<del>100</del>	<del>U</del> <b>R</b>
110-82-7	Cyclohexane		5.0	U
79-20-9	Methyl acetate		5.0	U

*Handwritten:* 4/17/14



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DEC-111

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-02A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3499.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
108-87-2	Methylcyclohexane		5.0	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DEC-111

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-02A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3499.D  
 Level: (TRACE or LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-02ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3504.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
75-71-8	Dichlorodifluoromethane		50	U
74-87-3	Chloromethane		50	U
75-01-4	Vinyl chloride		50	U
74-83-9	Bromomethane		50	U
75-00-3	Chloroethane		50	U
75-69-4	Trichlorofluoromethane		50	U
75-35-4	1,1-Dichloroethene		50	U
67-64-1	Acetone		50	U
74-88-4	Iodomethane		50	U
75-15-0	Carbon disulfide		50	U
75-09-2	Methylene chloride		50	U
156-60-5	trans-1,2-Dichloroethene		50	U
1634-04-4	Methyl tert-butyl ether		50	U
75-34-3	1,1-Dichloroethane		50	U
108-05-4	Vinyl acetate		50	U
78-93-3	2-Butanone		50	U
156-59-2	cis-1,2-Dichloroethene		50	U
594-20-7	2,2-Dichloropropane		50	U
74-97-5	Bromochloromethane		50	U
67-66-3	Chloroform		50	U
71-55-6	1,1,1-Trichloroethane		50	U
563-58-6	1,1-Dichloropropene		50	U
56-23-5	Carbon tetrachloride		50	U
107-06-2	1,2-Dichloroethane		50	U
71-43-2	Benzene		50	U
79-01-6	Trichloroethene		9.0	DJ
78-87-5	1,2-Dichloropropane		50	U
74-95-3	Dibromomethane		50	U
75-27-4	Bromodichloromethane		50	U
10061-01-5	cis-1,3-Dichloropropene		50	U
108-10-1	4-Methyl-2-pentanone		50	U
108-88-3	Toluene		50	U
10061-02-6	trans-1,3-Dichloropropene		50	U
79-00-5	1,1,2-Trichloroethane		50	U
142-28-9	1,3-Dichloropropane		50	U

*Handwritten:* DJ 1/17/14

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-02ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3504.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
127-18-4	Tetrachloroethene		1300	D
591-78-6	2-Hexanone		50	U
124-48-1	Dibromochloromethane		50	U
106-93-4	1,2-Dibromoethane		50	U
108-90-7	Chlorobenzene		50	U
630-20-6	1,1,1,2-Tetrachloroethane		50	U
100-41-4	Ethylbenzene		50	U
179601-23-1	m,p-Xylene		50	U
95-47-6	o-Xylene		50	U
1330-20-7	Xylene (Total)		50	U
100-42-5	Styrene		50	U
75-25-2	Bromoform		50	U
98-82-8	Isopropylbenzene		50	U
79-34-5	1,1,2,2-Tetrachloroethane		50	U
108-86-1	Bromobenzene		50	U
96-18-4	1,2,3-Trichloropropane		50	U
95-49-8	2-Chlorotoluene		50	U
108-67-8	1,3,5-Trimethylbenzene		50	U
106-43-4	4-Chlorotoluene		50	U
98-06-6	tert-Butylbenzene		50	U
95-63-6	1,2,4-Trimethylbenzene		50	U
135-98-8	sec-Butylbenzene		50	U
99-87-6	4-Isopropyltoluene		50	U
541-73-1	1,3-Dichlorobenzene		50	U
106-46-7	1,4-Dichlorobenzene		50	U
95-50-1	1,2-Dichlorobenzene		50	U
96-12-8	1,2-Dibromo-3-chloropropane		50	U
120-82-1	1,2,4-Trichlorobenzene		50	U
87-68-3	Hexachlorobutadiene		50	U
87-61-6	1,2,3-Trichlorobenzene		50	U
91-20-3	Naphthalene		50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		50	U
123-91-1	1,4-Dioxane		1000	U R
110-82-7	Cyclohexane		50	U
79-20-9	Methyl acetate		50	U

*Handwritten:* 4/17/14



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-02ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3504.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
108-87-2	Methylcyclohexane		50	U

*OK*  
*4/17/14*

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DEC-111DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-02ADL  
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3504.D  
Level: (TRACE or LOW/MED) LOW Date Received: 03/10/2014  
% Moisture: not dec. Date Analyzed: 03/12/2014  
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

*Done*  
*4/17/14*

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC-111

EPA SAMPLE NO.

DUP20120306

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-01A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3498.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
75-71-8	Dichlorodifluoromethane		5.0	U
74-87-3	Chloromethane		5.0	U J
75-01-4	Vinyl chloride		5.0	U
74-83-9	Bromomethane		5.0	U J
75-00-3	Chloroethane		5.0	U
75-69-4	Trichlorofluoromethane		5.0	U
75-35-4	1,1-Dichloroethene		5.0	U
67-64-1	Acetone		5.0	U J
74-88-4	Iodomethane		5.0	U J
75-15-0	Carbon disulfide		5.0	U
75-09-2	Methylene chloride		5.0	U
156-60-5	trans-1,2-Dichloroethene		5.0	U
1634-04-4	Methyl tert-butyl ether		5.0	U
75-34-3	1,1-Dichloroethane		5.0	U
108-05-4	Vinyl acetate		5.0	U
78-93-3	2-Butanone		5.0	U
156-59-2	cis-1,2-Dichloroethene		2.4	J
594-20-7	2,2-Dichloropropane		5.0	U
74-97-5	Bromochloromethane		5.0	U
67-66-3	Chloroform		0.88	J
71-55-6	1,1,1-Trichloroethane		5.0	U
563-58-6	1,1-Dichloropropene		5.0	U
56-23-5	Carbon tetrachloride		5.0	U
107-06-2	1,2-Dichloroethane		5.0	U
71-43-2	Benzene		5.0	U
79-01-6	Trichloroethene		6.5	U
78-87-5	1,2-Dichloropropane		5.0	U
74-95-3	Dibromomethane		5.0	U
75-27-4	Bromodichloromethane		5.0	U
10061-01-5	cis-1,3-Dichloropropene		5.0	U
108-10-1	4-Methyl-2-pentanone		5.0	U
108-88-3	Toluene		5.0	U
10061-02-6	trans-1,3-Dichloropropene		5.0	U J
79-00-5	1,1,2-Trichloroethane		5.0	U
142-28-9	1,3-Dichloropropane		5.0	U

OK  
4/17/14

DEC-111

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP20120306

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-01A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3498.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
127-18-4	Tetrachloroethene	950	<del>1000</del>	<del>U</del> D
591-78-6	2-Hexanone		5.0	U
124-48-1	Dibromochloromethane		5.0	U
106-93-4	1,2-Dibromoethane		5.0	U
108-90-7	Chlorobenzene		5.0	U
630-20-6	1,1,1,2-Tetrachloroethane		5.0	U
100-41-4	Ethylbenzene		5.0	U
179601-23-1	m,p-Xylene		5.0	U
95-47-6	o-Xylene		5.0	U
1330-20-7	Xylene (Total)		5.0	U
100-42-5	Styrene		5.0	U
75-25-2	Bromoform		5.0	U
98-82-8	Isopropylbenzene		5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		5.0	U
108-86-1	Bromobenzene		5.0	U
96-18-4	1,2,3-Trichloropropane		5.0	U
95-49-8	2-Chlorotoluene		5.0	U
108-67-8	1,3,5-Trimethylbenzene		5.0	U
106-43-4	4-Chlorotoluene		5.0	U
98-06-6	tert-Butylbenzene		5.0	U
95-63-6	1,2,4-Trimethylbenzene		5.0	U
135-98-8	sec-Butylbenzene		5.0	U
99-87-6	4-Isopropyltoluene		5.0	U
541-73-1	1,3-Dichlorobenzene		5.0	U
106-46-7	1,4-Dichlorobenzene		5.0	U
95-50-1	1,2-Dichlorobenzene		5.0	U
96-12-8	1,2-Dibromo-3-chloropropane		5.0	U
120-82-1	1,2,4-Trichlorobenzene		5.0	U
87-68-3	Hexachlorobutadiene		5.0	U
87-61-6	1,2,3-Trichlorobenzene		5.0	U
91-20-3	Naphthalene		5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.0	U
123-91-1	1,4-Dioxane		<del>100</del>	U R
110-82-7	Cyclohexane		5.0	U
79-20-9	Methyl acetate		5.0	U

dusk  
4/17/14



DEC-111

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP20120306

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_

Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-01A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3498.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014

% Moisture: not dec. Date Analyzed: 03/12/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
108-87-2	Methylcyclohexane		5.0	U

DEC-111

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DUP20120306

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_

Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-01A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3498.D

Level: (TRACE or LOW/MED) LOW Date Received: 03/10/2014

% Moisture: not dec. Date Analyzed: 03/12/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

DEC-111

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DUP20120306DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_

Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-01ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3503.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014

% Moisture: not dec. Date Analyzed: 03/12/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
75-71-8	Dichlorodifluoromethane		50	U
74-87-3	Chloromethane		50	U
75-01-4	Vinyl chloride		50	U
74-83-9	Bromomethane		50	U
75-00-3	Chloroethane		50	U
75-69-4	Trichlorofluoromethane		50	U
75-35-4	1,1-Dichloroethene		50	U
67-64-1	Acetone		50	U
74-88-4	Iodomethane		50	U
75-15-0	Carbon disulfide		50	U
75-09-2	Methylene chloride		50	U
156-60-5	trans-1,2-Dichloroethene		50	U
1634-04-4	Methyl tert-butyl ether		50	U
75-34-3	1,1-Dichloroethane		50	U
108-05-4	Vinyl acetate		50	U
78-93-3	2-Butanone		50	U
156-59-2	cis-1,2-Dichloroethene		50	U
594-20-7	2,2-Dichloropropane		50	U
74-97-5	Bromochloromethane		50	U
67-66-3	Chloroform		50	U
71-55-6	1,1,1-Trichloroethane		50	U
563-58-6	1,1-Dichloropropene		50	U
56-23-5	Carbon tetrachloride		50	U
107-06-2	1,2-Dichloroethane		50	U
71-43-2	Benzene		50	U
79-01-6	Trichloroethene		7.5	DJ
78-87-5	1,2-Dichloropropane		50	U
74-95-3	Dibromomethane		50	U
75-27-4	Bromodichloromethane		50	U
10061-01-5	cis-1,3-Dichloropropene		50	U
108-10-1	4-Methyl-2-pentanone		50	U
108-88-3	Toluene		50	U
10061-02-6	trans-1,3-Dichloropropene		50	U
79-00-5	1,1,2-Trichloroethane		50	U
142-28-9	1,3-Dichloropropane		50	U

*Handwritten signature*  
4/17/14

DEC-111

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DUP20120306DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_

Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-01ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3503.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014

% Moisture: not dec. Date Analyzed: 03/12/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
127-18-4	Tetrachloroethene		950	D
591-78-6	2-Hexanone		50	U
124-48-1	Dibromochloromethane		50	U
106-93-4	1,2-Dibromoethane		50	U
108-90-7	Chlorobenzene		50	U
630-20-6	1,1,1,2-Tetrachloroethane		50	U
100-41-4	Ethylbenzene		50	U
179601-23-1	m,p-Xylene		50	U
95-47-6	o-Xylene		50	U
1330-20-7	Xylene (Total)		50	U
100-42-5	Styrene		50	U
75-25-2	Bromoform		50	U
98-82-8	Isopropylbenzene		50	U
79-34-5	1,1,2,2-Tetrachloroethane		50	U
108-86-1	Bromobenzene		50	U
96-18-4	1,2,3-Trichloropropane		50	U
95-49-8	2-Chlorotoluene		50	U
108-67-8	1,3,5-Trimethylbenzene		50	U
106-43-4	4-Chlorotoluene		50	U
98-06-6	tert-Butylbenzene		50	U
95-63-6	1,2,4-Trimethylbenzene		50	U
135-98-8	sec-Butylbenzene		50	U
99-87-6	4-Isopropyltoluene		50	U
541-73-1	1,3-Dichlorobenzene		50	U
106-46-7	1,4-Dichlorobenzene		50	U
95-50-1	1,2-Dichlorobenzene		50	U
96-12-8	1,2-Dibromo-3-chloropropane		50	U
120-82-1	1,2,4-Trichlorobenzene		50	U
87-68-3	Hexachlorobutadiene		50	U
87-61-6	1,2,3-Trichlorobenzene		50	U
91-20-3	Naphthalene		50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		50	U
123-91-7	1,4-Dioxane		1000	U R
110-82-7	Cyclohexane		50	U
79-20-9	Methyl acetate		50	U

*Handwritten signature*  
4/17/14



DEC-111

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DUP20120306DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_

Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-01ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3503.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014

% Moisture: not dec. Date Analyzed: 03/12/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
108-87-2	Methylcyclohexane		50	U

*Handwritten signature*  
4/17/14

DEC-111

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
DUP20120306DL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_

Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-01ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3503.D

Level: (TRACE or LOW/MED) LOW Date Received: 03/10/2014

% Moisture: not dec. Date Analyzed: 03/12/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

*Handwritten signature and date: 4/17/14*

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DEC-111D

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-03A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3500.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	ug/L	
75-71-8	Dichlorodifluoromethane		5.0	U
74-87-3	Chloromethane		5.0	U <i>S</i>
75-01-4	Vinyl chloride		5.0	U
74-83-9	Bromomethane		5.0	U <i>S</i>
75-00-3	Chloroethane		5.0	U
75-69-4	Trichlorofluoromethane		5.0	U
75-35-4	1,1-Dichloroethene		53	
67-64-1	Acetone		5.0	U <i>S</i>
74-88-4	Iodomethane		5.0	U <i>S</i>
75-15-0	Carbon disulfide		5.0	U
75-09-2	Methylene chloride		5.0	U
156-60-5	trans-1,2-Dichloroethene		5.0	U
1634-04-4	Methyl tert-butyl ether		5.0	U
75-34-3	1,1-Dichloroethane		14	
108-05-4	Vinyl acetate		5.0	U
78-93-3	2-Butanone		5.0	U
156-59-2	cis-1,2-Dichloroethene		11	
594-20-7	2,2-Dichloropropane		5.0	U
74-97-5	Bromochloromethane		5.0	U
67-66-3	Chloroform		5.0	U
71-55-6	1,1,1-Trichloroethane		8.5	
563-58-6	1,1-Dichloropropene		5.0	U
56-23-5	Carbon tetrachloride		5.0	U
107-06-2	1,2-Dichloroethane		140	
71-43-2	Benzene		5.0	U
79-01-6	Trichloroethene	<i>220</i>	<del>240</del>	<i>Z D</i>
78-87-5	1,2-Dichloropropane		5.0	U
74-95-3	Dibromomethane		5.0	U
75-27-4	Bromodichloromethane		5.0	U
10061-01-5	cis-1,3-Dichloropropene		5.0	U
108-10-1	4-Methyl-2-pentanone		5.0	U
108-88-3	Toluene		5.0	U
10061-02-6	trans-1,3-Dichloropropene		5.0	U <i>S</i>
79-00-5	1,1,2-Trichloroethane		5.0	U
142-28-9	1,3-Dichloropropane		5.0	U

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4/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DEC-111D

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-03A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3500.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	ug/L	
127-18-4	Tetrachloroethene		18	
591-78-6	2-Hexanone		5.0	U
124-48-1	Dibromochloromethane		5.0	U
106-93-4	1,2-Dibromoethane		5.0	U
108-90-7	Chlorobenzene		5.0	U
630-20-6	1,1,1,2-Tetrachloroethane		5.0	U
100-41-4	Ethylbenzene		5.0	U
179601-23-1	m,p-Xylene		5.0	U
95-47-6	o-Xylene		5.0	U
1330-20-7	Xylene (Total)		5.0	U
100-42-5	Styrene		5.0	U
75-25-2	Bromoform		5.0	U
98-82-8	Isopropylbenzene		5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		5.0	U
108-86-1	Bromobenzene		5.0	U
96-18-4	1,2,3-Trichloropropane		5.0	U
95-49-8	2-Chlorotoluene		5.0	U
108-67-8	1,3,5-Trimethylbenzene		5.0	U
106-43-4	4-Chlorotoluene		5.0	U
98-06-6	tert-Butylbenzene		5.0	U
95-63-6	1,2,4-Trimethylbenzene		5.0	U
135-98-8	sec-Butylbenzene		5.0	U
99-87-6	4-Isopropyltoluene		5.0	U
541-73-1	1,3-Dichlorobenzene		5.0	U
106-46-7	1,4-Dichlorobenzene		5.0	U
95-50-1	1,2-Dichlorobenzene		5.0	U
96-12-8	1,2-Dibromo-3-chloropropane		5.0	U
120-82-1	1,2,4-Trichlorobenzene		5.0	U
87-68-3	Hexachlorobutadiene		5.0	U
87-61-6	1,2,3-Trichlorobenzene		5.0	U
91-20-3	Naphthalene		5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.0	U
123-91-1	1,4-Dioxane		<del>100</del>	U R
110-82-7	Cyclohexane		5.0	U
79-20-9	Methyl acetate		5.0	U



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DEC-111D

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-03A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3500.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
108-87-2	Methylcyclohexane		5.0	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
DEC-111D

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-03A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3500.D  
 Level: (TRACE or LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111DDL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-03ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3512.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 2.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	ug/L	
75-71-8	Dichlorodifluoromethane		10	U
74-87-3	Chloromethane		10	U
75-01-4	Vinyl chloride		10	U
74-83-9	Bromomethane		10	U
75-00-3	Chloroethane		10	U
75-69-4	Trichlorofluoromethane		10	U
75-35-4	1,1-Dichloroethene		41	D
67-64-1	Acetone		10	U
74-88-4	Iodomethane		10	U
75-15-0	Carbon disulfide		10	U
75-09-2	Methylene chloride		10	U
156-60-5	trans-1,2-Dichloroethene		10	U
1634-04-4	Methyl tert-butyl ether		10	U
75-34-3	1,1-Dichloroethane		13	D
108-05-4	Vinyl acetate		10	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		9.9	DJ
594-20-7	2,2-Dichloropropane		10	U
74-97-5	Bromochloromethane		10	U
67-66-3	Chloroform		10	U
71-55-6	1,1,1-Trichloroethane		7.0	DJ
563-58-6	1,1-Dichloropropene		10	U
56-23-5	Carbon tetrachloride		10	U
107-06-2	1,2-Dichloroethane		110	D
71-43-2	Benzene		10	U
79-01-6	Trichloroethene		220	D
78-87-5	1,2-Dichloropropane		10	U
74-95-3	Dibromomethane		10	U
75-27-4	Bromodichloromethane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
108-10-1	4-Methyl-2-pentanone		10	U
108-88-3	Toluene		10	U
10061-02-6	trans-1,3-Dichloropropene		10	U
79-00-5	1,1,2-Trichloroethane		10	U
142-28-9	1,3-Dichloropropane		10	U

*Handwritten signature*  
4/17/14

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
DEC-111DDL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-03ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3512.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 2.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	ug/L	
127-18-4	Tetrachloroethene		13	D
591-78-6	2-Hexanone		10	U
124-48-1	Dibromochloromethane		10	U
106-93-4	1,2-Dibromoethane		10	U
108-90-7	Chlorobenzene		10	U
630-20-6	1,1,1,2-Tetrachloroethane		10	U
100-41-4	Ethylbenzene		10	U
179601-23-1	m,p-Xylene		10	U
95-47-6	o-Xylene		10	U
1330-20-7	Xylene (Total)		10	U
100-42-5	Styrene		10	U
75-25-2	Bromoform		10	U
98-82-8	Isopropylbenzene		10	U
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-86-1	Bromobenzene		10	U
96-18-4	1,2,3-Trichloropropane		10	U
95-49-8	2-Chlorotoluene		10	U
108-67-8	1,3,5-Trimethylbenzene		10	U
106-43-4	4-Chlorotoluene		10	U
98-06-6	tert-Butylbenzene		10	U
95-63-6	1,2,4-Trimethylbenzene		10	U
135-98-8	sec-Butylbenzene		10	U
99-87-6	4-Isopropyltoluene		10	U
541-73-1	1,3-Dichlorobenzene		10	U
106-46-7	1,4-Dichlorobenzene		10	U
95-50-1	1,2-Dichlorobenzene		10	U
96-12-8	1,2-Dibromo-3-chloropropane		10	U
120-82-1	1,2,4-Trichlorobenzene		10	U
87-68-3	Hexachlorobutadiene		10	U
87-61-6	1,2,3-Trichlorobenzene		10	U
91-20-3	Naphthalene		10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		10	U
123-91-1	1,4-Dioxane		<del>200</del>	U R
110-82-7	Cyclohexane		10	U
79-20-9	Methyl acetate		10	U

*Handwritten signature and date:*  
4/17/14



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DEC-111DDL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-03ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3512.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 2.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
108-87-2	Methylcyclohexane		10	U

*Handwritten signature and date: 4/17/14*

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 DEC-111DDL

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-03ADL  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3512.D  
 Level: (TRACE or LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 2.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

*Handwritten:*  
 4/17/14

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
TRIP BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-05A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3497.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	ug/L	
75-71-8	Dichlorodifluoromethane		5.0	U
74-87-3	Chloromethane		5.0	U <i>5</i>
75-01-4	Vinyl chloride		5.0	U
74-83-9	Bromomethane		5.0	U <i>5</i>
75-00-3	Chloroethane		5.0	U
75-69-4	Trichlorofluoromethane		5.0	U
75-35-4	1,1-Dichloroethene		5.0	U
67-64-1	Acetone		5.0	U <i>3</i>
74-88-4	Iodomethane		5.0	U <i>3</i>
75-15-0	Carbon disulfide		5.0	U
75-09-2	Methylene chloride		5.0	U
156-60-5	trans-1,2-Dichloroethene		5.0	U
1634-04-4	Methyl tert-butyl ether		5.0	U
75-34-3	1,1-Dichloroethane		5.0	U
108-05-4	Vinyl acetate		5.0	U
78-93-3	2-Butanone		5.0	U
156-59-2	cis-1,2-Dichloroethene		5.0	U
594-20-7	2,2-Dichloropropane		5.0	U
74-97-5	Bromochloromethane		5.0	U
67-66-3	Chloroform		5.0	U
71-55-6	1,1,1-Trichloroethane		5.0	U
563-58-6	1,1-Dichloropropene		5.0	U
56-23-5	Carbon tetrachloride		5.0	U
107-06-2	1,2-Dichloroethane		5.0	U
71-43-2	Benzene		5.0	U
79-01-6	Trichloroethene		5.0	U
78-87-5	1,2-Dichloropropane		5.0	U
74-95-3	Dibromomethane		5.0	U
75-27-4	Bromodichloromethane		5.0	U
10061-01-5	cis-1,3-Dichloropropene		5.0	U
108-10-1	4-Methyl-2-pentanone		5.0	U
108-88-3	Toluene		5.0	U
10061-02-6	trans-1,3-Dichloropropene		5.0	U <i>5</i>
79-00-5	1,1,2-Trichloroethane		5.0	U
142-28-9	1,3-Dichloropropane		5.0	U

*dup 4/17/14*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-05A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3497.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	ug/L	
127-18-4	Tetrachloroethene		5.0	U
591-78-6	2-Hexanone		5.0	U
124-48-1	Dibromochloromethane		5.0	U
106-93-4	1,2-Dibromoethane		5.0	U
108-90-7	Chlorobenzene		5.0	U
630-20-6	1,1,1,2-Tetrachloroethane		5.0	U
100-41-4	Ethylbenzene		5.0	U
179601-23-1	m,p-Xylene		5.0	U
95-47-6	o-Xylene		5.0	U
1330-20-7	Xylene (Total)		5.0	U
100-42-5	Styrene		5.0	U
75-25-2	Bromoform		5.0	U
98-82-8	Isopropylbenzene		5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		5.0	U
108-86-1	Bromobenzene		5.0	U
96-18-4	1,2,3-Trichloropropane		5.0	U
95-49-8	2-Chlorotoluene		5.0	U
108-67-8	1,3,5-Trimethylbenzene		5.0	U
106-43-4	4-Chlorotoluene		5.0	U
98-06-6	tert-Butylbenzene		5.0	U
95-63-6	1,2,4-Trimethylbenzene		5.0	U
135-98-8	sec-Butylbenzene		5.0	U
99-87-6	4-Isopropyltoluene		5.0	U
541-73-1	1,3-Dichlorobenzene		5.0	U
106-46-7	1,4-Dichlorobenzene		5.0	U
95-50-1	1,2-Dichlorobenzene		5.0	U
96-12-8	1,2-Dibromo-3-chloropropane		5.0	U
120-82-1	1,2,4-Trichlorobenzene		5.0	U
87-68-3	Hexachlorobutadiene		5.0	U
87-61-6	1,2,3-Trichlorobenzene		5.0	U
91-20-3	Naphthalene		5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		5.0	U
123-91-1	1,4-Dioxane		100	<del>U</del> R
110-82-7	Cyclohexane		5.0	U
79-20-9	Methyl acetate		5.0	U

*dash*  
*4/17/14*



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.  
TRIP BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-05A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3497.D  
 Level: (TRACE/LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
108-87-2	Methylcyclohexane		5.0	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
TRIP BLANK

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: N0301-05A  
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8D3497.D  
 Level: (TRACE or LOW/MED) LOW Date Received: 03/10/2014  
 % Moisture: not dec. Date Analyzed: 03/12/2014  
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 5.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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<sup>1</sup>EPA-designated Registry Number.

**ATTACHMENT B**  
**SUPPORT DOCUMENTATION**

# CHAIN OF CUSTODY RECORD

## TESTS

# URS

PROJECT NO. 6390  
11176359.00002SITE NAME  
KLINK ROSMO-NYDOL

TCL VOCs

LAB SpectrumCOOLER 1 of 1

SAMPLERS (PRINT/SIGNATURE)

Rob MURPHY/Rob MURA Abdelaziz

BOTTLE TYPE AND PRESERVATIVE

PAGE 1 of 1DELIVERY SERVICE: Carrier AIRBILL NO.:

TOTAL NO.# OF CONTAINERS

2oz glass  
None

REMARKS

NO163

SAMPLE TYPE

BEGINNING DEPTH (IN FEET)

ENDING DEPTH (IN FEET)

FIELD LOT NO.# (RPMs ONLY)

LOCATION IDENTIFIER	DATE	TIME	COMP/GRAB	SAMPLE ID	MATRIX	TOTAL NO.# OF CONTAINERS	2oz glass	None
DEC-111D	2/6/14	1110	G	DEC-111D-34-35'	SO	2	2	
SG-197	2/7/14	1110	G	SG-197 (1.5-2.0)	SO	2	2	
SG-196	2/7/14	1010	G	SG-196 (3.5-4.0)	SO	2	2	
SG-195	2/7/14	0935	G	SG-195 (7.5-8.0)	SO	2	2	

REMARKS	SAMPLE TYPE	BEGINNING DEPTH (IN FEET)	ENDING DEPTH (IN FEET)	FIELD LOT NO.# (RPMs ONLY)
01	N	34	35	
02	N	1.5	2.0	
03	N	3.5	4.0	
04	N	7.5	8.0	

30/1/2014  
JH 2/7

<b>MATRIX CODES</b>	AA - AMBIENT AIR SE - SEDIMENT SH - HAZARDOUS SOLID WASTE	SL - SLUDGE WP - DRINKING WATER WW - WASTE WATER	WG - GROUND WATER SO - SOIL DC - DRILL CUTTINGS	WL - LEACHATE GS - SOIL GAS WC - DRILLING WATER	WO - OCEAN WATER WS - SURFACE WATER WQ - WATER FIELD QC	LH - HAZARDOUS LIQUID WASTE LF - FLOATING/FREE PRODUCT ON GW TABLE
<b>SAMPLE TYPE CODES</b>	TB# - TRIP BLANK SD# - MATRIX SPIKE DUPLICATE	RB# - RINSE BLANK FR# - FIELD REPLICATE	N# - NORMAL ENVIRONMENTAL SAMPLE MS# - MATRIX SPIKE (* - SEQUENTIAL NUMBER (FROM 1 TO 9) TO ACCOMMODATE MULTIPLE SAMPLES IN A SINGLE DAY)			

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	DATE	TIME	SPECIAL INSTRUCTIONS STANDARD TAT CALL GEORGE KISLUK @ 716 856-5636 w/ Questions
<u>[Signature]</u>	2/7/14	1150	<u>[Signature]</u>	2-7-14	1105	
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY (SIGNATURE)	DATE	TIME	
<u>[Signature]</u>			<u>Subout</u>			

Distribution: Original accompanies shipment, copy to coordinators field files 2.10.14

[Signature] K.P. 2/10/14 11:25 2.4°C Ice IR



N0163

# CHAIN OF CUSTODY RECORD

## TESTS

# URS

PROJECT NO.  
1176390.00002

SITE NAME  
Klink Cosmo

VOC

LAB H2M

SAMPLERS (PRINT/SIGNATURE)  
R. Abdelkziz *Mirahel*

COOLER 1 of 1

## BOTTLE TYPE AND PRESERVATIVE

PAGE 1 of 1

N0163

DELIVERY SERVICE: \_\_\_\_\_ AIRBILL NO.: \_\_\_\_\_

TOTAL NO. OF CONTAINERS

2 Jars

LOCATION IDENTIFIER	DATE	TIME	COMP/GRAB	SAMPLE ID	MATRIX	TOTAL NO. OF CONTAINERS	REMARKS	SAMPLE TYPE	BEGINNING DEPTH (IN FEET)	ENDING DEPTH (IN FEET)	FIELD LOT NO. # (IRPIMS ONLY)
				<del>56-200</del>							
-05	2/7/14	1300	G	56-200(3.5-4)	50	X		M1	3.5	4	
-06	2/7/14	1210	G	56-199(3-3.5)	50	X		N2	3	3.5	
				<u>0.6/0/0.6 IRol</u>							
				AWC 02-11-14							

MATRIX CODES	AA - AMBIENT AIR	SL - SLUDGE	WG - GROUND WATER	WL - LEACHATE	WO - OCEAN WATER	LH - HAZARDOUS LIQUID WASTE
	SE - SEDIMENT	WP - DRINKING WATER	SO - SOIL	GS - SOIL GAS	WS - SURFACE WATER	LF - FLOATING/FREE PRODUCT ON GW TABLE
SAMPLE TYPE CODES	SH - HAZARDOUS SOLID WASTE	WW - WASTE WATER	DC - DRILL CUTTINGS	WC - DRILLING WATER	WQ - WATER FIELD QC	
	TB# - TRIP BLANK	RB# - RINSE BLANK	N# - NORMAL ENVIRONMENTAL SAMPLE	# - SEQUENTIAL NUMBER (FROM 1 TO 9) TO ACCOMMODATE MULTIPLE SAMPLES IN A SINGLE DAY		
	SD# - MATRIX SPIKE DUPLICATE	FR# - FIELD REPLICATE	MS# - MATRIX SPIKE			

RELINQUISHED BY (SIGNATURE) <i>Mirahel</i>	DATE 2/11/14	TIME	RECEIVED BY (SIGNATURE) <i>Jet</i>	DATE 2/11/14	TIME 10:35	SPECIAL INSTRUCTIONS
RELINQUISHED BY (SIGNATURE) <i>Jet</i>	DATE	TIME	RECEIVED FOR LAB BY (SIGNATURE) <i>SUB OUT</i>	DATE 02-11-14	TIME	

Distribution: Original accompanies shipment, copy to coordinator field files

Page 4 of 17

*K P* 2/12/14 10:49 2.3°C IR ICE

## REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : URS Corporation

Project: Klink Cosmo Meeker

Laboratory Workorder / SDG #: N0163

SW846 8260C, VOC by GC-MS

### I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

### II. HOLDING TIMES

#### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

#### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

### III. METHODS

Samples were analyzed following procedures in laboratory test code:  
SW846 8260C

### IV. PREPARATION

Soil Samples were prepared following procedures in laboratory test code:  
SW5035

### V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V1  
Instrument Type: GCMS-VOA

Description: HP5890 II / HP5972  
Manufacturer: Hewlett-Packard  
Model: 5890 / 5972  
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624  
capillary column.

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Surrogates:

Surrogate standard percent recoveries were within the QC limits with the following exceptions. Please note that the acceptance criteria allow one surrogate recovery outside of the QC limits per fraction.

SG-200(3.5-4) (N0163-05B), recovery is above criteria for 1,2-Dichloroethane-d4 at 113% with criteria of (88-110).

### D. Spikes:

#### 1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits with the following exceptions. Please note that most test procedures allow for several compounds outside of the QC limits for the LCS, although this may indicate a bias for this specific compound.

LCS-75895 in batch 75895, recovery is above criteria for 1,4-Dioxane at 191% with criteria of (70-130).

LCS-75931 in batch 75931, recovery is above criteria for Dichlorodifluoromethane at 140% with criteria of (35-135), recovery is below criteria for 1,4-Dioxane at 55% with criteria of (70-130).

LCSD-75895 in batch 75895, recovery is above criteria for 1,4-Dioxane at 181% with criteria of (70-130).

LCSD-75931 in batch 75931, recovery is above criteria for 1,4-Dioxane at 193% with criteria of

(70-130)Dichlorodifluoromethane at 141% with criteria of (35-135).

**2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):**

No client-requested MS/MSD analyses were included in this SDG.

**E. Internal Standards:**

Internal standard peak areas were within the QC limits.

**F. Dilutions:**

No sample in this SDG required analysis at dilution.

**G. Samples:**

No other unusual occurrences were noted during sample analysis.

**H. Manual Integration**

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

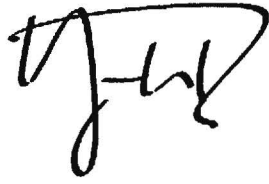
- M1 peak tailing or fronting
- M2 peak co-elution
- M3 rising or falling baseline
- M4 retention time shift
- M5 miscellaneous - under this category, the justification is explained
- M6 software did not integrate peak
- M7 partial peak integration

Manual integration was performed on the following:

VSTD0501J 2,2-Dichloropropane due to M6

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



A handwritten signature in black ink, appearing to be 'J. H. P.', written in a cursive style.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_ 2/28/2014 \_\_\_\_\_

3 - FORM III  
 SOIL LABORATORY CONTROL  
 SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-75931

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Lab Sample ID: LCS-75931 LCS Lot No.: \_\_\_\_\_  
 Date Extracted: 02/19/2014 Date Analyzed (1): 02/19/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Xylene (Total)	150.0000	0.0000	162.1115	108		83 - 125
Styrene	50.0000	0.0000	53.2984	107		75 - 125
Bromoform	50.0000	0.0000	52.4614	105		55 - 135
Isopropylbenzene	50.0000	0.0000	54.0167	108		75 - 130
1,1,2,2-Tetrachloroethane	50.0000	0.0000	51.2547	103		55 - 130
Bromobenzene	50.0000	0.0000	50.4813	101		65 - 120
1,2,3-Trichloropropane	50.0000	0.0000	59.9224	120		65 - 130
n-Propylbenzene	50.0000	0.0000	52.5718	105		65 - 135
2-Chlorotoluene	50.0000	0.0000	50.2582	101		70 - 130
1,3,5-Trimethylbenzene	50.0000	0.0000	53.1246	106		65 - 135
4-Chlorotoluene	50.0000	0.0000	51.9996	104		75 - 125
tert-Butylbenzene	50.0000	0.0000	52.5847	105		65 - 130
1,2,4-Trimethylbenzene	50.0000	0.0000	52.5719	105		65 - 135
sec-Butylbenzene	50.0000	0.0000	52.1779	104		65 - 130
4-Isopropyltoluene	50.0000	0.0000	52.5114	105		75 - 135
1,3-Dichlorobenzene	50.0000	0.0000	50.8714	102		70 - 125
1,4-Dichlorobenzene	50.0000	0.0000	50.5363	101		70 - 125
n-Butylbenzene	50.0000	0.0000	53.8307	108		65 - 140
1,2-Dichlorobenzene	50.0000	0.0000	51.1558	102		75 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	51.9346	104		40 - 135
1,2,4-Trichlorobenzene	50.0000	0.0000	53.8272	108		65 - 130
Hexachlorobutadiene	50.0000	0.0000	52.8272	106		55 - 140
1,2,3-Trichlorobenzene	50.0000	0.0000	51.8486	104		60 - 135
Naphthalene	50.0000	0.0000	46.7847	94		40 - 125
1,1,2-Trichloro-1,2,2-trif	50.0000	0.0000	55.4412	111		70 - 130
1,4-Dioxane	1000.0000	0.0000	552.9923	55	*	70 - 130
Cyclohexane	50.0000	0.0000	58.4945	117		70 - 130
Methyl acetate	50.0000	0.0000	56.8946	114		70 - 130
Methylcyclohexane	50.0000	0.0000	59.5887	119		70 - 130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

Spike Recovery: 2 out of 73 outside limits

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

3 - FORM III  
SOIL LABORATORY CONTROL  
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-75895

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Lab Sample ID: LCSD-75895 LCS Lot No.: \_\_\_\_\_

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	QC LIMITS	
						RPD	REC.
Bromoform	50.0000	50.9998	102		10	40	55 - 135
Isopropylbenzene	50.0000	53.8895	108		5	40	75 - 130
1,1,2,2-Tetrachloroethane	50.0000	50.1289	100		7	40	55 - 130
Bromobenzene	50.0000	50.4349	101		2	40	65 - 120
1,2,3-Trichloropropane	50.0000	53.2119	106		5	40	65 - 130
n-Propylbenzene	50.0000	52.3890	105		4	40	65 - 135
2-Chlorotoluene	50.0000	51.0021	102		6	40	70 - 130
1,3,5-Trimethylbenzene	50.0000	53.4319	107		3	40	65 - 135
4-Chlorotoluene	50.0000	51.1188	102		4	40	75 - 125
tert-Butylbenzene	50.0000	54.4691	109		2	40	65 - 130
1,2,4-Trimethylbenzene	50.0000	52.3137	105		2	40	65 - 135
sec-Butylbenzene	50.0000	53.9799	108		3	40	65 - 130
4-Isopropyltoluene	50.0000	55.2984	111		0	40	75 - 135
1,3-Dichlorobenzene	50.0000	49.7959	100		5	40	70 - 125
1,4-Dichlorobenzene	50.0000	50.2399	100		4	40	70 - 125
n-Butylbenzene	50.0000	53.9411	108		5	40	65 - 140
1,2-Dichlorobenzene	50.0000	50.0804	100		4	40	75 - 120
1,2-Dibromo-3-chloropropan	50.0000	47.3076	95		4	40	40 - 135
1,2,4-Trichlorobenzene	50.0000	46.6390	93		5	40	65 - 130
Hexachlorobutadiene	50.0000	55.0633	110		4	40	55 - 140
1,2,3-Trichlorobenzene	50.0000	45.9629	92		4	40	60 - 135
Naphthalene	50.0000	40.8775	82		13	40	40 - 125
1,1,2-Trichloro-1,2,2-trif	50.0000	53.5789	107		11	40	70 - 130
1,4-Dioxane	1000.0000	1811.4334	181	*	5	40	70 - 130
Cyclohexane	50.0000	54.2230	108		10	40	70 - 130
Methyl acetate	50.0000	53.2170	106		3	40	70 - 130
Methylcyclohexane	50.0000	56.6045	113		8	40	70 - 130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 73 outside limits

Spike Recovery: 1 out of 73 outside limits

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

## VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Instrument ID: V1 Calibration Date(s): 02/07/2014 02/07/2014  
 Heated Purge: (Y/N) Y Calibration Time(s): 8:15 10:09  
 Purge Volume: 10.0 (mL)  
 GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

LAB FILE ID: \_\_\_\_\_ RRF005 = V1M7733.D RRF020 = V1M7734.D  
 RRF050 = V1M7735.D RRF100 = V1M7736.D RRF200 = V1M7737.D

COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF200	RRF	%RSD
Dichlorodifluoromethane	0.128	0.174	0.195	0.203	0.145	0.169	18.8
Chloromethane	0.748	0.594	0.780	0.763	0.678	0.713	10.8
Vinyl chloride	0.435	0.456	0.551	0.536	0.469	0.489	10.5
Bromomethane	0.281	0.289	0.327	0.291	0.265	0.290	7.8
Chloroethane	0.318	0.287	0.347	0.320	0.297	0.314	7.4
Trichlorofluoromethane	0.305	0.291	0.356	0.374	0.329	0.331	10.4
1,1-Dichloroethene	0.363	0.334	0.383	0.385	0.326	0.358	7.7
Acetone	0.065	0.064	0.082	0.067	0.060	0.068	12.9
Iodomethane	0.501	0.338	0.443	0.355	0.354	0.398	17.8
Carbon disulfide	0.424	0.389	0.470	0.484	0.428	0.439	8.7
Methylene chloride	0.834	0.534	0.553	0.482	0.439	0.569	27.2
trans-1,2-Dichloroethene	0.357	0.337	0.416	0.394	0.350	0.371	8.9
Methyl tert-butyl ether	1.091	1.093	1.310	1.100	1.018	1.122	9.8
1,1-Dichloroethane	0.825	0.762	0.884	0.832	0.750	0.810	6.8
Vinyl acetate	1.898	1.834	2.108	1.836	1.672	1.870	8.4
2-Butanone	0.041	0.038	0.060	0.051	0.045	0.047	18.4
cis-1,2-Dichloroethene	0.438	0.402	0.463	0.433	0.385	0.424	7.3
2,2-Dichloropropane	0.218	0.223	0.247	0.252	0.208	0.229	8.4
Bromochloromethane	0.163	0.164	0.196	0.170	0.159	0.170	8.7
Chloroform	0.644	0.601	0.719	0.656	0.591	0.642	7.9
1,1,1-Trichloroethane	0.371	0.357	0.422	0.432	0.376	0.392	8.4
1,1-Dichloropropene	0.156	0.124	0.164	0.163	0.140	0.149	11.4
Carbon tetrachloride	0.356	0.322	0.410	0.397	0.349	0.367	9.8
1,2-Dichloroethane	0.434	0.416	0.477	0.417	0.384	0.426	8.0
Benzene	1.629	1.466	1.741	1.623	1.450	1.582	7.8
Trichloroethene	0.297	0.271	0.317	0.313	0.276	0.295	7.1
1,2-Dichloropropane	0.548	0.454	0.547	0.483	0.454	0.497	9.5
Dibromomethane	0.235	0.219	0.264	0.227	0.213	0.232	8.8
Bromodichloromethane	0.459	0.477	0.551	0.490	0.459	0.487	7.7
cis-1,3-Dichloropropene	0.639	0.659	0.764	0.681	0.630	0.675	7.9
4-Methyl-2-pentanone	0.587	0.559	0.696	0.595	0.516	0.591	11.3
Toluene	1.532	1.342	1.602	1.514	1.323	1.463	8.4
trans-1,3-Dichloropropene	0.506	0.527	0.626	0.548	0.507	0.543	9.2
1,1,2-Trichloroethane	0.297	0.309	0.341	0.291	0.273	0.302	8.3
1,3-Dichloropropane	0.895	0.806	0.931	0.834	0.765	0.846	7.9
Tetrachloroethene	0.325	0.274	0.340	0.347	0.299	0.317	9.5
2-Hexanone	0.644	0.562	0.696	0.575	0.533	0.602	11.1
Dibromochloromethane	0.453	0.451	0.517	0.481	0.450	0.470	6.2
1,2-Dibromoethane	0.398	0.419	0.486	0.436	0.406	0.429	8.1



6B - FORM VI VOA-2  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Instrument ID: V1 Calibration Date(s): 02/07/2014 02/07/2014  
 Heated Purge: (Y/N) Y Calibration Time(s): 8:15 10:09  
 Purge Volume: 10.0 (mL)  
 GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF200	RRF	%RSD
LAB FILE ID: _____	RRF005 = <u>V1M7733.D</u>	RRF020 = <u>V1M7734.D</u>					
RRF050 = <u>V1M7735.D</u>	RRF100 = <u>V1M7736.D</u>	RRF200 = <u>V1M7737.D</u>					
Chlorobenzene	1.193	1.080	1.250	1.216	1.097	1.167	6.4
1,1,1,2-Tetrachloroethane	0.411	0.376	0.445	0.417	0.390	0.408	6.5
Ethylbenzene	0.640	0.543	0.651	0.664	0.590	0.617	8.1
m,p-Xylene	0.798	0.703	0.833	0.827	0.728	0.778	7.6
o-Xylene	0.806	0.721	0.819	0.818	0.713	0.775	6.9
Xylene (Total)	0.801	0.709	0.829	0.824	0.723	0.777	7.4
Styrene	1.323	1.228	1.490	1.390	1.262	1.339	7.8
Bromoform	0.167	0.262	0.302	0.287	0.269	0.257	20.6
Isopropylbenzene	1.978	1.712	2.088	2.091	1.837	1.941	8.5
1,1,2,2-Tetrachloroethane	1.468	1.334	1.772	1.367	1.234	1.435	14.4
Bromobenzene	1.095	0.908	1.205	0.989	0.927	1.025	12.1
1,2,3-Trichloropropane	1.434	1.395	1.929	1.134	1.369	1.452	20.0
n-Propylbenzene	1.041	0.898	1.284	1.123	1.003	1.070	13.5
2-Chlorotoluene	1.017	0.859	1.135	1.006	0.897	0.983	11.1
1,3,5-Trimethylbenzene	3.735	3.342	4.510	3.960	3.456	3.801	12.2
4-Chlorotoluene	1.003	0.898	1.190	1.032	0.921	1.009	11.5
tert-Butylbenzene	3.403	3.154	4.313	3.726	3.314	3.582	12.8
1,2,4-Trimethylbenzene	3.865	3.345	4.647	4.039	3.569	3.893	12.8
sec-Butylbenzene	4.708	4.264	5.901	5.258	4.602	4.947	13.0
4-Isopropyltoluene	3.624	3.189	4.157	3.973	3.456	3.680	10.6
1,3-Dichlorobenzene	1.875	1.599	2.218	1.861	1.668	1.844	13.1
1,4-Dichlorobenzene	1.859	1.625	2.231	1.860	1.706	1.856	12.5
n-Butylbenzene	3.668	3.369	4.934	4.365	3.754	4.018	15.6
1,2-Dichlorobenzene	1.732	1.531	2.066	1.688	1.561	1.715	12.4
1,2-Dibromo-3-chloropropane	0.145	0.166	0.212	0.167	0.148	0.167	15.9
1,2,4-Trichlorobenzene	1.022	0.910	1.301	1.088	0.949	1.054	14.6
Hexachlorobutadiene	0.399	0.477	0.675	0.570	0.495	0.523	20.0
1,2,3-Trichlorobenzene	0.920	0.798	1.115	0.878	0.796	0.901	14.5
Naphthalene	3.408	1.977	2.762	2.155	1.908	2.442	26.1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.357	0.304	0.386	0.395	0.340	0.357	10.3
1,4-Dioxane	0.003	0.001	0.002	0.002	0.002	0.002	25.3
Cyclohexane	0.910	0.741	0.952	0.970	0.832	0.881	10.7
Methyl acetate	0.722	0.696	0.857	0.725	0.637	0.728	11.1
Methylcyclohexane	0.644	0.566	0.730	0.737	0.644	0.664	10.7

5A - FORM V VOA  
 VOLATILE ORGANIC INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFB1L

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Lab File ID: V1M7780.D BFB Injection Date: 02/12/2014  
 Instrument ID: V1 BFB Injection Time: 8:34  
 GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.7
75	30.0 - 60.0% of mass 95	41.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	62.6
175	5.0 - 9.0% of mass 174	3.5 (5.6)1
176	95.0 - 101.0% of mass 174	62.9 (100.4)1
177	5.0 - 9.0% of mass 176	3.8 (6.1)2

1 - Value is % mass 174

2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0501L	VSTD0501L	V1M7781.D	02/12/2014	9:03
02	LCS-75895	LCS-75895	V1M7782.D	02/12/2014	9:50
03	LCSD-75895	LCSD-75895	V1M7783.D	02/12/2014	10:19
04	MB-75895	MB-75895	V1M7785.D	02/12/2014	11:16
05	DEC-111D-34-35	N0163-01B	V1M7793.D	02/12/2014	15:10
06	SG-197(1.5-2.0)	N0163-02B	V1M7794.D	02/12/2014	15:39
07	SG-196(3.5-4.0)	N0163-03B	V1M7795.D	02/12/2014	16:07
08	SG-195(7.5-8.0)	N0163-04B	V1M7796.D	02/12/2014	16:35

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Instrument ID: V1 Calibration Date: 02/12/2014 Time: 9:03  
 Lab File ID: V1M7781.D Init. Calib. Date(s): 02/07/2014 02/07/2014  
 EPA Sample No. (VSTD####) VSTD0501L Init. Calib. Time(s): 8:15 10:09  
 Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)  
 Purge Volume: 10.0 (mL)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.169	0.211	0.100	24.8	20.0
Chloromethane	0.713	0.762	0.100	7.0	20.0
Vinyl chloride	0.489	0.541	0.100	10.5	20.0
Bromomethane	0.290	0.298	0.100	2.7	20.0
Chloroethane	0.314	0.344	0.100	9.6	20.0
Trichlorofluoromethane	0.331	0.366	0.100	10.7	20.0
1,1-Dichloroethene	0.358	0.364	0.100	1.5	20.0
Acetone	0.068	0.077	0.100	14.3	20.0
Iodomethane	0.398	0.398	0.100	-0.1	20.0
Carbon disulfide	0.439	0.470	0.100	6.9	20.0
Methylene chloride	0.569	0.480	0.100	-15.6	20.0
trans-1,2-Dichloroethene	0.371	0.392	0.100	5.8	20.0
Methyl tert-butyl ether	1.122	1.183	0.100	5.4	20.0
1,1-Dichloroethane	0.810	0.838	0.200	3.5	20.0
Vinyl acetate	1.870	1.961	0.100	4.9	20.0
2-Butanone	0.047	0.062	0.100	30.9	20.0
cis-1,2-Dichloroethene	0.424	0.444	0.100	4.7	20.0
2,2-Dichloropropane	0.229	0.238	0.100	3.8	20.0
Bromochloromethane	0.170	0.183	0.100	7.6	20.0
Chloroform	0.642	0.665	0.200	3.5	20.0
1,1,1-Trichloroethane	0.392	0.419	0.100	7.0	20.0
1,1-Dichloropropene	0.149	0.156	0.100	4.5	20.0
Carbon tetrachloride	0.367	0.389	0.100	6.2	20.0
1,2-Dichloroethane	0.426	0.443	0.100	4.2	20.0
Benzene	1.582	1.624	0.500	2.7	20.0
Trichloroethene	0.295	0.309	0.200	5.0	20.0
1,2-Dichloropropane	0.497	0.518	0.100	4.3	20.0
Dibromomethane	0.232	0.236	0.100	1.9	20.0
Bromodichloromethane	0.487	0.508	0.200	4.4	20.0
cis-1,3-Dichloropropene	0.675	0.711	0.200	5.4	20.0
4-Methyl-2-pentanone	0.591	0.665	0.100	12.6	20.0
Toluene	1.463	1.483	0.400	1.4	20.0
trans-1,3-Dichloropropene	0.543	0.595	0.100	9.6	20.0
1,1,2-Trichloroethane	0.302	0.319	0.100	5.6	20.0
1,3-Dichloropropane	0.846	0.866	0.100	2.4	20.0
Tetrachloroethene	0.317	0.310	0.200	-2.3	20.0
2-Hexanone	0.602	0.657	0.100	9.2	20.0
Dibromochloromethane	0.470	0.491	0.100	4.3	20.0
1,2-Dibromoethane	0.429	0.459	0.100	6.8	20.0
Chlorobenzene	1.167	1.184	0.500	1.4	20.0



7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Instrument ID: V1 Calibration Date: 02/12/2014 Time: 9:03  
 Lab File ID: V1M7781.D Init. Calib. Date(s): 02/07/2014 02/07/2014  
 EPA Sample No. (VSTD#####) VSTD0501L Init. Calib. Time(s): 8:15 10:09  
 Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)  
 Purge Volume: 10.0 (mL)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX %D
1,1,1,2-Tetrachloroethane	0.408	0.413	0.100	1.2	20.0
Ethylbenzene	0.617	0.609	0.100	-1.4	20.0
m,p-Xylene	0.778	0.765	0.100	-1.6	20.0
o-Xylene	0.775	0.756	0.300	-2.6	20.0
Xylene (Total)	0.777	0.762	0.100	-1.9	20.0
Styrene	1.339	1.340	0.300	0.1	20.0
Bromoform	0.257	0.307	0.100	19.3	20.0
Isopropylbenzene	1.941	1.934	0.100	-0.4	20.0
1,1,2,2-Tetrachloroethane	1.435	1.434	0.300	-0.1	20.0
Bromobenzene	1.025	0.956	0.100	-6.7	20.0
1,2,3-Trichloropropane	1.452	1.568	0.100	8.0	20.0
n-Propylbenzene	1.070	0.980	0.100	-8.4	20.0
2-Chlorotoluene	0.983	0.885	0.100	-10.0	20.0
1,3,5-Trimethylbenzene	3.801	3.605	0.100	-5.2	20.0
4-Chlorotoluene	1.009	0.913	0.100	-9.5	20.0
tert-Butylbenzene	3.582	3.385	0.100	-5.5	20.0
1,2,4-Trimethylbenzene	3.893	3.562	0.100	-8.5	20.0
sec-Butylbenzene	4.947	4.577	0.100	-7.5	20.0
4-Isopropyltoluene	3.680	3.456	0.100	-6.1	20.0
1,3-Dichlorobenzene	1.844	1.717	0.600	-6.9	20.0
1,4-Dichlorobenzene	1.856	1.706	0.500	-8.1	20.0
n-Butylbenzene	4.018	3.807	0.100	-5.2	20.0
1,2-Dichlorobenzene	1.715	1.626	0.400	-5.2	20.0
1,2-Dibromo-3-chloropropane	0.167	0.175	0.050	4.6	20.0
1,2,4-Trichlorobenzene	1.054	1.000	0.200	-5.1	20.0
Hexachlorobutadiene	0.523	0.514	0.100	-1.9	20.0
1,2,3-Trichlorobenzene	0.901	0.808	0.100	-10.3	20.0
Naphthalene	2.442	2.258	0.100	-7.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.357	0.375	0.100	5.2	20.0
1,4-Dioxane	0.002	0.002	0.100	-10.7	20.0
Cyclohexane	0.881	0.902	0.100	2.3	20.0
Methyl acetate	0.728	0.846	0.100	16.2	20.0
Methylcyclohexane	0.664	0.698	0.100	5.1	20.0



5A - FORM V VOA  
VOLATILE ORGANIC INSTRUMENT  
PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFB1M

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Lab File ID: V1M7800.D BFB Injection Date: 02/19/2014  
 Instrument ID: V1 BFB Injection Time: 8:00  
 GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.7
75	30.0 - 60.0% of mass 95	40.7
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	57.3
175	5.0 - 9.0% of mass 174	4.0 (6.9)1
176	95.0 - 101.0% of mass 174	57.3 (100.0)1
177	5.0 - 9.0% of mass 176	3.6 (6.2)2

1 - Value is % mass 174

2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0501M	VSTD0501M	V1M7801.D	02/19/2014	8:28
02	LCS-75931	LCS-75931	V1M7803.D	02/19/2014	9:36
03	LCSD-75931	LCSD-75931	V1M7804.D	02/19/2014	10:05
04	MB-75931	MB-75931	V1M7807.D	02/19/2014	11:30
05	SG-200(3.5-4)	N0163-05B	V1M7808.D	02/19/2014	11:58
06	SG-199(3-3.5)	N0163-06B	V1M7809.D	02/19/2014	12:26

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Instrument ID: V1 Calibration Date: 02/19/2014 Time: 8:28  
 Lab File ID: V1M7801.D Init. Calib. Date(s): 02/07/2014 02/07/2014  
 EPA Sample No. (VSTD#####) VSTD0501M Init. Calib. Time(s): 8:15 10:09  
 Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)  
 Purge Volume: 10.0 (mL)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.169	0.206	0.100	22.0	20.0
Chloromethane	0.713	0.817	0.100	14.7	20.0
Vinyl chloride	0.489	0.558	0.100	14.1	20.0
Bromomethane	0.290	0.318	0.100	9.5	20.0
Chloroethane	0.314	0.352	0.100	12.1	20.0
Trichlorofluoromethane	0.331	0.393	0.100	18.6	20.0
1,1-Dichloroethene	0.358	0.389	0.100	8.6	20.0
Acetone	0.068	0.077	0.100	13.9	20.0
Iodomethane	0.398	0.375	0.100	-5.7	20.0
Carbon disulfide	0.439	0.507	0.100	15.4	20.0
Methylene chloride	0.569	0.521	0.100	-8.3	20.0
trans-1,2-Dichloroethene	0.371	0.422	0.100	13.9	20.0
Methyl tert-butyl ether	1.122	1.235	0.100	10.0	20.0
1,1-Dichloroethane	0.810	0.872	0.200	7.7	20.0
Vinyl acetate	1.870	2.064	0.100	10.4	20.0
2-Butanone	0.047	0.063	0.100	32.6	20.0
cis-1,2-Dichloroethene	0.424	0.452	0.100	6.5	20.0
2,2-Dichloropropane	0.229	0.262	0.100	14.2	20.0
Bromochloromethane	0.170	0.196	0.100	15.2	20.0
Chloroform	0.642	0.702	0.200	9.2	20.0
1,1,1-Trichloroethane	0.392	0.427	0.100	9.1	20.0
1,1-Dichloropropene	0.149	0.163	0.100	8.8	20.0
Carbon tetrachloride	0.367	0.412	0.100	12.5	20.0
1,2-Dichloroethane	0.426	0.484	0.100	13.8	20.0
Benzene	1.582	1.752	0.500	10.7	20.0
Trichloroethene	0.295	0.323	0.200	9.6	20.0
1,2-Dichloropropane	0.497	0.542	0.100	9.0	20.0
Dibromomethane	0.232	0.259	0.100	12.0	20.0
Bromodichloromethane	0.487	0.546	0.200	12.0	20.0
cis-1,3-Dichloropropene	0.675	0.777	0.200	15.2	20.0
4-Methyl-2-pentanone	0.591	0.728	0.100	23.2	20.0
Toluene	1.463	1.613	0.400	10.3	20.0
trans-1,3-Dichloropropene	0.543	0.639	0.100	17.8	20.0
1,1,2-Trichloroethane	0.302	0.337	0.100	11.6	20.0
1,3-Dichloropropane	0.846	0.904	0.100	6.8	20.0
Tetrachloroethene	0.317	0.319	0.200	0.6	20.0
2-Hexanone	0.602	0.674	0.100	11.9	20.0
Dibromochloromethane	0.470	0.492	0.100	4.6	20.0
1,2-Dibromoethane	0.429	0.465	0.100	8.3	20.0
Chlorobenzene	1.167	1.227	0.500	5.1	20.0

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: N0163 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0163  
 Instrument ID: V1 Calibration Date: 02/19/2014 Time: 8:28  
 Lab File ID: V1M7801.D Init. Calib. Date(s): 02/07/2014 02/07/2014  
 EPA Sample No. (VSTD#####) VSTD0501M Init. Calib. Time(s): 8:15 10:09  
 Heated Purge: (Y/N) Y GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)  
 Purge Volume: 10.0 (mL)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX %D
1,1,1,2-Tetrachloroethane	0.408	0.425	0.100	4.2	20.0
Ethylbenzene	0.617	0.617	0.100	0.0	20.0
m,p-Xylene	0.778	0.792	0.100	1.8	20.0
o-Xylene	0.775	0.767	0.300	-1.2	20.0
Xylene (Total)	0.777	0.783	0.100	0.8	20.0
Styrene	1.339	1.388	0.300	3.7	20.0
Bromoform	0.257	0.311	0.100	20.8	20.0
Isopropylbenzene	1.941	2.022	0.100	4.2	20.0
1,1,2,2-Tetrachloroethane	1.435	1.472	0.300	2.6	20.0
Bromobenzene	1.025	0.985	0.100	-3.9	20.0
1,2,3-Trichloropropane	1.452	1.569	0.100	8.1	20.0
n-Propylbenzene	1.070	1.057	0.100	-1.2	20.0
2-Chlorotoluene	0.983	0.926	0.100	-5.8	20.0
1,3,5-Trimethylbenzene	3.801	3.838	0.100	1.0	20.0
4-Chlorotoluene	1.009	0.979	0.100	-2.9	20.0
tert-Butylbenzene	3.582	3.657	0.100	2.1	20.0
1,2,4-Trimethylbenzene	3.893	3.821	0.100	-1.8	20.0
sec-Butylbenzene	4.947	4.963	0.100	0.3	20.0
4-Isopropyltoluene	3.680	3.751	0.100	1.9	20.0
1,3-Dichlorobenzene	1.844	1.805	0.600	-2.1	20.0
1,4-Dichlorobenzene	1.856	1.828	0.500	-1.5	20.0
n-Butylbenzene	4.018	4.181	0.100	4.1	20.0
1,2-Dichlorobenzene	1.715	1.695	0.400	-1.2	20.0
1,2-Dibromo-3-chloropropane	0.167	0.183	0.050	9.1	20.0
1,2,4-Trichlorobenzene	1.054	1.082	0.200	2.6	20.0
Hexachlorobutadiene	0.523	0.571	0.100	9.1	20.0
1,2,3-Trichlorobenzene	0.901	0.934	0.100	3.6	20.0
Naphthalene	2.442	2.280	0.100	-6.6	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.357	0.397	0.100	11.4	20.0
1,4-Dioxane	0.002	0.002	0.100	-8.4	20.0
Cyclohexane	0.881	0.964	0.100	9.4	20.0
Methyl acetate	0.728	0.917	0.100	26.1	20.0
Methylcyclohexane	0.664	0.764	0.100	15.0	20.0



N0301

N0301

# CHAIN OF CUSTODY RECORD

## TESTS

# URS

PROJECT NO.  
11176359.00002

SITE NAME MEERER AVE  
Klink Cosmo

LAB Spectrum Analytical

SAMPLERS (PRINT/SIGNATURE)  
Mira Abdelaziz Mina

COOLER 1 of 1

## BOTTLE TYPE AND PRESERVATIVE

PAGE 1 of 1

DELIVERY SERVICE: Pickup  
Spectrum Analytical  
AIRBILL NO.: N/A

TOTAL NO. OF CONTAINERS

40 mL Vial

REMARKS

SAMPLE TYPE

BEGINNING DEPTH (IN FEET)

ENDING DEPTH (IN FEET)

FIELD LOT NO. # (IRPIMS ONLY)

N0301

LOCATION IDENTIFIER	DATE	TIME	COMP/GRAB	SAMPLE ID	MATRIX	TOTAL NO. OF CONTAINERS	40 mL Vial	REMARKS	SAMPLE TYPE	BEGINNING DEPTH (IN FEET)	ENDING DEPTH (IN FEET)	FIELD LOT NO. # (IRPIMS ONLY)
-01 DEC-111	3/6/14	0930	G	DQP20120306	WG	2	2		FRI	-	-	-
-02 DEC-111		0930		DEC-111		2	2		NI	-	-	-
-03 DEC-111D		0945		DEC-111D		2	2		NI	-	-	-
-03		0950		DEC-111DMS0950		2	2		MSI	-	-	-
-03		0955		DEC-111DMSD0955		2	2		SDI	-	-	-
-04 DEC-006TC	3/7/14	1010		DEC-006TC		2	2		NI	-	-	-
-05 Trip Blank	3/7/14			TRIP BLANK		2	2		TOI	-	-	-

WST/0/140 IRCA

MATRIX CODES	AA - AMBIENT AIR SE - SEDIMENT SH - HAZARDOUS SOLID WASTE	SL - SLUDGE WP - DRINKING WATER WW - WASTE WATER	WG - GROUND WATER SO - SOIL DC - DRILL CUTTINGS	WL - LEACHATE GS - SOIL GAS WC - DRILLING WATER	WO - OCEAN WATER WS - SURFACE WATER WQ - WATER FIELD QC	LH - HAZARDOUS LIQUID WASTE LF - FLOATING/FREE PRODUCT ON GW TABLE
--------------	---	--	---	---	---	---

SAMPLE TYPE CODES	TB# - TRIP BLANK SD# - MATRIX SPIKE DUPLICATE	RB# - RINSE BLANK FR# - FIELD REPLICATE	N# - NORMAL ENVIRONMENTAL SAMPLE MS# - MATRIX SPIKE	(# - SEQUENTIAL NUMBER (FROM 1 TO 9) TO ACCOMMODATE MULTIPLE SAMPLES IN A SINGLE DAY)
-------------------	--	--	--	---

RELINQUISHED BY (SIGNATURE) <u>Mina</u>	DATE 3/7/14	TIME 1330	RECEIVED BY (SIGNATURE) <u>Mina</u>	DATE 3/7/14	TIME 1:30 PM	SPECIAL INSTRUCTIONS <u>send To GEORGE Kestock</u> <u>STANDARD T.A.T.</u> <u>716 856-5636</u> <u>ICSD</u>
RELINQUISHED BY (SIGNATURE) <u>Mina</u>	DATE 3/7/14	TIME	RECEIVED FOR LAB BY (SIGNATURE) <u>Mina</u>	DATE 3/7/14	TIME 1728	

Distribution: Original accompanies shipment, copy to coordinator field files

S-10-14 hw

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URS-0750/DF 1/00/DF/GCM

03/10/14 11:00 0.7°



## REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : URS Corporation

Project: Klink Cosmo Meeker

Laboratory Workorder / SDG #: N0301

SW846 8260C, VOC by GC-MS

### I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

### II. HOLDING TIMES

#### A. Sample Preparation:

All samples were prepared within the method-specified holding times.

#### B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

### III. METHODS

Samples were analyzed following procedures in laboratory test code:  
SW846 8260C

### IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

### V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V10  
Instrument Type: GCMS-VOA

Description: HP7890A  
Manufacturer: Agilent  
Model: 7890A / 5975C  
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624  
capillary column.

## VI. ANALYSIS

### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

### B. Blanks:

All method blanks were within the acceptance criteria.

### C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

### D. Spikes:

#### 1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits with the following exceptions. Please note that most test procedures allow for several compounds outside of the QC limits for the LCS, although this may indicate a bias for this specific compound.

LCS-76129 in batch 76129, recovery is below criteria for Iodomethane at 66% with criteria of (72-121).

#### 2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

Matrix spikes were performed on samples: DEC-111D (N0301-03AMS) and DEC-111D (N0301-03AMSD).

Percent recoveries were within the QC limits with the following exceptions:

DEC-111D (N0301-03AMS), recovery is above criteria for 1,2-Dichloroethane at 145% with criteria of (70-130) and Iodomethane at 126% with criteria of (72-121).

DEC-111D (N0301-03AMSD), recovery is above criteria for Iodomethane at 127% with criteria of (72-121) and Trichloroethene

at 144% with criteria of (70-125).

Replicate RPDs were within the advisory QC limits.

**E. Internal Standards:**

Internal standard peak areas were within the QC limits.

**F. Dilutions:**

The following samples were analyzed at dilution:

DUP20120306 (N0301-01ADL) : Dilution Factor: 10

DEC-111 (N0301-02ADL) : Dilution Factor: 10

DEC-111D (N0301-03ADL) : Dilution Factor: 2

DEC-006TC (N0301-04ADL) : Dilution Factor: 50

**G. Samples:**

No other unusual occurrences were noted during sample analysis.

**H. Manual Integration**

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:


- M1 peak tailing or fronting
- M2 peak co-elution
- M3 rising or falling baseline
- M4 retention time shift
- M5 miscellaneous - under this category, the justification is explained
- M6 software did not integrate peak
- M7 partial peak integration

Manual integration was performed on the following:

DEC-111D (N0301-03A) Trichloroethene due to M6

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and

for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

A handwritten signature in black ink, appearing to be 'J. H. W.', written over a horizontal line.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_ 3/27/2014 \_\_\_\_\_



3 - FORM III  
 WATER LABORATORY CONTROL  
 SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-76129

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Lab Sample ID: LCS-76129 LCS Lot No.: \_\_\_\_\_  
 Date Extracted: 03/12/2014 Date Analyzed (1): 03/12/2014

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	46.9511	94		30 - 155
Chloromethane	50.0000	0.0000	39.9895	80		40 - 125
Vinyl chloride	50.0000	0.0000	54.8429	110		50 - 145
Bromomethane	50.0000	0.0000	38.9000	78		30 - 145
Chloroethane	50.0000	0.0000	60.8599	122		60 - 135
Trichlorofluoromethane	50.0000	0.0000	50.4266	101		60 - 145
1,1-Dichloroethene	50.0000	0.0000	52.0567	104		70 - 130
Acetone	50.0000	0.0000	63.8554	128		40 - 140
Iodomethane	50.0000	0.0000	32.9572	66	*	72 - 121
Carbon disulfide	50.0000	0.0000	52.0704	104		35 - 160
Methylene chloride	50.0000	0.0000	56.2242	112		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	55.5506	111		60 - 140
Methyl tert-butyl ether	50.0000	0.0000	55.3015	111		65 - 125
1,1-Dichloroethane	50.0000	0.0000	56.6656	113		70 - 135
Vinyl acetate	50.0000	0.0000	57.7982	116		38 - 163
2-Butanone	50.0000	0.0000	62.8808	126		30 - 150
cis-1,2-Dichloroethene	50.0000	0.0000	54.6145	109		70 - 125
2,2-Dichloropropane	50.0000	0.0000	57.2099	114		70 - 135
Bromochloromethane	50.0000	0.0000	52.3871	105		65 - 130
Chloroform	50.0000	0.0000	53.0261	106		65 - 135
1,1,1-Trichloroethane	50.0000	0.0000	52.1435	104		65 - 130
1,1-Dichloropropene	50.0000	0.0000	56.4250	113		75 - 130
Carbon tetrachloride	50.0000	0.0000	52.7367	105		65 - 140
1,2-Dichloroethane	50.0000	0.0000	52.9539	106		70 - 130
Benzene	50.0000	0.0000	55.9589	112		80 - 120
Trichloroethene	50.0000	0.0000	54.9839	110		70 - 125
1,2-Dichloropropane	50.0000	0.0000	57.6726	115		75 - 125
Dibromomethane	50.0000	0.0000	54.4503	109		75 - 125
Bromodichloromethane	50.0000	0.0000	55.2846	111		75 - 120
cis-1,3-Dichloropropene	50.0000	0.0000	54.1789	108		70 - 130
4-Methyl-2-pentanone	50.0000	0.0000	60.4692	121		60 - 135
Toluene	50.0000	0.0000	54.8416	110		75 - 120
trans-1,3-Dichloropropene	50.0000	0.0000	53.9207	108		55 - 140
1,1,2-Trichloroethane	50.0000	0.0000	56.8241	114		75 - 125
1,3-Dichloropropane	50.0000	0.0000	55.0204	110		75 - 125
Tetrachloroethene	50.0000	0.0000	54.9978	110		45 - 150
2-Hexanone	50.0000	0.0000	55.2296	110		55 - 130
Dibromochloromethane	50.0000	0.0000	54.7282	109		60 - 135
1,2-Dibromoethane	50.0000	0.0000	54.2572	109		80 - 120
Chlorobenzene	50.0000	0.0000	52.1129	104		80 - 120
1,1,1,2-Tetrachloroethane	50.0000	0.0000	52.6480	105		80 - 130
Ethylbenzene	50.0000	0.0000	53.3537	107		75 - 125
m,p-Xylene	100.0000	0.0000	109.5576	110		75 - 130
o-Xylene	50.0000	0.0000	54.8787	110		80 - 120

5A - FORM V VOA  
VOLATILE ORGANIC INSTRUMENT  
PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFB10U

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
Lab File ID: V8D3490.D BFB Injection Date: 03/12/2014  
Instrument ID: V10 BFB Injection Time: 8:14  
GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	30.3
75	30.0 - 80.0% of mass 95	56.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 -120% of mass 95	77.7
175	5.0 - 9.0% of mass 174	6.0 (7.7)1
176	95.0 - 101% of mass 174	77.8 (100.2)1
177	5.0 - 9.0% of mass 176	5.2 (6.7)2

1 - Value is % mass 174

2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD05010U	VSTD05010U	V8D3492.D	03/12/2014	10:13
02	LCS-76129	LCS-76129	V8D3493.D	03/12/2014	10:54
03	LCSD-76129	LCSD-76129	V8D3494.D	03/12/2014	11:21
04	MB-76129	MB-76129	V8D3496.D	03/12/2014	12:24
05	TRIP BLANK	N0301-05A	V8D3497.D	03/12/2014	12:51
06	DUP20120306	N0301-01A	V8D3498.D	03/12/2014	13:18
07	DEC-111	N0301-02A	V8D3499.D	03/12/2014	13:46
08	DEC-111D	N0301-03A	V8D3500.D	03/12/2014	14:13
09	DEC-006TC	N0301-04A	V8D3501.D	03/12/2014	14:40
10	DUP20120306DL	N0301-01ADL	V8D3503.D	03/12/2014	16:02
11	DEC-111DL	N0301-02ADL	V8D3504.D	03/12/2014	16:29
12	DEC-111DDL	N0301-03ADL	V8D3512.D	03/12/2014	20:08

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Instrument ID: V10 Calibration Date: 03/12/2014 Time: 10:13  
 Lab File ID: V8D3492.D Init. Calib. Date(s): 02/25/2014 02/25/2014  
 EPA Sample No. (VSTD#####) VSTD05010U Init. Calib. Time(s): 8:46 11:31  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)  
 Purge Volume: 5.0 (mL)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.324	0.293	0.100	-9.6	20.0
Chloromethane	0.699	0.526	0.100	-24.8	20.0
Vinyl chloride	0.402	0.416	0.100	3.5	20.0
Bromomethane	0.152	0.103	0.100	-32.6	20.0
Chloroethane	0.228	0.273	0.100	20.0	20.0
Trichlorofluoromethane	0.546	0.526	0.100	-3.8	20.0
1,1-Dichloroethene	0.274	0.273	0.100	-0.3	20.0
Acetone	0.053	0.064	0.100	20.5	20.0
Iodomethane	0.128	0.068	0.100	-46.5	20.0
Carbon disulfide	0.881	0.875	0.100	-0.7	20.0
Methylene chloride	0.307	0.324	0.100	5.3	20.0
trans-1,2-Dichloroethene	0.294	0.309	0.100	5.1	20.0
Methyl tert-butyl ether	0.902	0.952	0.100	5.6	20.0
1,1-Dichloroethane	0.670	0.705	0.200	5.2	20.0
Vinyl acetate	1.064	1.195	0.100	12.3	20.0
2-Butanone	0.041	0.049	0.100	18.6	20.0
cis-1,2-Dichloroethene	0.314	0.327	0.100	4.3	20.0
2,2-Dichloropropane	0.517	0.562	0.100	8.7	20.0
Bromochloromethane	0.158	0.156	0.100	-1.4	20.0
Chloroform	0.609	0.618	0.200	1.6	20.0
1,1,1-Trichloroethane	0.589	0.582	0.100	-1.1	20.0
1,1-Dichloropropene	0.143	0.152	0.100	6.6	20.0
Carbon tetrachloride	0.512	0.512	0.100	-0.1	20.0
1,2-Dichloroethane	0.627	0.636	0.100	1.4	20.0
Benzene	1.113	1.181	0.500	6.1	20.0
Trichloroethene	0.305	0.317	0.200	4.0	20.0
1,2-Dichloropropane	0.346	0.376	0.100	8.8	20.0
Dibromomethane	0.205	0.214	0.100	4.4	20.0
Bromodichloromethane	0.440	0.458	0.200	4.1	20.0
cis-1,3-Dichloropropene	0.430	0.495	0.200	15.1	20.0
4-Methyl-2-pentanone	0.479	0.538	0.100	12.2	20.0
Toluene	1.189	1.225	0.400	3.1	20.0
trans-1,3-Dichloropropene	0.390	0.473	0.100	21.4	20.0
1,1,2-Trichloroethane	0.257	0.272	0.100	6.1	20.0
1,3-Dichloropropane	0.562	0.565	0.100	0.6	20.0
Tetrachloroethene	0.376	0.367	0.200	-2.4	20.0
2-Hexanone	0.381	0.451	0.100	18.2	20.0
Dibromochloromethane	0.390	0.402	0.100	3.1	20.0
1,2-Dibromoethane	0.345	0.353	0.100	2.3	20.0
Chlorobenzene	0.968	0.926	0.500	-4.4	20.0

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: SPECTRUM ANALYTICAL, INC. Contract: \_\_\_\_\_  
 Lab Code: MITKEM Case No.: n0301 Mod. Ref No.: \_\_\_\_\_ SDG No.: SN0301  
 Instrument ID: V10 Calibration Date: 03/12/2014 Time: 10:13  
 Lab File ID: V8D3492.D Init. Calib. Date(s): 02/25/2014 02/25/2014  
 EPA Sample No. (VSTD#####) VSTD05010U Init. Calib. Time(s): 8:46 11:31  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)  
 Purge Volume: 5.0 (mL)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX %D
1,1,1,2-Tetrachloroethane	0.385	0.377	0.100	-2.3	20.0
Ethylbenzene	0.488	0.470	0.100	-3.7	20.0
m,p-Xylene	0.584	0.588	0.100	0.8	20.0
o-Xylene	0.562	0.564	0.300	0.4	20.0
Xylene (Total)	0.576	0.580	0.100	0.7	20.0
Styrene	0.874	0.907	0.300	3.8	20.0
Bromoform	0.242	0.255	0.100	5.4	20.0
Isopropylbenzene	1.511	1.477	0.100	-2.3	20.0
1,1,2,2-Tetrachloroethane	0.814	0.804	0.300	-1.2	20.0
Bromobenzene	0.851	0.791	0.100	-7.1	20.0
1,2,3-Trichloropropane	0.949	0.971	0.100	2.3	20.0
2-Chlorotoluene	0.684	0.641	0.100	-6.3	20.0
1,3,5-Trimethylbenzene	2.483	2.311	0.100	-6.9	20.0
4-Chlorotoluene	0.702	0.667	0.100	-5.0	20.0
tert-Butylbenzene	2.494	2.236	0.100	-10.3	20.0
1,2,4-Trimethylbenzene	2.423	2.323	0.100	-4.1	20.0
sec-Butylbenzene	2.944	2.821	0.100	-4.2	20.0
4-Isopropyltoluene	2.414	2.349	0.100	-2.7	20.0
1,3-Dichlorobenzene	1.426	1.322	0.600	-7.3	20.0
1,4-Dichlorobenzene	1.517	1.373	0.500	-9.5	20.0
1,2-Dichlorobenzene	1.414	1.299	0.400	-8.1	20.0
1,2-Dibromo-3-chloropropane	0.137	0.144	0.050	5.0	20.0
1,2,4-Trichlorobenzene	0.732	0.792	0.200	8.3	20.0
Hexachlorobutadiene	0.541	0.480	0.100	-11.4	20.0
1,2,3-Trichlorobenzene	0.706	0.736	0.100	4.2	20.0
Naphthalene	1.517	1.610	0.100	6.2	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.310	0.295	0.100	-4.7	20.0
1,4-Dioxane	0.003	0.003	0.100	12.8	20.0
Cyclohexane	0.643	0.658	0.100	2.4	20.0
Methyl acetate	0.484	0.535	0.100	10.5	20.0
Methylcyclohexane	0.422	0.431	0.100	2.1	20.0



**DATA USABILITY SUMMARY REPORT**

**WORK ASSIGNMENT C007540-4.1  
KLINK COSMO CLEANERS  
EAST WILLIAMSBURG INDUSTRIAL AREA  
BOROUGH OF BROOKLYN  
KINGS COUNTY, NEW YORK  
NYSDEC SITE ID# 224130**

**Analyses Performed by:**

**PACE ANALYTICAL SERVICES, Inc.  
MELVILLE, NY**

**Prepared for:**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
DIVISION OF ENVIRONMENTAL REMEDIATION**

**Prepared by:**

**URS CORPORATION  
257 WEST GENESEE STREET  
SUITE 400  
BUFFALO, NY 14202-2657**

**APRIL 2014**

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### TABLES (Following Text)

Table 1	Summary of Data Qualifications
Table 2	Validated Air and Outdoor Air Sample Results

### ATTACHMENTS

Attachment A	Validated Form 1's
Attachment B	Support Documentation

## 1.0 INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and the Development of Data Usability and Summary Reports*, May 2010. Discussed in this DUSR are analytical data for 5 soil gas samples, 1 soil gas field duplicate (FD), and 1 outdoor air sample collected by URS personnel on February 12, 2014 from the from the Klink Cosmo Cleaners site (Site ID # 224130) in support of the Remedial Investigation for NYSDEC Work Assignment # C007540-4.1.

## 2.0 ANALYTICAL METHODOLOGIES/DATA VALIDATION PROCEDURES

All samples were sent to Pace Analytical Services, Inc. (Melville, NY) for analysis. The samples were analyzed for volatile organic compounds (VOCs) following USEPA Compendium Method TO-15, *Determination of VOCs in Air Collected in Specially Prepared Canisters and Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)*.

A limited data validation was performed in accordance with the guidelines in the following USEPA Region II document:

- *Volatile Organic Analysis of Ambient Air in Canister By Method TO-15, SOP HW-31, Rev. 4, October 2006.*

The limited validation included: a completeness review of all required deliverables; holding times; a review of quality control (QC) results [blanks, instrument tunings, calibration standards, duplicate analyses, and laboratory control sample (LCS) recoveries] to determine if the data are within the protocol-required limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

Qualifications applied during the data validation include ‘J’ (estimated concentration) and ‘UJ’ (estimated quantitation limit). Definitions of USEPA Region II data qualifiers are presented at the end of this text. A summary of data qualifications is provided on Table 1. The validated analytical results are presented on Table 2. Copies of the validated laboratory results (i.e., Form 1’s) are presented in

Attachment A. Documentation supporting the qualification of data is presented in Attachment B. Only analytical deviations affecting data usability are discussed in this report.

### **3.0 DATA DELIVERABLE COMPLETENESS**

Full deliverable data packages (i.e., NYSDEC ASP Category B or equivalent) were provided by the laboratory, which included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

### **4.0 SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES**

All samples were received by the laboratory intact, properly preserved, and under proper chain-of-custody (COC). All samples were analyzed within the required holding times.

### **5.0 NON-CONFORMANCES**

#### **Instrument Calibration**

The initial calibration (ICAL) average relative response factor (RRF) percent relative standard deviation (%RSD) for methylene chloride was above the QC limit (30%). The detected results for methylene chloride in the associated samples listed on Table 1 have been qualified 'J'.

The percent difference (%D) between the ICAL average RRF and the RRF in one or more of the continuing calibration (CCAL) standards exceeded the QC limit of 30% for 1,1,2,2-tetrachloroethane. The non-detect results for this compound in the associated samples listed on Table 1 were qualified 'UJ'.

### **6.0 SAMPLE RESULTS AND REPORTING**

All quantitation/detection limits were reported in accordance with method requirements and were adjusted for sample volume and dilution factors.

#### **Field Duplicate Samples**

A field duplicate was collected for sample SG-200. Generally, similar detections and concentrations were observed in the parent sample and its respective field duplicate.



Note, the USEPA Region II validation guidelines do not require qualification of analytical results based upon field duplicate precision.

## 7.0 SUMMARY

All sample analyses were found to be compliant with the method criteria, except where previously noted. Those results qualified 'J' or 'UJ' are considered conditionally usable. All other sample results are usable as reported. URS does not recommend the recollection of any samples at this time.

**Prepared By:** Ann Marie Kropovitch, Chemist

*AMK*

**Date:** 4/22/14

**Reviewed By:** Peter R. Fairbanks, Senior Chemist

*PF*

**Date:** 4/22/14

## **DEFINITIONS OF USEPA REGION II DATA QUALIFIERS**

- U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- D – The positive value is the result of an analysis at a secondary dilution factor.

**TABLE 1****SUMMARY OF DATA QUALIFICATIONS****KLINK COSMO CLEANERS SITE**

<b>Sample ID</b>	<b>Analytical Deviation</b>	<b>Qualification</b>
SG-195, SG-196, SG-197, SG-199, SG-200, DUP020140212 (SG-200), and AA20140212.	ICAL %RSD > 30% for methylene chloride.	Qualify detected results 'J'.
SG-195, SG-196, SG-197, SG-199, SG-200, DUP020140212 (SG-200), and AA20140212.	CCAL %D > 30% for 1,1,2,2-tetrachloroethane.	Qualify non-detected results 'UJ'.

**TABLE 2**  
**VALIDATED AIR AND OUTDOOR AIR SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		OUTDOOR AIR	SG-195	SG-196	SG-197	SG-199
Sample ID		AA20140212	SG-195	SG-196	SG-197	SG-199
Matrix		Outdoor Air	Subslab Vapor	Subslab Vapor	Subslab Vapor	Subslab Vapor
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/12/14	02/12/14	02/12/14	02/12/14	02/12/14
Parameter	Units					
<b>Volatile Organic Compounds</b>						
1,1,1-Trichloroethane	UG/M3	0.55 U	6.38	0.55 U	0.55 U	3.00
1,1,2,2-Tetrachloroethane	UG/M3	0.69 UJ	0.69 UJ	0.69 UJ	0.69 UJ	0.69 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.77 U	0.77 U	0.77 U	0.77 U	1.76
1,1,2-Trichloroethane	UG/M3	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
1,1-Dichloroethane	UG/M3	0.40 U	2.83	0.40 U	0.40 U	0.40 U
1,1-Dichloroethene	UG/M3	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
1,2,4-Trichlorobenzene	UG/M3	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
1,2,4-Trimethylbenzene	UG/M3	0.54	1.13	1.23	0.88	0.98
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
1,2-Dichlorobenzene	UG/M3	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloroethane	UG/M3	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
1,2-Dichloroethene (cis)	UG/M3	1.59 U	5.63	1.59 U	1.59 U	1.59 U
1,2-Dichloroethene (trans)	UG/M3	0.40 U	0.44	0.40 U	0.40 U	0.40 U
1,2-Dichloropropane	UG/M3	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	UG/M3	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,3-Dichlorobenzene	UG/M3	0.60 U	9.14	10.1	7.40	6.85
1,3-Dichloropropene (cis)	UG/M3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,3-Dichloropropene (trans)	UG/M3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,4-Dichlorobenzene	UG/M3	0.66	6.07	4.69	3.07	3.13
2-Hexanone	UG/M3	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
4-Methyl-2-pentanone	UG/M3	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Acetone	UG/M3	6.75	36.8	44.8	30.3	29.2

Flags assigned during chemistry validation are shown.

Made By: AMK 4/18/14  
Checked By: PF 4/21/14

Detection Limits shown are PQL



**TABLE 2**  
**VALIDATED AIR AND OUTDOOR AIR SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		OUTDOOR AIR	SG-195	SG-196	SG-197	SG-199
Sample ID		AA20140212	SG-195	SG-196	SG-197	SG-199
Matrix		Outdoor Air	Subslab Vapor	Subslab Vapor	Subslab Vapor	Subslab Vapor
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/12/14	02/12/14	02/12/14	02/12/14	02/12/14
Parameter	Units					
<b>Volatile Organic Compounds</b>						
Benzene	UG/M3	0.99	1.44	3.45	2.14	1.34
Bromodichloromethane	UG/M3	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Bromoform	UG/M3	1.03 U	1.03 U	1.03 U	1.03 U	1.03 U
Bromomethane	UG/M3	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Carbon disulfide	UG/M3	0.37	0.44	4.05	5.48	54.8
Carbon tetrachloride	UG/M3	0.63 U	0.63 U	0.63 U	0.63	0.63 U
Chlorobenzene	UG/M3	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Chloroethane	UG/M3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Chloroform	UG/M3	0.49 U	8.40	1.03	2.05	0.93
Chloromethane	UG/M3	1.26	0.21 U	0.62	0.87	0.56
Dibromochloromethane	UG/M3	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Dichlorodifluoromethane	UG/M3	2.72	1.63	1.83	2.72	0.79
Ethylbenzene	UG/M3	0.43 U	0.69	0.69	0.69	0.56
Hexachlorobutadiene	UG/M3	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U
Methyl ethyl ketone (2-Butanone)	UG/M3	0.53	1.92	2.39	2.21	1.89
Methyl tert-butyl ether	UG/M3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Methylene chloride	UG/M3	10.6 J	4.62 J	3.46 J	5.86 J	17.6 J
Styrene	UG/M3	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Tetrachloroethene	UG/M3	2.71	62.6	8.61	2.51	1.22
Toluene	UG/M3	1.58	3.28	5.57	8.36	2.34
Trichloroethene	UG/M3	0.54 U	9.03	0.54 U	0.54 U	1.02
Trichlorofluoromethane	UG/M3	1.46	5.84	1.40	1.69	1.57
Vinyl acetate	UG/M3	0.99	4.72	4.40	3.03	4.58

Flags assigned during chemistry validation are shown.

Made By: AMK 4/18/14  
Checked By: PF 4/21/14

Detection Limits shown are PQL

**TABLE 2**  
**VALIDATED AIR AND OUTDOOR AIR SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		OUTDOOR AIR	SG-195	SG-196	SG-197	SG-199
Sample ID		AA20140212	SG-195	SG-196	SG-197	SG-199
Matrix		Outdoor Air	Subslab Vapor	Subslab Vapor	Subslab Vapor	Subslab Vapor
Depth Interval (ft)		-	-	-	-	-
Date Sampled		02/12/14	02/12/14	02/12/14	02/12/14	02/12/14
Parameter	Units					
<b>Volatile Organic Compounds</b>						
Vinyl chloride	UG/M3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
m&p-Xylene	UG/M3	1.00	2.30	2.35	2.26	1.78
o-Xylene	UG/M3	0.43	1.04	1.04	0.96	0.83

Flags assigned during chemistry validation are shown.

Made By: AMK 4/18/14  
Checked By: PF 4/21/14

Detection Limits shown are PQL

**TABLE 2**  
**VALIDATED AIR AND OUTDOOR AIR SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		SG-200	SG-200
Sample ID		DUP020140212	SG-200
Matrix		Subslab Vapor	Subslab Vapor
Depth Interval (ft)		-	-
Date Sampled		02/12/14	02/12/14
Parameter	Units	Field Duplicate (1-1)	
<b>Volatile Organic Compounds</b>			
1,1,1-Trichloroethane	UG/M3	1.42	1.64
1,1,2,2-Tetrachloroethane	UG/M3	0.69 UJ	0.69 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.77 U	0.77 U
1,1,2-Trichloroethane	UG/M3	0.55 U	0.55 U
1,1-Dichloroethane	UG/M3	0.40 U	0.40 U
1,1-Dichloroethene	UG/M3	0.40 U	0.40 U
1,2,4-Trichlorobenzene	UG/M3	0.74 U	0.74 U
1,2,4-Trimethylbenzene	UG/M3	1.23	1.18
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	0.77 U	0.77 U
1,2-Dichlorobenzene	UG/M3	0.60 U	0.60 U
1,2-Dichloroethane	UG/M3	0.40 U	0.40 U
1,2-Dichloroethene (cis)	UG/M3	1.59 U	1.59 U
1,2-Dichloroethene (trans)	UG/M3	0.40 U	0.40 U
1,2-Dichloropropane	UG/M3	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	UG/M3	0.70 U	0.70 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	0.49 U	0.49 U
1,3-Dichlorobenzene	UG/M3	10.6	9.20
1,3-Dichloropropene (cis)	UG/M3	0.45 U	0.45 U
1,3-Dichloropropene (trans)	UG/M3	0.45 U	0.45 U
1,4-Dichlorobenzene	UG/M3	4.09	3.73
2-Hexanone	UG/M3	0.41 U	0.41 U
4-Methyl-2-pentanone	UG/M3	0.41 U	0.41 U
Acetone	UG/M3	29.3	29.4

Flags assigned during chemistry validation are shown.

Made By: AMK 4/18/14  
 Checked By: PF 4/21/14

Detection Limits shown are PQL

**TABLE 2**  
**VALIDATED AIR AND OUTDOOR AIR SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		SG-200	SG-200
Sample ID		DUP020140212	SG-200
Matrix		Subslab Vapor	Subslab Vapor
Depth Interval (ft)		-	-
Date Sampled		02/12/14	02/12/14
Parameter	Units	Field Duplicate (1-1)	
<b>Volatile Organic Compounds</b>			
Benzene	UG/M3	1.47	1.63
Bromodichloromethane	UG/M3	0.67 U	0.67 U
Bromoform	UG/M3	1.03 U	1.03 U
Bromomethane	UG/M3	0.39 U	0.39 U
Carbon disulfide	UG/M3	4.48	4.89
Carbon tetrachloride	UG/M3	0.63	0.76
Chlorobenzene	UG/M3	0.46 U	0.46 U
Chloroethane	UG/M3	0.26 U	0.26 U
Chloroform	UG/M3	0.49 U	0.49 U
Chloromethane	UG/M3	0.31	0.31
Dibromochloromethane	UG/M3	0.85 U	0.85 U
Dichlorodifluoromethane	UG/M3	1.48	1.04
Ethylbenzene	UG/M3	0.78	0.78
Hexachlorobutadiene	UG/M3	1.07 U	1.07 U
Methyl ethyl ketone (2-Butanone)	UG/M3	2.04	2.12
Methyl tert-butyl ether	UG/M3	0.36 U	0.36 U
Methylene chloride	UG/M3	6.95 J	3.69 J
Styrene	UG/M3	0.43 U	0.43 U
Tetrachloroethene	UG/M3	0.81	0.68 U
Toluene	UG/M3	3.58	4.07
Trichloroethene	UG/M3	0.54 U	0.54 U
Trichlorofluoromethane	UG/M3	2.42	2.47
Vinyl acetate	UG/M3	3.59	3.70

Flags assigned during chemistry validation are shown.

Made By: AMK 4/18/14  
Checked By: PF 4/21/14

Detection Limits shown are PQL



**TABLE 2**  
**VALIDATED AIR AND OUTDOOR AIR SAMPLE RESULTS**  
**KLINK COSMO CLEANERS**

Location ID		SG-200	SG-200
Sample ID		DUP020140212	SG-200
Matrix		Subslab Vapor	Subslab Vapor
Depth Interval (ft)		-	-
Date Sampled		02/12/14	02/12/14
Parameter	Units	Field Duplicate (1-1)	
<b>Volatile Organic Compounds</b>			
Vinyl chloride	UG/M3	0.26 U	0.26 U
m&p-Xylene	UG/M3	2.74	2.61
o-Xylene	UG/M3	1.22	1.13

Flags assigned during chemistry validation are shown.

Made By: AMK 4/18/14  
 Checked By: PF 4/21/14

**Detection Limits shown are PQL**

**ATTACHMENT A**  
**VALIDATED FORM 1's**



**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

URS Corporation, Inc.  
77 Goodell Street  
Buffalo, NY 14203

Lab No. : 1402721-001  
Client Sample ID: SG-195

Sample Information:  
Type : Air

Attn To :  
Collected : 2/12/2014 3:36:00 PM  
Received : 2/14/2014 1:00:00 PM  
Collected By : MA99

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
1,1,1-Trichloroethane	1.17	ppbv		1	6.38	µg/m³	02/26/2014 12:09 AM
1,1,2,2-Tetrachloroethane	< 0.10	ppbv	c / JS	1	< 0.69	µg/m³	02/26/2014 12:09 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 12:09 AM
1,1,2-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/26/2014 12:09 AM
1,1-Dichloroethane	0.70	ppbv		1	2.83	µg/m³	02/26/2014 12:09 AM
1,1-Dichloroethene	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 12:09 AM
1,2,4-Trichlorobenzene	< 0.10	ppbv		1	< 0.74	µg/m³	02/26/2014 12:09 AM
1,2,4-Trimethylbenzene	0.23	ppbv		1	1.13	µg/m³	02/26/2014 12:09 AM
1,2-Dibromoethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 12:09 AM
1,2-Dichlorobenzene	< 0.10	ppbv		1	< 0.60	µg/m³	02/26/2014 12:09 AM
1,2-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 12:09 AM
1,2-Dichloroethene (cis)	1.42	ppbv		1	5.63	µg/m³	02/26/2014 12:09 AM
1,2-Dichloroethene (trans)	0.11	ppbv		1	0.44	µg/m³	02/26/2014 12:09 AM
1,2-Dichloropropane	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 12:09 AM
1,2-Dichlorotetrafluoroethane	< 0.10	ppbv		1	< 0.70	µg/m³	02/26/2014 12:09 AM
1,3,5-Trimethylbenzene	< 0.10	ppbv		1	< 0.49	µg/m³	02/26/2014 12:09 AM
1,3-Dichlorobenzene	1.52	ppbv		1	9.14	µg/m³	02/26/2014 12:09 AM
1,3-Dichloropropene (cis)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 12:09 AM
1,3-Dichloropropene (trans)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 12:09 AM
1,3-Hexachlorobutadiene	< 0.10	ppbv		1	< 1.07	µg/m³	02/26/2014 12:09 AM
1,4-Dichlorobenzene	1.01	ppbv		1	6.07	µg/m³	02/26/2014 12:09 AM
Acetone	15.5	ppbv		1	36.8	µg/m³	02/26/2014 12:09 AM
Benzene	0.45	ppbv		1	1.44	µg/m³	02/26/2014 12:09 AM
Bromodichloromethane	< 0.10	ppbv		1	< 0.67	µg/m³	02/26/2014 12:09 AM
Bromoform	< 0.10	ppbv		1	< 1.03	µg/m³	02/26/2014 12:09 AM
Bromomethane	< 0.10	ppbv		1	< 0.39	µg/m³	02/26/2014 12:09 AM
Carbon disulfide	0.14	ppbv		1	0.44	µg/m³	02/26/2014 12:09 AM
Carbon tetrachloride	< 0.10	ppbv		1	< 0.63	µg/m³	02/26/2014 12:09 AM
Chlorobenzene	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 12:09 AM
Chloroethane	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 12:09 AM
Chloroform	1.72	ppbv		1	8.40	µg/m³	02/26/2014 12:09 AM
Chloromethane	< 0.10	ppbv		1	< 0.21	µg/m³	02/26/2014 12:09 AM
Dibromochloromethane	< 0.10	ppbv		1	< 0.85	µg/m³	02/26/2014 12:09 AM
Dichlorodifluoromethane	0.33	ppbv		1	1.63	µg/m³	02/26/2014 12:09 AM
Ethylbenzene	0.16	ppbv		1	0.69	µg/m³	02/26/2014 12:09 AM

Qualifiers: E = Value above quantitation range, Value estimated.  
B = Found In Blank  
D.F. = Dilution Factor D = Results for Dilution  
H = Received/analyzed outside of analytical holding time  
+ = ELAP / NELAC does not offer certification for this analyte  
c = Calibration acceptability criteria exceeded for this analyte  
r = Reporting limit > MDL and < LOQ, Value estimated.  
J = Estimated value - below calibration range  
S = Recovery exceeded control limits for this analyte  
N = Indicates presumptive evidence of compound

*Joann M. Stavins*  
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

*Handwritten signature and date: 4/17/14*

Date Reported :



**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

URS Corporation, Inc.

77 Goodell Street  
Buffalo, NY 14203

Attn To :

Collected : 2/12/2014 3:36:00 PM

Received : 2/14/2014 1:00:00 PM

Collected By : MA99

Lab No. : 1402721-001

Client Sample ID: SG-195

**Sample Information:**

Type : Air

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Methyl butylk etone	< 0.10	ppbv		1	< 0.41	µg/m³	02/26/2014 12:09 AM
Methyl ethyl ketone	0.65	ppbv		1	1.92	µg/m³	02/26/2014 12:09 AM
Methyl isobutyl ketone	< 0.10	ppbv		1	< 0.41	µg/m³	02/26/2014 12:09 AM
Methyl tert-butyl ether	< 0.10	ppbv		1	< 0.36	µg/m³	02/26/2014 12:09 AM
Methylene chloride	1.19	ppbv		1	4.62	µg/m³	02/26/2014 12:09 AM
Styrene	< 0.10	ppbv		1	< 0.43	µg/m³	02/26/2014 12:09 AM
Tetrachloroethene	9.23	ppbv		1	62.6	µg/m³	02/26/2014 12:09 AM
Toluene	0.87	ppbv		1	3.28	µg/m³	02/26/2014 12:09 AM
Trichloroethene	1.68	ppbv		1	9.03	µg/m³	02/26/2014 12:09 AM
Trichlorofluoromethane	1.04	ppbv		1	5.84	µg/m³	02/26/2014 12:09 AM
Vinyl acetate	1.34	ppbv		1	4.72	µg/m³	02/26/2014 12:09 AM
Vinyl chloride	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 12:09 AM
Xylenes (m&p)	0.53	ppbv		1	2.30	µg/m³	02/26/2014 12:09 AM
Xylenes (o)	0.24	ppbv		1	1.04	µg/m³	02/26/2014 12:09 AM
Surr:4 -Bromofluorobenzene	98.1	%REC	Limit: 70-130		No M.W. Data		02/26/2014 12:09 AM

*Handwritten signature and date: 2/17/14*

- Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found In Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Joann M. Stearns*  
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :



1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SG-195

Lab Name: PACE ANALYTICAL Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: URS SAS No.: \_\_\_\_\_ SDG No.: URS161

Matrix: (soil/water) AIR Lab Sample ID: 1402721-001A

Sample wt/vol: 400 (g/mL) ML Lab File ID: 4\I11911.D

Level: (low/med) LOW Date Received: 02/14/14

% Moisture: not dec. Date Analyzed: 02/26/14

GC Column: Rxi-1MS ID: .32 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μl) Soil Aliquot Volume: 0 (μL)

CONCENTRATION UNITS:

Number TICs found: 6 (μg/L or μg/Kg) ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 75-68-3	Ethane, 1-chloro-1,1-difluoro-	3.87	17	JN
2.	(DEL) Alkane: Straight-Chain (4)	4.00	2	J
3.	unknown alkene	4.16	1	J
4. 64-17-5	Ethanol (4.7)	4.69	12	JN
5. 67-63-0	Isopropyl Alcohol (5.3)	5.34	55	JN
6.	(DEL) Alkane: Straight-Chain (5.59)	5.59	2	J
7.	(DEL) Alkane: Branched (7.63)	7.63	1	J
8.	(DEL) Alkane: Branched (10.8)	10.80	5	J
<del>9. 541-05-9</del>	<del>Cyclotrisiloxane, hexamethyl-</del>	<del>14.32</del>	<del>6</del>	<del>JNX</del>
<del>10.</del>	<del>unknown siloxane</del>	<del>20.39</del>	<del>3</del>	<del>JX</del>

done  
4/17/14



**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

URS Corporation, Inc.  
77 Goodell Street  
Buffalo, NY 14203

Lab No. : 1402721-002  
Client Sample ID: SG-196

Sample Information:  
Type : Air

Attn To :  
Collected : 2/12/2014 3:48:00 PM  
Received : 2/14/2014 1:00:00 PM  
Collected By : MA99

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
1,1,1-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/26/2014 12:52 AM
1,1,2,2-Tetrachloroethane	< 0.10	ppbv	c	1	< 0.69	µg/m³	02/26/2014 12:52 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 12:52 AM
1,1,2-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/26/2014 12:52 AM
1,1-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 12:52 AM
1,1-Dichloroethene	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 12:52 AM
1,2,4-Trichlorobenzene	< 0.10	ppbv		1	< 0.74	µg/m³	02/26/2014 12:52 AM
1,2,4-Trimethylbenzene	0.25	ppbv		1	1.23	µg/m³	02/26/2014 12:52 AM
1,2-Dibromoethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 12:52 AM
1,2-Dichlorobenzene	< 0.10	ppbv		1	< 0.60	µg/m³	02/26/2014 12:52 AM
1,2-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 12:52 AM
1,2-Dichloroethene (cis)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 12:52 AM
1,2-Dichloroethene (trans)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 12:52 AM
1,2-Dichloropropane	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 12:52 AM
1,2-Dichlorotetrafluoroethane	< 0.10	ppbv		1	< 0.70	µg/m³	02/26/2014 12:52 AM
1,3,5-Trimethylbenzene	< 0.10	ppbv		1	< 0.49	µg/m³	02/26/2014 12:52 AM
1,3-Dichlorobenzene	1.68	ppbv		1	10.1	µg/m³	02/26/2014 12:52 AM
1,3-Dichloropropene (cis)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 12:52 AM
1,3-Dichloropropene (trans)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 12:52 AM
1,3-Hexachlorobutadiene	< 0.10	ppbv		1	< 1.07	µg/m³	02/26/2014 12:52 AM
1,4-Dichlorobenzene	0.78	ppbv		1	4.69	µg/m³	02/26/2014 12:52 AM
Acetone	18.9	ppbv		1	44.8	µg/m³	02/26/2014 12:52 AM
Benzene	1.08	ppbv		1	3.45	µg/m³	02/26/2014 12:52 AM
Bromodichloromethane	< 0.10	ppbv		1	< 0.67	µg/m³	02/26/2014 12:52 AM
Bromoform	< 0.10	ppbv		1	< 1.03	µg/m³	02/26/2014 12:52 AM
Bromomethane	< 0.10	ppbv		1	< 0.39	µg/m³	02/26/2014 12:52 AM
Carbon disulfide	1.30	ppbv		1	4.05	µg/m³	02/26/2014 12:52 AM
Carbon tetrachloride	< 0.10	ppbv		1	< 0.63	µg/m³	02/26/2014 12:52 AM
Chlorobenzene	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 12:52 AM
Chloroethane	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 12:52 AM
Chloroform	0.21	ppbv		1	1.03	µg/m³	02/26/2014 12:52 AM
Chloromethane	0.30	ppbv		1	0.62	µg/m³	02/26/2014 12:52 AM
Dibromochloromethane	< 0.10	ppbv		1	< 0.85	µg/m³	02/26/2014 12:52 AM
Dichlorodifluoromethane	0.37	ppbv		1	1.83	µg/m³	02/26/2014 12:52 AM
Ethylbenzene	0.16	ppbv		1	0.69	µg/m³	02/26/2014 12:52 AM

Qualifiers: E = Value above quantitation range, Value estimated.  
B = Found in Blank  
D.F. = Dilution Factor D = Results for Dilution  
H = Received/analyzed outside of analytical holding time  
+ = ELAP / NELAC does not offer certification for this analyte  
c = Calibration acceptability criteria exceeded for this analyte  
r = Reporting limit > MDL and < LOQ, Value estimated.  
J = Estimated value - below calibration range  
S = Recovery exceeded control limits for this analyte  
N = Indicates presumptive evidence of compound

*Joann M. Alvarino*  
Laboratory Manager

*MA99*  
*4/17/14*

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :



**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

URS Corporation, Inc.  
77 Goodell Street  
Buffalo, NY 14203

Lab No. : 1402721-002  
Client Sample ID: SG-196

Sample Information:  
Type : Air

Attn To :  
Collected : 2/12/2014 3:48:00 PM  
Received : 2/14/2014 1:00:00 PM  
Collected By : MA99

Origin:

Method: ETO-15 :							
Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Methyl butylk etone	< 0.10	ppbv	<del>✓</del>	1	< 0.41	µg/m³	02/26/2014 12:52 AM
Methyl ethyl ketone	0.81	ppbv		1	2.39	µg/m³	02/26/2014 12:52 AM
Methyl isobutyl ketone	< 0.10	ppbv		1	< 0.41	µg/m³	02/26/2014 12:52 AM
Methyl tert-butyl ether	< 0.10	ppbv		1	< 0.36	µg/m³	02/26/2014 12:52 AM
Methylene chloride	0.89	ppbv	J	1	3.46	µg/m³	02/26/2014 12:52 AM
Styrene	< 0.10	ppbv		1	< 0.43	µg/m³	02/26/2014 12:52 AM
Tetrachloroethene	1.27	ppbv		1	8.61	µg/m³	02/26/2014 12:52 AM
Toluene	1.48	ppbv		1	5.57	µg/m³	02/26/2014 12:52 AM
Trichloroethene	< 0.10	ppbv		1	< 0.54	µg/m³	02/26/2014 12:52 AM
Trichlorofluoromethane	0.25	ppbv		1	1.40	µg/m³	02/26/2014 12:52 AM
Vinyla cetate	1.25	ppbv		1	4.40	µg/m³	02/26/2014 12:52 AM
Vinylic chloride	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 12:52 AM
Xylenes (m&p)	0.54	ppbv		1	2.35	µg/m³	02/26/2014 12:52 AM
Xylenes (o)	0.24	ppbv		1	1.04	µg/m³	02/26/2014 12:52 AM
Surr:4 -Bromofluorobenzene	101	%REC	Limit:	70-130	No M.W. Data		02/26/2014 12:52 AM

*Supp  
4/17/14*

Qualifiers: E = Value above quantitation range, Value estimated.  
B = Found in Blank  
D.F. = Dilution Factor D = Results for Dilution  
H = Received/analyzed outside of analytical holding time  
+ = ELAP / NELAC does not offer certification for this analyte  
c = Calibration acceptability criteria exceeded for this analyte  
r = Reporting limit > MDL and < LOQ, Value estimated.  
J = Estimated value - below calibration range  
S = Recovery exceeded control limits for this analyte  
N = Indicates presumptive evidence of compound

*Joann M. Slavins*  
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :



1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SG-196

Lab Name: PACE ANALYTICAL Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: URS SAS No.: \_\_\_\_\_ SDG No.: URS161

Matrix: (soil/water) AIR Lab Sample ID: 1402721-002A

Sample wt/vol: 400 (g/mL) ML Lab File ID: 4\I11912.D

Level: (low/med) LOW Date Received: 02/14/14

% Moisture: not dec. Date Analyzed: 02/25/14

GC Column: Rxi-1MS ID: .32 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μl) Soil Aliquot Volume: 0 (μL)

CONCENTRATION UNITS:

Number TICs found: 6 (μg/L or μg/Kg) ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown alkene (3.69)	3.69	2	J
2.	(DEL) Alkane: Branched (4)	4.00	5	J
3.	unknown alkene (4.16)	4.16	2	J
4.	(DEL) Alkane: Straight-Chain (4.24)	4.24	5	J
5. 64-17-5	Ethanol (4.7)	4.69	11	JN
6. 67-63-0	Isopropyl Alcohol (5.3)	5.35	47	JN
7.	(DEL) Alkane: Straight-Chain (5.59)	5.59	2	J
8.	(DEL) Alkane: Branched (10.38)	10.38	1	J
9.	(DEL) Alkane: Branched (10.8)	10.80	4	J
10.	(DEL) Alkane: Straight-Chain (11.08)	11.08	1	J
11.	(DEL) Alkane: Cyclic	11.76	1	J
<del>12. 541-05-9</del>	<del>Cyclotrisiloxane, hexamethyl-</del>	<del>14.32</del>	<del>6</del>	<del>JNX</del>
13.	Limonene isomer	18.66	1	J

OK  
4/17/14





**LABORATORY RESULTS**

Results for the samples and analytes requested

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URS Corporation, Inc.  
77 Goodell Street  
Buffalo, NY 14203

Lab No. : 1402721-005  
Client Sample ID: SG-197

Sample Information:  
Type : Air

Attn To :  
Collected : 2/12/2014 4:06:00 PM  
Received : 2/14/2014 1:00:00 PM  
Collected By : MA99

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
1,1,1-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/26/2014 3:01 AM
1,1,2,2-Tetrachloroethane	< 0.10	ppbv	US	1	< 0.69	µg/m³	02/26/2014 3:01 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 3:01 AM
1,1,2-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/26/2014 3:01 AM
1,1-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:01 AM
1,1-Dichloroethene	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:01 AM
1,2,4-Trichlorobenzene	< 0.10	ppbv		1	< 0.74	µg/m³	02/26/2014 3:01 AM
1,2,4-Trimethylbenzene	0.18	ppbv		1	0.88	µg/m³	02/26/2014 3:01 AM
1,2-Dibromoethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 3:01 AM
1,2-Dichlorobenzene	< 0.10	ppbv		1	< 0.60	µg/m³	02/26/2014 3:01 AM
1,2-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:01 AM
1,2-Dichloroethene (cis)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:01 AM
1,2-Dichloroethene (trans)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:01 AM
1,2-Dichloropropane	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 3:01 AM
1,2-Dichlorotetrafluoroethane	< 0.10	ppbv		1	< 0.70	µg/m³	02/26/2014 3:01 AM
1,3,5-Trimethylbenzene	< 0.10	ppbv		1	< 0.49	µg/m³	02/26/2014 3:01 AM
1,3-Dichlorobenzene	1.23	ppbv		1	7.40	µg/m³	02/26/2014 3:01 AM
1,3-Dichloropropene (cis)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 3:01 AM
1,3-Dichloropropene (trans)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 3:01 AM
1,3-Hexachlorobutadiene	< 0.10	ppbv		1	< 1.07	µg/m³	02/26/2014 3:01 AM
1,4-Dichlorobenzene	0.51	ppbv		1	3.07	µg/m³	02/26/2014 3:01 AM
Acetone	12.8	ppbv		1	30.3	µg/m³	02/26/2014 3:01 AM
Benzene	0.67	ppbv		1	2.14	µg/m³	02/26/2014 3:01 AM
Bromodichloromethane	< 0.10	ppbv		1	< 0.67	µg/m³	02/26/2014 3:01 AM
Bromoform	< 0.10	ppbv		1	< 1.03	µg/m³	02/26/2014 3:01 AM
Bromomethane	< 0.10	ppbv		1	< 0.39	µg/m³	02/26/2014 3:01 AM
Carbon disulfide	1.76	ppbv		1	5.48	µg/m³	02/26/2014 3:01 AM
Carbon tetrachloride	0.10	ppbv		1	0.63	µg/m³	02/26/2014 3:01 AM
Chlorobenzene	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 3:01 AM
Chloroethane	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 3:01 AM
Chloroform	0.42	ppbv		1	2.05	µg/m³	02/26/2014 3:01 AM
Chloromethane	0.42	ppbv		1	0.87	µg/m³	02/26/2014 3:01 AM
Dibromochloromethane	< 0.10	ppbv		1	< 0.85	µg/m³	02/26/2014 3:01 AM
Dichlorodifluoromethane	0.55	ppbv		1	2.72	µg/m³	02/26/2014 3:01 AM
Ethylbenzene	0.16	ppbv		1	0.69	µg/m³	02/26/2014 3:01 AM

Qualifiers: E = Value above quantitation range, Value estimated.  
B = Found in Blank  
D.F. = Dilution Factor D = Results for Dilution  
H = Received/analyzed outside of analytical holding time  
+ = ELAP / NELAC does not offer certification for this analyte  
c = Calibration acceptability criteria exceeded for this analyte  
r = Reporting limit > MDL and < LOQ, Value estimated.  
J = Estimated value - below calibration range  
S = Recovery exceeded control limits for this analyte  
N = Indicates presumptive evidence of compound

*Joseph M. Slavina*  
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

*Handwritten signature/initials in pink*

Date Reported :



### LABORATORY RESULTS

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

URS Corporation, Inc.  
77 Goodell Street  
Buffalo, NY 14203

Lab No. : 1402721-005  
Client Sample ID: SG-197

Sample Information:  
Type: Air

Attn To :  
Collected : 2/12/2014 4:06:00 PM  
Received : 2/14/2014 1:00:00 PM  
Collected By : MA99

Origin:

Method: ETO-15 :							
Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Methyl butyl ketone	< 0.10	ppbv	+	1	< 0.41	µg/m³	02/26/2014 3:01 AM
Methyl ethyl ketone	0.75	ppbv		1	2.21	µg/m³	02/26/2014 3:01 AM
Methyl isobutyl ketone	< 0.10	ppbv		1	< 0.41	µg/m³	02/26/2014 3:01 AM
Methyl tert-butyl ether	< 0.10	ppbv		1	< 0.36	µg/m³	02/26/2014 3:01 AM
Methylene chloride	1.51	ppbv	J	1	5.86	µg/m³	02/26/2014 3:01 AM
Styrene	< 0.10	ppbv		1	< 0.43	µg/m³	02/26/2014 3:01 AM
Tetrachloroethene	0.37	ppbv		1	2.51	µg/m³	02/26/2014 3:01 AM
Toluene	2.22	ppbv		1	8.36	µg/m³	02/26/2014 3:01 AM
Trichloroethene	< 0.10	ppbv		1	< 0.54	µg/m³	02/26/2014 3:01 AM
Trichlorofluoromethane	0.30	ppbv		1	1.69	µg/m³	02/26/2014 3:01 AM
Vinyl acetate	0.86	ppbv		1	3.03	µg/m³	02/26/2014 3:01 AM
Vinyl chloride	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 3:01 AM
Xylenes (m&p)	0.52	ppbv		1	2.26	µg/m³	02/26/2014 3:01 AM
Xylenes (o)	0.22	ppbv		1	0.96	µg/m³	02/26/2014 3:01 AM
Surr: 4-Bromofluorobenzene	98.0	%REC	Limit:	70-130	No M.W. Data		02/26/2014 3:01 AM

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4/17/14

Qualifiers: E = Value above quantitation range, Value estimated.  
B = Found in Blank  
D.F. = Dilution Factor D = Results for Dilution  
H = Received/analyzed outside of analytical holding time  
+ = ELAP / NELAC does not offer certification for this analyte  
c = Calibration acceptability criteria exceeded for this analyte  
r = Reporting limit > MDL and < LOQ, Value estimated.  
J = Estimated value - below calibration range  
S = Recovery exceeded control limits for this analyte  
N = Indicates presumptive evidence of compound

*Joann M. Slavine*  
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Date Reported :

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SG-197

Lab Name: PACE ANALYTICAL Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: URS SAS No.: \_\_\_\_\_ SDG No.: URS161

Matrix: (soil/water) AIR Lab Sample ID: 1402721-005A

Sample wt/vol: 400 (g/mL) ML Lab File ID: 4\I11915.D

Level: (low/med) LOW Date Received: 02/14/14

% Moisture: not dec. Date Analyzed: 02/26/14

GC Column: Rxi-1MS ID: .32 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μl) Soil Aliquot Volume: 0 (μL)

CONCENTRATION UNITS:

Number TICs found: 5 (μg/L or μg/Kg) ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown alkene (3.69)	3.69	2	J
2.	(DEL) Alkane: Branched (4)	4.00	2	J
3.	unknown alkene (4.16)	4.16	2	J
4.	(DEL) Alkane: Straight-Chain (4.24)	4.24	1	J
5. 64-17-5	Ethanol (4.7)	4.70	11	JN
6. 67-63-0	Isopropyl Alcohol (5.3)	5.35	52	JN
7.	(DEL) Alkane: Straight-Chain (8.11)	8.11	1	J
8.	(DEL) Alkane: Branched (10.81)	10.81	3	J
<del>9. 641-05-9</del>	<del>Cyclotrisiloxane, hexamethyl-</del>	<del>14.33</del>	<del>2</del>	<del>JNX</del>

done  
4/17/14





**LABORATORY RESULTS**

Results for the samples and analytes requested

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URS Corporation, Inc.

77 Goodell Street  
Buffalo, NY 14203

Attn To :

Collected : 2/12/2014 3:28:00 PM

Received : 2/14/2014 1:00:00 PM

Collected By : MA99

Lab No. : 1402721-006

Client Sample ID: SG-199

Sample Information:

Type : Air

Origin:

Method: ETO-16 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
1,1,1-Trichloroethane	0.55	ppbv		1	3.00	µg/m³	02/26/2014 3:44 AM
1,1,2,2-Tetrachloroethane	< 0.10	ppbv	603	1	< 0.69	µg/m³	02/26/2014 3:44 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.23	ppbv		1	1.76	µg/m³	02/26/2014 3:44 AM
1,1,2-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/26/2014 3:44 AM
1,1-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:44 AM
1,1-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:44 AM
1,2,4-Trichlorobenzene	< 0.10	ppbv		1	< 0.74	µg/m³	02/26/2014 3:44 AM
1,2,4-Trimethylbenzene	0.20	ppbv		1	0.98	µg/m³	02/26/2014 3:44 AM
1,2-Dibromoethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 3:44 AM
1,2-Dichlorobenzene	< 0.10	ppbv		1	< 0.60	µg/m³	02/26/2014 3:44 AM
1,2-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:44 AM
1,2-Dichloroethene (cis)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:44 AM
1,2-Dichloroethene (trans)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 3:44 AM
1,2-Dichloropropane	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 3:44 AM
1,2-Dichlorotetrafluoroethane	< 0.10	ppbv		1	< 0.70	µg/m³	02/26/2014 3:44 AM
1,3,5-Trimethylbenzene	< 0.10	ppbv		1	< 0.49	µg/m³	02/26/2014 3:44 AM
1,3-Dichlorobenzene	1.14	ppbv		1	6.85	µg/m³	02/26/2014 3:44 AM
1,3-Dichloropropene (cis)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 3:44 AM
1,3-Dichloropropene (trans)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 3:44 AM
1,3-Hexachlorobutadiene	< 0.10	ppbv		1	< 1.07	µg/m³	02/26/2014 3:44 AM
1,4-Dichlorobenzene	0.52	ppbv		1	3.13	µg/m³	02/26/2014 3:44 AM
Acetone	12.3	ppbv		1	29.2	µg/m³	02/26/2014 3:44 AM
Benzene	0.42	ppbv		1	1.34	µg/m³	02/26/2014 3:44 AM
Bromodichloromethane	< 0.10	ppbv		1	< 0.67	µg/m³	02/26/2014 3:44 AM
Bromoform	< 0.10	ppbv		1	< 1.03	µg/m³	02/26/2014 3:44 AM
Bromomethane	< 0.10	ppbv		1	< 0.39	µg/m³	02/26/2014 3:44 AM
Carbon disulfide	17.6	ppbv		1	54.8	µg/m³	02/26/2014 3:44 AM
Carbon tetrachloride	< 0.10	ppbv		1	< 0.63	µg/m³	02/26/2014 3:44 AM
Chlorobenzene	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 3:44 AM
Chloroethane	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 3:44 AM
Chloroform	0.19	ppbv		1	0.93	µg/m³	02/26/2014 3:44 AM
Chloromethane	0.27	ppbv		1	0.56	µg/m³	02/26/2014 3:44 AM
Dibromochloromethane	< 0.10	ppbv		1	< 0.85	µg/m³	02/26/2014 3:44 AM
Dichlorodifluoromethane	0.16	ppbv		1	0.79	µg/m³	02/26/2014 3:44 AM
Ethylbenzene	0.13	ppbv		1	0.56	µg/m³	02/26/2014 3:44 AM

Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found In Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Joanna M. Starina*  
 Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Date Reported :

*copy  
 4/17/14*





**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

URS Corporation, Inc.  
 77 Goodell Street  
 Buffalo, NY 14203

Lab No. : 1402721-006  
 Client Sample ID: SG-199

Sample Information:

Type: Air

Attn To :  
 Collected : 2/12/2014 3:28:00 PM  
 Received : 2/14/2014 1:00:00 PM  
 Collected By: MA99

Origin:

Method: ETO-15 :							
Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Methyl butylk etone	< 0.10	ppbv		1	< 0.41	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Methyl ethyl ketone	0.64	ppbv		1	1.89	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Methyl isobutyl ketone	< 0.10	ppbv		1	< 0.41	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Methyl tart-butyl ether	< 0.10	ppbv		1	< 0.36	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Methylene chloride	4.54	ppbv		1	17.6	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Styrene	< 0.10	ppbv		1	< 0.43	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Tetrachloroethene	0.18	ppbv		1	1.22	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Toluene	0.62	ppbv		1	2.34	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Trichloroethene	0.19	ppbv		1	1.02	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Trichlorofluoromethane	0.28	ppbv		1	1.57	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Vinyl acetate	1.30	ppbv		1	4.58	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Vinyl chloride	< 0.10	ppbv		1	< 0.26	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Xylenes (m&p)	0.41	ppbv		1	1.78	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Xylenes (o)	0.19	ppbv		1	0.83	µg/m <sup>3</sup>	02/26/2014 3:44 AM
Surr:4 -Bromofluorobenzene	99.5	%REC		Limit: 70-130	No M.W. Data		02/26/2014 3:44 AM

*Handwritten in red:* OK 4/17/14

Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Signature of Johann M. Slavins*  
 Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

SG-199
--------

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: URS

SAS No.: \_\_\_\_\_

SDG No.: URS161

Matrix: (soil/water)

AIRLab Sample ID: 1402721-006ASample wt/vol: 400(g/mL) MLLab File ID: 4\I11916.DLevel: (low/med) LOWDate Received: 02/14/14

% Moisture: not dec.

Date Analyzed: 02/26/14GC Column: Rxi-1MSID: .32 (mm)Dilution Factor: 1.00

Soil Extract Volume:

(μl)

Soil Aliquot Volume: 0 (μL)

## CONCENTRATION UNITS:

Number TICs found:

6

(μg/L or μg/Kg)

ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	(DEL) Alkane: Straight-Chain (4)	4.00	3	J
2.	unknown alkene	4.16	2	J
3.	(DEL) Alkane: Straight-Chain (4.24)	4.24	1	J
4.	(DEL) Alkane: Branched (4.36)	4.36	4	J
5. 64-17-5	Ethanol (4.7)	4.71	13	JN
6. 67-63-0	Isopropyl Alcohol (5.3)	5.37	61	JN
7.	(DEL) Alkane: Straight-Chain (5.6)	5.60	1	J
8. 1066-40-6	Silanol, trimethyl-	7.09	3	JN
9.	(DEL) Alkane: Branched (7.64)	7.64	1	J
10.	(DEL) Alkane: Branched (10.81)	10.81	5	J
11.	(DEL) Alkane: Cyclic	11.76	1	J
<del>12. 541-05-9</del>	<del>Cyclotrisiloxane, hexamethyl-</del>	<del>14.33</del>	<del>5</del>	<del>JNX</del>
<del>13.</del>	<del>unknown siloxane</del>	<del>20.39</del>	<del>3</del>	<del>JX</del>



**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

URS Corporation, Inc.

77 Goodell Street  
Buffalo, NY 14203

Attn To :

Collected : 2/12/2014 2:07:00 PM

Received : 2/14/2014 1:00:00 PM

Collected By : MA99

Lab No. : 1402721-007

Client Sample ID: AA20140212

Sample Information:

Type : Air

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
1,1,1-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/25/2014 11:26 PM
1,1,2,2-Tetrachloroethane	< 0.10	ppbv	605	1	< 0.69	µg/m³	02/25/2014 11:26 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/25/2014 11:26 PM
1,1,2-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/25/2014 11:26 PM
1,1-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/25/2014 11:26 PM
1,1-Dichloroethene	< 0.10	ppbv		1	< 0.40	µg/m³	02/25/2014 11:26 PM
1,2,4-Trichlorobenzene	< 0.10	ppbv		1	< 0.74	µg/m³	02/25/2014 11:26 PM
1,2,4-Trimethylbenzene	0.11	ppbv		1	0.54	µg/m³	02/25/2014 11:26 PM
1,2-Dibromoethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/25/2014 11:26 PM
1,2-Dichlorobenzene	< 0.10	ppbv		1	< 0.60	µg/m³	02/25/2014 11:26 PM
1,2-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/25/2014 11:26 PM
1,2-Dichloroethene (cis)	< 0.10	ppbv		1	< 0.40	µg/m³	02/25/2014 11:26 PM
1,2-Dichloroethene (trans)	< 0.10	ppbv		1	< 0.40	µg/m³	02/25/2014 11:26 PM
1,2-Dichloropropane	< 0.10	ppbv		1	< 0.46	µg/m³	02/25/2014 11:26 PM
1,2-Dichlorotetrafluoroethane	< 0.10	ppbv		1	< 0.70	µg/m³	02/25/2014 11:26 PM
1,3,5-Trimethylbenzene	< 0.10	ppbv		1	< 0.49	µg/m³	02/25/2014 11:26 PM
1,3-Dichlorobenzene	< 0.10	ppbv		1	< 0.60	µg/m³	02/25/2014 11:26 PM
1,3-Dichloropropene (cis)	< 0.10	ppbv		1	< 0.45	µg/m³	02/25/2014 11:26 PM
1,3-Dichloropropene (trans)	< 0.10	ppbv		1	< 0.45	µg/m³	02/25/2014 11:26 PM
1,3-Hexachlorobutadiene	< 0.10	ppbv		1	< 1.07	µg/m³	02/25/2014 11:26 PM
1,4-Dichlorobenzene	0.11	ppbv		1	0.66	µg/m³	02/25/2014 11:26 PM
Acetone	2.84	ppbv		1	6.75	µg/m³	02/25/2014 11:26 PM
Benzene	0.31	ppbv		1	0.99	µg/m³	02/25/2014 11:26 PM
Bromodichloromethane	< 0.10	ppbv		1	< 0.67	µg/m³	02/25/2014 11:26 PM
Bromoform	< 0.10	ppbv		1	< 1.03	µg/m³	02/25/2014 11:26 PM
Bromomethane	< 0.10	ppbv		1	< 0.39	µg/m³	02/25/2014 11:26 PM
Carbon disulfide	0.12	ppbv		1	0.37	µg/m³	02/25/2014 11:26 PM
Carbon tetrachloride	< 0.10	ppbv		1	< 0.63	µg/m³	02/25/2014 11:26 PM
Chlorobenzene	< 0.10	ppbv		1	< 0.46	µg/m³	02/25/2014 11:26 PM
Chloroethane	< 0.10	ppbv		1	< 0.26	µg/m³	02/25/2014 11:26 PM
Chloroform	< 0.10	ppbv		1	< 0.49	µg/m³	02/25/2014 11:26 PM
Chloromethane	0.61	ppbv		1	1.26	µg/m³	02/25/2014 11:26 PM
Dibromochloromethane	< 0.10	ppbv		1	< 0.85	µg/m³	02/25/2014 11:26 PM
Dichlorodifluoromethane	0.55	ppbv		1	2.72	µg/m³	02/25/2014 11:26 PM
Ethylbenzene	< 0.10	ppbv		1	< 0.43	µg/m³	02/25/2014 11:26 PM

Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found In Blank  
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 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
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 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Joann M. Stavins*  
 Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

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*Handwritten signature and date: 4/17/14*

Date Reported :





**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

URS Corporation, Inc.

77 Goodell Street  
 Buffalo, NY 14203

Attn To :

Collected : 2/12/2014 2:07:00 PM

Received : 2/14/2014 1:00:00 PM

Collected By : MA99

Lab No. : 1402721-007

Client Sample ID: AA20140212

Sample Information:

Type : Air

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Methyl butyl ketone	< 0.10	ppbv		1	< 0.41	µg/m³	02/25/2014 11:26 PM
Methyl ethyl ketone	0.18	ppbv		1	0.53	µg/m³	02/25/2014 11:26 PM
Methyl isobutyl ketone	< 0.10	ppbv		1	< 0.41	µg/m³	02/25/2014 11:26 PM
Methyl tert-butyl ether	< 0.10	ppbv		1	< 0.36	µg/m³	02/25/2014 11:26 PM
Methylene chloride	2.74	ppbv		1	10.6	µg/m³	02/25/2014 11:26 PM
Styrene	< 0.10	ppbv		1	< 0.43	µg/m³	02/25/2014 11:26 PM
Tetrachloroethene	0.40	ppbv		1	2.71	µg/m³	02/25/2014 11:26 PM
Toluene	0.42	ppbv		1	1.58	µg/m³	02/25/2014 11:26 PM
Trichloroethene	< 0.10	ppbv		1	< 0.54	µg/m³	02/25/2014 11:26 PM
Trichlorofluoromethane	0.26	ppbv		1	1.46	µg/m³	02/25/2014 11:26 PM
Vinyl acetate	0.28	ppbv		1	0.99	µg/m³	02/25/2014 11:26 PM
Vinyl chloride	< 0.10	ppbv		1	< 0.26	µg/m³	02/25/2014 11:26 PM
Xylenes (m&p)	0.23	ppbv		1	1.00	µg/m³	02/25/2014 11:26 PM
Xylenes (o)	0.10	ppbv		1	0.43	µg/m³	02/25/2014 11:26 PM
Surr:4 -Bromofluorobenzene	98.6	%REC	Limit:	70-130	No M.W. Data		02/25/2014 11:26 PM

*Handwritten signature and date: 4/17/14*

- Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = Indicates presumptive evidence of compound

*Joann M. Starvin*  
 Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :



1F  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

AA20140212

Lab Name: PACE ANALYTICAL Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: URS SAS No.: \_\_\_\_\_ SDG No.: URS161  
 Matrix: (soil/water) AIR Lab Sample ID: 1402721-007A  
 Sample wt/vol: 400 (g/mL) ML Lab File ID: 4\I11910.D  
 Level: (low/med) LOW Date Received: 02/14/14  
 % Moisture: not dec. Date Analyzed: 02/25/14  
 GC Column: Rxi-1MS ID: .32 (mm) Dilution Factor: 1.00  
 Soil Extract Volume: \_\_\_\_\_ (μl) Soil Aliquot Volume: 0 (μL)

CONCENTRATION UNITS:

Number TICs found: 1 (μg/L or μg/Kg) ppbv

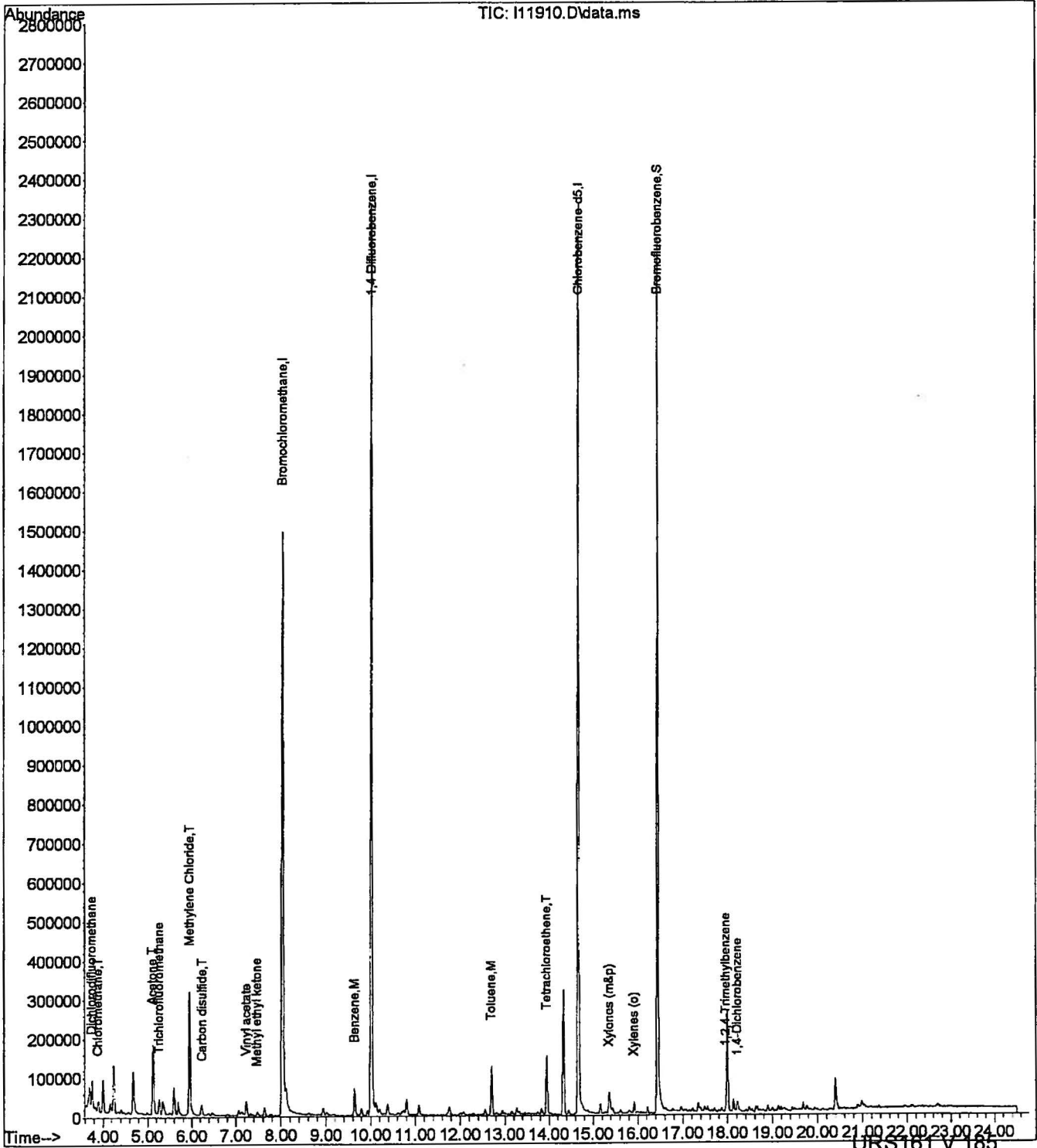
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
<del>1. 541-05-9</del>	<del>Cyclotrisiloxane, hexamethyl-</del>	<del>14.33</del>	<del>1</del>	<del>JNX</del>

*OMP*  
*4/17/14*

Quantitation Report (QT/LSC Reviewed)

Data File : O:\ms\5973i\DATA\2014\FEB14\022514\I11910.D Vial: 14  
 Acq On : 25 Feb 2014 23:26 Operator: BBL  
 Sample : 1402721-007A Inst : h5973i  
 Misc : URS161,AA20140212,,SAMP,,400ML;SN3421 Multiplr: 1.00  
 Quant Time: Feb 26 21:25:18 2014  
 Quant Results File: TO151217LO.RES  
 Integrator: RTE

Quant Method : C:\msdchem\1\METHODS\TO151217LO.M  
 Quant Title : TO-15 AIR CAL-032PLU3SPC04J; QC-189PLU3SPC01J MonWed Dec 18 18:1  
 QLast Update : Wed Dec 18 18:14:23 2013  
 Response via : Initial Calibration  
 DataAcq Meth:TO151217A.M





**LABORATORY RESULTS**

Results for the samples and analytes requested

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URS Corporation, Inc.

77 Goodell Street  
Buffalo, NY 14203

Attn To :

Collected : 2/12/2014 3:00:00 PM

Received : 2/14/2014 1:00:00 PM

Collected By : MA99

Lab No. : 1402721-004

Client Sample ID: SG-200

**Sample Information:**

Type : Air

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
1,1,1-Trichloroethane	0.30	ppbv		1	1.64	µg/m³	02/26/2014 2:18 AM
1,1,2,2-Tetrachloroethane	< 0.10	ppbv	✓ US	1	< 0.69	µg/m³	02/26/2014 2:18 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 2:18 AM
1,1,2-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/26/2014 2:18 AM
1,1-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 2:18 AM
1,1-Dichloroethene	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 2:18 AM
1,2,4-Trichlorobenzene	< 0.10	ppbv		1	< 0.74	µg/m³	02/26/2014 2:18 AM
1,2,4-Trimethylbenzene	0.24	ppbv		1	1.18	µg/m³	02/26/2014 2:18 AM
1,2-Dibromoethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 2:18 AM
1,2-Dichlorobenzene	< 0.10	ppbv		1	< 0.60	µg/m³	02/26/2014 2:18 AM
1,2-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 2:18 AM
1,2-Dichloroethene (cis)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 2:18 AM
1,2-Dichloroethene (trans)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 2:18 AM
1,2-Dichloropropane	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 2:18 AM
1,2-Dichlorotetrafluoroethane	< 0.10	ppbv		1	< 0.70	µg/m³	02/26/2014 2:18 AM
1,3,5-Trimethylbenzene	< 0.10	ppbv		1	< 0.49	µg/m³	02/26/2014 2:18 AM
1,3-Dichlorobenzene	1.53	ppbv		1	9.20	µg/m³	02/26/2014 2:18 AM
1,3-Dichloropropene (cis)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 2:18 AM
1,3-Dichloropropene (trans)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 2:18 AM
1,3-Hexachlorobutadiene	< 0.10	ppbv		1	< 1.07	µg/m³	02/26/2014 2:18 AM
1,4-Dichlorobenzene	0.62	ppbv		1	3.73	µg/m³	02/26/2014 2:18 AM
Acetone	12.4	ppbv		1	29.4	µg/m³	02/26/2014 2:18 AM
Benzene	0.51	ppbv		1	1.63	µg/m³	02/26/2014 2:18 AM
Bromodichloromethane	< 0.10	ppbv		1	< 0.67	µg/m³	02/26/2014 2:18 AM
Bromoform	< 0.10	ppbv		1	< 1.03	µg/m³	02/26/2014 2:18 AM
Bromomethane	< 0.10	ppbv		1	< 0.39	µg/m³	02/26/2014 2:18 AM
Carbon disulfide	1.57	ppbv		1	4.89	µg/m³	02/26/2014 2:18 AM
Carbon tetrachloride	0.12	ppbv		1	0.76	µg/m³	02/26/2014 2:18 AM
Chlorobenzene	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 2:18 AM
Chloroethane	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 2:18 AM
Chloroform	< 0.10	ppbv		1	< 0.49	µg/m³	02/26/2014 2:18 AM
Chloromethane	0.15	ppbv		1	0.31	µg/m³	02/26/2014 2:18 AM
Dibromochloromethane	< 0.10	ppbv		1	< 0.85	µg/m³	02/26/2014 2:18 AM
Dichlorodifluoromethane	0.21	ppbv		1	1.04	µg/m³	02/26/2014 2:18 AM
Ethylbenzene	0.18	ppbv		1	0.78	µg/m³	02/26/2014 2:18 AM

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*Joann M. Slavine*  
 Laboratory Manager

*check 2/17/14*

Test results meet the requirements of NELAC unless otherwise noted.

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**LABORATORY RESULTS**

Results for the samples and analytes requested

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URS Corporation, Inc.  
77 Goodell Street  
Buffalo, NY 14203

Lab No. : **1402721-004**  
Client Sample ID: **SG-200**

**Sample Information:**

Type : Air

Origin:

Collected : 2/12/2014 3:00:00 PM  
Received : 2/14/2014 1:00:00 PM  
Collected By : MA99

Method: ETO-15 :							
Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Methyl butylk etone	< 0.10	ppbv	/	1	< 0.41	µg/m³	02/26/2014 2:18 AM
Methyl ethyl ketone	0.72	ppbv		1	2.12	µg/m³	02/26/2014 2:18 AM
Methyl isobutyl ketone	< 0.10	ppbv		1	< 0.41	µg/m³	02/26/2014 2:18 AM
Methyl tert-butyl ether	< 0.10	ppbv		1	< 0.36	µg/m³	02/26/2014 2:18 AM
Methylene chloride	0.95	ppbv	S	1	3.69	µg/m³	02/26/2014 2:18 AM
Styrene	< 0.10	ppbv		1	< 0.43	µg/m³	02/26/2014 2:18 AM
Tetrachloroethene	< 0.10	ppbv		1	< 0.68	µg/m³	02/26/2014 2:18 AM
Toluene	1.08	ppbv		1	4.07	µg/m³	02/26/2014 2:18 AM
Trichloroethene	< 0.10	ppbv		1	< 0.54	µg/m³	02/26/2014 2:18 AM
Trichlorofluoromethane	0.44	ppbv		1	2.47	µg/m³	02/26/2014 2:18 AM
Vinyl acetate	1.05	ppbv		1	3.70	µg/m³	02/26/2014 2:18 AM
Vinyl chloride	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 2:18 AM
Xylenes (m&p)	0.60	ppbv		1	2.61	µg/m³	02/26/2014 2:18 AM
Xylenes (o)	0.26	ppbv		1	1.13	µg/m³	02/26/2014 2:18 AM
Surr:4 -Bromofluorobenzene	97.5	%REC	Limit	70-130	No M.W. Data		02/26/2014 2:18 AM

*Handwritten signature and date: 2/11/14*

- Qualifiers: E = Value above quantitation range, Value estimated.  
 B = Found in Blank  
 D.F. = Dilution Factor D = Results for Dilution  
 H = Received/analyzed outside of analytical holding time  
 + = ELAP / NELAC does not offer certification for this analyte  
 c = Calibration acceptability criteria exceeded for this analyte  
 r = Reporting limit > MDL and < LOQ, Value estimated.  
 J = Estimated value - below calibration range  
 S = Recovery exceeded control limits for this analyte  
 N = indicates presumptive evidence of compound

*Joseph M. Stavins*  
Laboratory Manager

Test results meet the requirements of NELAC unless otherwise noted.

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1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SG-200

Lab Name: PACE ANALYTICAL Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: URS SAS No.: \_\_\_\_\_ SDG No.: URS161  
 Matrix: (soil/water) AIR Lab Sample ID: 1402721-004A  
 Sample wt/vol: 400 (g/mL) ML Lab File ID: 4\I11914.D  
 Level: (low/med) LOW Date Received: 02/14/14  
 % Moisture: not dec. Date Analyzed: 02/26/14  
 GC Column: Rxi-1MS ID: .32 (mm) Dilution Factor: 1.00  
 Soil Extract Volume: \_\_\_\_\_ (μl) Soil Aliquot Volume: 0 (μL)

CONCENTRATION UNITS:

Number TICs found: 5 (μg/L or μg/Kg) ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown alkene	4.15	2	J
2.	(DEL) Alkane: Straight-Chain (4.23)	4.23	1	J
3. 64-17-5	Ethanol (4.7)	4.70	12	JN
4. 67-63-0	Isopropyl Alcohol (5.3)	5.35	58	JN
5.	(DEL) Alkane: Straight-Chain (5.59)	5.59	1	J
6.	(DEL) Alkane: Branched	10.81	3	J
<del>7. 641-05-0</del>	<del>Cyclotrisiloxane, hexamethyl-</del>	<del>14.32</del>	<del>6</del>	<del>JNX</del>
<del>8.</del>	<del>unknown siloxane</del>	<del>20.39</del>	<del>3</del>	<del>JX</del>

done  
4/17/14



SG-200

**LABORATORY RESULTS**

Results for the samples and analytes requested

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URS Corporation, Inc.  
77 Goodell Street  
Buffalo, NY 14203

Lab No. : 1402721-003  
Client Sample ID: DUP020140212

Sample Information:

Type: Air

Attn To :

Origin:

Collected : 2/12/2014

Received : 2/14/2014 1:00:00 PM

Collected By : MA99

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
1,1,1-Trichloroethane	0.26	ppbv		1	1.42	µg/m³	02/26/2014 1:35 AM
1,1,2,2-Tetrachloroethane	< 0.10	ppbv	US	1	< 0.69	µg/m³	02/26/2014 1:35 AM
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 1:35 AM
1,1,2-Trichloroethane	< 0.10	ppbv		1	< 0.55	µg/m³	02/26/2014 1:35 AM
1,1-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 1:35 AM
1,1-Dichloroethene	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 1:35 AM
1,2,4-Trichlorobenzene	< 0.10	ppbv		1	< 0.74	µg/m³	02/26/2014 1:35 AM
1,2,4-Trimethylbenzene	0.25	ppbv		1	1.23	µg/m³	02/26/2014 1:35 AM
1,2-Dibromoethane	< 0.10	ppbv		1	< 0.77	µg/m³	02/26/2014 1:35 AM
1,2-Dichlorobenzene	< 0.10	ppbv		1	< 0.60	µg/m³	02/26/2014 1:35 AM
1,2-Dichloroethane	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 1:35 AM
1,2-Dichloroethene (cis)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 1:35 AM
1,2-Dichloroethene (trans)	< 0.10	ppbv		1	< 0.40	µg/m³	02/26/2014 1:35 AM
1,2-Dichloropropane	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 1:35 AM
1,2-Dichlorotetrafluoroethane	< 0.10	ppbv		1	< 0.70	µg/m³	02/26/2014 1:35 AM
1,3,5-Trimethylbenzene	< 0.10	ppbv		1	< 0.49	µg/m³	02/26/2014 1:35 AM
1,3-Dichlorobenzene	1.76	ppbv		1	10.6	µg/m³	02/26/2014 1:35 AM
1,3-Dichloropropene (cis)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 1:35 AM
1,3-Dichloropropene (trans)	< 0.10	ppbv		1	< 0.45	µg/m³	02/26/2014 1:35 AM
1,3-Hexachlorobutadiene	< 0.10	ppbv		1	< 1.07	µg/m³	02/26/2014 1:35 AM
1,4-Dichlorobenzene	0.68	ppbv		1	4.09	µg/m³	02/26/2014 1:35 AM
Acetone	12.3	ppbv		1	29.3	µg/m³	02/26/2014 1:35 AM
Benzene	0.46	ppbv		1	1.47	µg/m³	02/26/2014 1:35 AM
Bromodichloromethane	< 0.10	ppbv		1	< 0.67	µg/m³	02/26/2014 1:35 AM
Bromoform	< 0.10	ppbv		1	< 1.03	µg/m³	02/26/2014 1:35 AM
Bromomethane	< 0.10	ppbv		1	< 0.39	µg/m³	02/26/2014 1:35 AM
Carbon disulfide	1.44	ppbv		1	4.48	µg/m³	02/26/2014 1:35 AM
Carbon tetrachloride	0.10	ppbv		1	0.83	µg/m³	02/26/2014 1:35 AM
Chlorobenzene	< 0.10	ppbv		1	< 0.46	µg/m³	02/26/2014 1:35 AM
Chloroethane	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 1:35 AM
Chloroform	< 0.10	ppbv		1	< 0.49	µg/m³	02/26/2014 1:35 AM
Chloromethane	0.15	ppbv		1	0.31	µg/m³	02/26/2014 1:35 AM
Dibromochloromethane	< 0.10	ppbv		1	< 0.85	µg/m³	02/26/2014 1:35 AM
Dichlorodifluoromethane	0.30	ppbv		1	1.48	µg/m³	02/26/2014 1:35 AM
Ethylbenzene	0.18	ppbv		1	0.78	µg/m³	02/26/2014 1:35 AM

Qualifiers: E = Value above quantitation range, Value estimated.  
B = Found in Blank  
D.F. = Dilution Factor D = Results for Dilution  
H = Received/analyzed outside of analytical holding time  
+ = ELAP / NELAC does not offer certification for this analyte  
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J = Estimated value - below calibration range  
S = Recovery exceeded control limits for this analyte  
N = indicates presumptive evidence of compound

*Joseph M. Slavins*  
Laboratory Manager

4/17/14

Test results meet the requirements of NELAC unless otherwise noted.

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Date Reported :



SG-200

**LABORATORY RESULTS**

Results for the samples and analytes requested

The lab is not directly responsible for the integrity of the sample before receipt at the lab and is responsible only for the certified tests requested.

URS Corporation, Inc.

77 Goodell Street  
Buffalo, NY 14203

Attn To :

Collected : 2/12/2014

Received : 2/14/2014 1:00:00 PM

Collected By : MA99

Lab No. : 1402721-003

Client Sample ID: DUP020140212

Sample Information:

Type : Air

Origin:

Method: ETO-15 : Parameter(s)	Result	Units	Qualifier	D.F.	Result	Units	Date Analyzed
Methyl butyl etone	< 0.10	ppbv	J	1	< 0.41	µg/m³	02/26/2014 1:35 AM
Methyl ethyl ketone	0.69	ppbv		1	2.04	µg/m³	02/26/2014 1:35 AM
Methyl isobutyl ketone	< 0.10	ppbv		1	< 0.41	µg/m³	02/26/2014 1:35 AM
Methyl tert-butyl ether	< 0.10	ppbv		1	< 0.36	µg/m³	02/26/2014 1:35 AM
Methylene chloride	1.79	ppbv	J	1	6.95	µg/m³	02/26/2014 1:35 AM
Styrene	< 0.10	ppbv		1	< 0.43	µg/m³	02/26/2014 1:35 AM
Tetrachloroethene	0.12	ppbv		1	0.81	µg/m³	02/26/2014 1:35 AM
Toluene	0.95	ppbv		1	3.58	µg/m³	02/26/2014 1:35 AM
Trichloroethene	< 0.10	ppbv		1	< 0.54	µg/m³	02/26/2014 1:35 AM
Trichlorofluoromethane	0.43	ppbv		1	2.42	µg/m³	02/26/2014 1:35 AM
Vinyl acetate	1.02	ppbv		1	3.59	µg/m³	02/26/2014 1:35 AM
Vinyl chloride	< 0.10	ppbv		1	< 0.26	µg/m³	02/26/2014 1:35 AM
Xylenes (m&p)	0.63	ppbv		1	2.74	µg/m³	02/26/2014 1:35 AM
Xylenes (o)	0.28	ppbv		1	1.22	µg/m³	02/26/2014 1:35 AM
Surr:4 -Bromofluorobenzene	98.5	%REC	Limit:	70-130	No M.W. Data		02/26/2014 1:35 AM

*Handwritten signature*  
4/17/14

Qualifiers: E = Value above quantitation range, Value estimated.  
B = Found in Blank  
D.F. = Dilution Factor D = Results for Dilution  
H = Received/analyzed outside of analytical holding time  
+ = ELAP / NELAC does not offer certification for this analyte  
c = Calibration acceptability criteria exceeded for this analyte  
r = Reporting limit > MDL and < LOQ, Value estimated.  
J = Estimated value - below calibration range  
S = Recovery exceeded control limits for this analyte  
N = Indicates presumptive evidence of compound

*Joseph M. Slavino*  
Laboratory Manager

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Date Reported :



VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

DUP020140212

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: URS

SAS No.: \_\_\_\_\_

SDG No.: URS161

Matrix: (soil/water)

AIR

Lab Sample ID: 1402721-003A

Sample wt/vol: 400

(g/mL) ML

Lab File ID: 4\I11913.D

Level: (low/med) LOW

Date Received: 02/14/14

% Moisture: not dec.

Date Analyzed: 02/26/14

GC Column: Rxi-1MS

ID: .32 (mm)

Dilution Factor: 1.00

Soil Extract Volume:

( $\mu$ l)

Soil Aliquot Volume:

0

( $\mu$ L)

CONCENTRATION UNITS:

Number TICs found:

6

( $\mu$ g/L or  $\mu$ g/Kg)

ppbv

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown alkene (3.68)	3.68	1	J
2.	(DEL) Alkane: Branched	4.00	2	J
3.	unknown alkene (4.15)	4.15	2	J
4.	(DEL) Alkane: Straight-Chain (4.23)	4.23	1	J
5. 64-17-5	Ethanol (4.7)	4.69	12	JN
6. 67-63-0	Isopropyl Alcohol (5.3)	5.35	56	JN
7.	(DEL) Alkane: Straight-Chain (5.59)	5.59	1	J
<del>8. 541-85-8</del>	<del>Cyclotrisiloxane, hexamethyl-</del>	<del>14.32</del>	<del>7</del>	<del>JNX</del>
<del>9.</del>	<del>unknown siloxane</del>	<del>20.39</del>	<del>3</del>	<del>JX</del>

*Handwritten:*  
OK  
4/17/14



**ATTACHMENT B**

**SUPPORT DOCUMENTATION**

## AIR CANISTER CHAIN OF CUSTODY



Client Contact Information				Project Manager: <u>Mike Gutman</u>				CLIENT:				H2M SDG NO.: <u>URS161</u>					
Company: <u>URS Corporation</u>				Phone:				Samplers Name(s) <u>M. Abdelaziz</u>				T CONNECTION INCLUDED					
Address: <u>77 Goodell St.</u>				Site Contact: <u>M. Abdelaziz</u>													
City/State/Zip <u>Buffalo, NY 14203</u>																	
Phone: <u>716-923-1113</u>																	
FAX: <u>716-856-2545</u>																	
Project Name: <u>Klink Cosmo</u>				Analysis Turnaround Time								Analysis		Matrix			
Site: <u>Meeker Ave.</u>				Standard (Specify) <input checked="" type="checkbox"/>								TO-15	OTHER	Indoor / Ambient Air	Soil Gas	Source Level	
PO #				Rush (Specify)													
				Canister Pressure													
				FIELD		LAB		140272V									
Sample Identification	Date Collected	Time Collected	Temp. (F)	Initial ("Hg) (Start)	("Hg) / PSI (Stop)	Outgoing ("Hg) (Lab)	Incoming ("Hg) (Lab)	Flow Controller ID	Canister ID	Can Size (L)	LAB ID No.	TO-15	OTHER	Indoor / Ambient Air	Soil Gas	Source Level	
SG-195	2/12/14	1536		-27	-1	-30"		1027	851	6	001	X					
SG-196	2/12/14	1548		-30	-3	-30"		1030	853	6	002	X					
Did NOT USE				DO NOT RUN				-30"	Scamp	9031	854	6	Run				
Did not use				DO NOT RUN				-30"		1073	860	6					
DUP20140212	2/12/14	-		-29	-3	-30"		1077	862	6	003	X		SG-200			
SG-200	2/12/14	1500		-29	-3	-30"		1158	868	6	004	X					
Did not use				DO NOT RUN				-30"		1164	3396	6					
SG-197	2/12/14	1606		-29	-1	-30"		1166	3402	6	005	X					
SG-199	2/12/14	1528		-285	-2	-30"		2120	3406	6	006	X					
AA20140212	2/12/14	1407		-30	-6	-30"		1033	3421	6	007	X					
				Pressure				Temperature (Fahrenheit)									
				Ambient		Maximum		Minimum				Ambient		Maximum		Minimum	
				Start		Stop						Start		Stop			
Special Instructions/QC Requirements & Comments:																	
Samples Relinquished by: <u>Mira Abdelaziz</u>				Date/Time: <u>2/14/14</u>				Received by: <u>[Signature]</u>				Date/Time: <u>2/14/14 11:30</u>					
Relinquished by: <u>[Signature]</u>				Date/Time: <u>2/14/14 1200</u>				Received by: <u>[Signature]</u>				Date/Time: <u>2/14 1300</u>					

WHITE COPY - ORIGINAL

YELLOW COPY - CLIENT

PINK COPY - LABORATORY

URS161 A 8

\* Notify lab if equipment is damaged upon receipt. Client is responsible for damage to equipment



SDG NARRATIVE FOR VOLATILE ORGANICS  
SAMPLES RECEIVED: 2/14/14  
SDG #: URS161

For Sample(s):

HIMW-04I	HIMW-11S	DUP120613	HIMW-14I
HIMW-04S	TB 120413	TB 120613	HS-HIMW-8S
HIMW-10I	HIMW-05I	HIMW-5D	HIMW-8S
HIMW-10S	HIMW-05S	OSMW-3	HS-HIMW-22
HIMW-11D	HIMW-20I	OSMW-2	HIMW-22
HIMW-11I	HS-HIMW-20I		

The above sample(s) and blanks was/were analyzed for a select list of volatile organic analytes by EPA method TO-15.

All Q.C. data and calibrations met the requirements of the method, and no problems were encountered with sample analysis. The following should be noted:

No duplicate sample was analyzed. A lab fortified blank was analyzed and indicates good method efficiency.

Linear responses with average RFs were used for the targeted analytes.

TIC's identified as unknown alkanes are listed on the TIC Form I however they are not included in the number of TIC's reported.

TIC's identified as unknown siloxanes are suspected column/septa bleed are flagged with an "X" qualifier.

**I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.**

Date Reported: March 2, 2014

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Joann M. Slavin  
General Manager

Form 6  
VOCS IN AIR INITIAL CALIBRATION DATA

Lab Name: PACE ANALYTICAL Contract: PACE ANALYTICAL  
 Lab Code: 10478 Case No.: URS SAS No.: SDG No.: URS161  
 Instrument ID: HP5973I Calibration Dates: 12/17/2013 12/18/2013  
 Heated Purge: (Y/N) N Calibration Times: 18:13 16:55  
 GC Column: Rxi-1MS ID: .32 (mm)

LAB FILE ID: D0.025= <u>I11489.D</u> STD040= <u>I11490.D</u> STD020= <u>I11491.D</u> STD010= <u>I11492.D</u> STD005= <u>I11493.D</u>													
STD0.1= <u>I11495.D</u> STD002= <u>I11498.D</u> STD0.2= <u>I11502.D</u>													
COMPOUND	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8			RRF	% RSD	R <sup>2</sup>
Bromochloromethane	*	1	1	1	1	1	1	1			1.000	0.0	*
Freon-114	*	0	2.6840250	2.5626352	2.5559521	2.6945203	2.0381095	2.3723509	2.1022563		2.430	11.0	*
Dichlorodifluoromethane	*	0	2.9869180	2.7937933	2.7461607	2.9256665	2.1959415	2.61401510	2.3525150		2.659	11.0	*
1,2-Dichlorotetrafluoroethane	*	0	2.6840250	2.5626352	2.5559521	2.6945203	2.0381095	2.3723509	2.1022563		2.430	11.0	*
Chloromethane	*	0	0.9942122	0.9164516	0.9086725	0.9502418	0.8059123	0.85011743	0.8124612		0.891	8.0	*
1,3-Butadiene	*	0	0.8374024	0.7778389	0.7401179	0.7754055	0.7096902	0.68709305	0.6523149		0.740	8.5	*
Bromomethane	*	0	1.1087908	1.0756348	1.0861801	1.1411175	0.9065648	0.99145678	0.9129235		1.032	9.2	*
Vinyl chloride	*	1.343644	1.2234528	1.1533891	1.1328953	1.1777086	0.9536375	1.05549227	0.9562547		1.125	11.8	*
Chloroethane	*	0	0.6196264	0.5917025	0.5852435	0.622712	0.5515813	0.53896131	0.5467467		0.580	6.0	*
Ethanol	*	0	0.1941526	0.1728489	0.1499739	0.1750619	0.2467163	0.17194729	0.2136894		0.189	17.0	*
Isopropanol	*	0	1.7651863	1.5199090	1.4101853	1.6988505	1.7544273	1.65770156	1.5528186		1.623	8.2	*
Methylene chloride	*	0	1.3609586	1.3021109	1.2894638	1.3975506	2.791965	1.23881646	2.0247016		1.629	35.5	*
Allyl Chloride	*	0	0.5896308	0.5735369	0.5608294	0.6039623	0.4535593	0.50251023	0.471262		0.536	11.2	*
Vinyl bromide	*	0	1.1626273	1.1491903	1.1260494	1.2083063	0.9505917	1.01295898	0.9266542		1.077	10.4	*
Acrolein	*	0	0.3877753	0.3462587	0.2872397	0.3195579	0.3594139	0.32511356	0.3009039		0.332	10.5	*
Acetone	*	0	1.5149622	1.2983591	1.053551	1.2540438	2.1411157	1.35801375	1.7021321		1.475	24.3	*
Carbon disulfide	*	0	3.8820102	3.8177257	3.7318826	3.9140498	3.0220674	3.35499023	3.0924584		3.545	10.8	*
1,1,2-Trichloro-1,2,2-trifluoroethane	*	0	2.5782363	2.5883	2.5709581	2.7556897	2.1117644	2.38909983	2.1743600		2.453	9.7	*
Ethyl acetate	*	0	0.4038476	0.3581313	0.2858589	0.337544	0.2849283	0.35297923	0.2630925		0.327	15.4	*
1,1-Dichloroethene	*	0	1.2538458	1.2420546	1.2340295	1.3137959	0.9672056	1.11684878	1.0133858		1.163	11.4	*
1,1-Dichloroethane	*	0	2.3748537	2.2756906	2.1759276	2.3685929	1.8729397	2.14228157	1.9109225		2.160	9.4	*
Trichlorofluoromethane	*	0	3.0157789	2.9269811	2.8470364	3.020332	2.3546042	2.65451631	2.3865314		2.744	10.3	*



5A  
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: PACE ANALYTICAL Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: URS SAS No.: \_\_\_\_\_ SDG No.: URS161  
 Lab File ID: 4\I11896.D BFB Injection Date: 02/25/14  
 Instrument ID: HP5973I BFB Injection Time: 12:50  
 GC Column: Rxi-1MS ID: .32 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	15.9
75	30.0 - 66.0% of mass 95	47.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	1.2 (1.5)1
174	50.0 - 120.0% of mass 95	81.3
175	4.0 - 9.0% of mass 174	6.4 (7.9)1
176	93.0 - 101.0% of mass 174	81.1 (99.7)1
177	5.0 - 9.0% of mass 176	5.3 (6.6)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	4\11898.D	02/25/14	14:15
02	VBLK022514	VBLK022514	4\11900.D	02/25/14	15:41
03	LFB022514	LFB022514	4\11901.D	02/25/14	16:29
04	AA20140212	1402721-007A	4\11910.D	02/25/14	23:26
05	SG-195	1402721-001A	4\11911.D	02/26/14	0:09
06	SG-196	1402721-002A	4\11912.D	02/26/14	0:52
07	DUP020140212	1402721-003A	4\11913.D	02/26/14	1:35
08	SG-200	1402721-004A	4\11914.D	02/26/14	2:18
09	SG-197	1402721-005A	4\11915.D	02/26/14	3:01
10	SG-199	1402721-006A	4\11916.D	02/26/14	3:44

## VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: PACE ANALYTICAL Contract: \_\_\_\_\_  
 Lab Code: 10478 Case No.: URS SAS No.: \_\_\_\_\_ SDG No.: URS161  
 Instrument ID: HP5973I Calibration Date: 02/25/14 Time: 14:15  
 Lab File ID: 4\I11898.D Init. Calib. Date(s): 12/17/13 12/18/13  
 EPA Sample No. (VSTD050##): VSTD010 Init. Calib. Times: 18:13 16:55  
 Heated Purge: (Y/N) N  
 GC Column: Rxi-1MS ID: .32 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
1,1,2,2-Tetrachloroethane	0.915	0.565		-38.2	30.0
Toluene	0.845	0.715		-15.4	30.0
Chlorobenzene	1.054	0.906		-14.0	30.0
Ethylbenzene	1.707	1.491		-12.7	30.0
Xylenes (m&p)	1.369	1.201		-12.2	30.0
Xylenes (o)	1.289	1.150		-10.8	30.0
1,3,5-Trimethylbenzene	1.413	1.276		-9.7	30.0
1,2,4-Trimethylbenzene	1.331	1.223		-8.1	30.0
1,3-Dichlorobenzene	0.870	0.774		-11.1	30.0
1,4-Dichlorobenzene	0.904	0.754		-16.6	30.0
1,2-Dichlorobenzene	0.854	0.764		-10.5	30.0
1,3-Hexachlorobutadiene	0.841	0.792		-5.9	30.0
1,2,4-Trichlorobenzene	0.817	0.607		-25.7	30.0

All other compounds must meet a minimum RRF of 0.010.