SHELTER BAY
RETAIL GROUP

Via Email

September 2, 2013

Ms. Dilan Roe
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Re: Subsurface Investigation Report for Park Avenue Cleaners at 7100-7120 Dublin Boulevard, Dublin, Alameda County, California
ACEH Case No. RO3113

Dear Ms. Roe:

I declare under penalty of perjury that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Very truly yours,

SHELTER BAY RETAIL GROUP
As authorized agent for Ready Family Partnership, L. P.

Sharlene A. Hassler FMA, RPA
Property Manager

655 Redwood Highway, Ste. 177, Mill Valley, CA 94941 • Telephone: (415) 388-4460 • Fax (415) 388-4480 • DRE License 01200547

SUBSURFACE INVESTIGATION REPORT

Former Park Avenue Cleaners

7100-7120 Dublin Boulevard
Dublin, California

September 6, 2013

Prepared for:

Ready Family Partnership

Prepared by:

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612

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1.0 INTRODUCTION

Iris Environmental has prepared this *Subsurface Investigation Report* (Report) for the Ready Family Partnership, L.P. for the former Park Avenue Cleaners Site located at 7104 Dublin Boulevard in Dublin, California (the "Site"). This investigation study was performed in accordance with *Work Plan for Additional Investigation* (Work Plan), dated July 2, 2013, which was prepared at the request of Alameda County Environmental Health's (ACEH) letter on May 30, 2013 requesting that the Site be enrolled into a voluntary cleanup program with ACEH oversight. Background information in this Work Plan is based on information presented in Basics Environmental's (Basics) *Limited Phase II Environmental Site Sampling Report* (Phase II Report), dated November 9, 2012 and Basics *Phase I Environmental Site Assessment* (Phase I ESA), dated July 19, 2012. This investigation was focused on volatile organic compounds (VOCs) associated with former dry cleaning machines used at the Site.

1.1 Background Information

The Site is part of a commercial retail shopping center that is developed with three one-story multi-tenant commercial buildings, associated parking and landscaped areas. The entire complex is referred to as the "Dublin Village Center" (7100-7120 Dublin Boulevard) and was constructed in 1976. Prior to that time, the property was undeveloped.

Park Avenue Cleaners operated a laundry and dry cleaning facility at 7102B Dublin Boulevard from 1990 to 2004. The approximate location of the former dry cleaner is presented in Figure 2; the previous Basics reports incorrectly depict the former dry cleaning machine in the eastern adjoining retail space at 7102 Dublin Boulevard. The former dry cleaner unit at 7102B Dublin Boulevard utilized tetrachloroethene (PCE), a VOC, in the former dry cleaning machine. In 2004, Park Avenue Cleaners relocated to the adjacent retail space at 7104 Dublin Boulevard and has occupied the subject unit to the present.

Two dry cleaning machines were located within the central portion of the suite; one of which (the southernmost) is the former dry cleaning machine from the adjacent unit at 7102B Dublin Boulevard relocated to the current suite. The northernmost dry cleaning machine reportedly is a petroleum-based system purchased circa 2005/2006.

Prior to the dry cleaning use, the unit at 7104 Dublin Boulevard was previously occupied by a Kragen Auto Parts store from 1976 to 2004 that formerly used an above-ground storage tank (AST) containing used motor oil. The former Kragen Auto Parts store also used small quantities of antifreeze, new motor oil in plastic bottles, sulfuric acid from used car batteries, methanol from windshield wiper fluid in plastic bottles and Freon in cylinders.

In October 2012, Basics performed a limited subsurface investigation (LSI) for the Dublin Village Center in response to the findings of Basic's *Phase I Environmental Site Assessment* (Phase I ESA), dated July 19, 2012. The LSI included advancing ten (10) borings (B1 to B5, SG1 to SG5) to collect a total of three (3) soil, two (2) grab-groundwater and five (5) soil vapor samples. Key findings from the LSI included:

- Concentrations of PCE were detected in the two of the three soil samples analyzed at concentrations of 0.011 milligrams per kilogram (mg/kg) (B2 @4.5 ft) and 0.12 mg/kg (B3 @ 4.5 ft).

- PCE was not detected in the analyzed grab-groundwater samples; however, cis-1,2-dichloroethene (DCE), a degradation product of PCE, was detected in one (1) grab-groundwater sample (B5) at a concentration of 220 micrograms per liter (µg/L), which is above the California EPA Department of Health Services (DHS) Primary Maximum Contaminant Level (MCL) established at 6.0 µg/L.
- In addition, PCE was detected in the analyzed soil vapor samples at concentrations of 130 micrograms per cubic meter (µg/m^3) (SG1), 150 µg/m^3 (SG2 and SG5), 3,200 µg/m^3 (SG4), and 54,000 µg/m^3 (SG3). The detected concentrations of PCE in the soil vapor samples at SG3 and SG4 exceed the commercial land use the Environmental Screening Level (ESL) promulgated by the San Francisco Bay Regional Water Quality Control Board (SFRWQCB).
- Groundwater was encountered during drilling of B4 and B5 between approximately 11.5 and 20 feet below the ground surface (bgs). Groundwater flow is presumed to be to the southeast based upon regional information provided by the Zone 7 Water Agency.
- Park Avenue Cleaners vacated the property in late July 2013. The former dry cleaning tenant spaces at 7102B and 7104 Dublin Boulevard are vacant.

In June 2013, the Site was enrolled into a voluntary cleanup program under local oversight by ACEH. Case No. RO3113 was assigned for the Site. As was requested, Iris Environmental uploaded previous documents to the ACEH ftp and State of California GeoTracker websites. On July 2, 2013, Iris Environmental submitted the Work Plan to ACEH for approval.

On July 9, 2013, Iris Environmental met with ACEH to discuss the Site and proposed investigation presented in the Work Plan. At the meeting, ACEH conditionally approved the Work Plan and recommended the following:

- Collection of a deeper grab-groundwater sample adjacent to B-4 where cis-1,2-DCE was previously detected;
- Collection of an additional sub-slab soil vapor sample adjacent to IE-08 to evaluate the potential for vapor intrusion;
- Installation of long-term soil vapor and sub-slab vapor probes (rather than temporary one-time sampling probes) to monitor remedial effectiveness.

The Work Plan was approved by ACEH in an email, dated July 12, 2013. On July 22, 2013, Park Avenue Cleaners vacated the Site and removed the former dry cleaning units and all associated equipment that were used at the 7104 tenant space. The former dry cleaning tenant spaces at 7102B and 7104 Dublin Boulevard are currently vacant; these vacancies provided an excellent opportunity to investigate the lateral and vertical extent of potential soil impacts and degree of groundwater impacts to assist in the identification of source areas.

1.2 Objectives

This investigation was conducted to further evaluate the following:

- Potential source locations including the former dry cleaning machine and sanitary sewer lines;
- The lateral and vertical extent of soil impacts beneath the building/Site;

- The degree and lateral extent of groundwater impacts beneath the building/Site so that suitable groundwater monitoring well locations can be selected to provide hydrogeological information (i.e. flow, gradient, seasonal variations);
- Whether deeper groundwater has been impacted with an onsite release of VOCs;
- The potential for vapor intrusion;
- Whether an interim remedial action (i.e. soil excavation, vapor extraction) should be performed while the tenant spaces are vacant.

1.3 Scope of Work

To achieve the objectives above, Iris Environmental completed the following scope of work:

- Conducted pre-field activities that included preparing a Site Health and Safety Plan (HASP), obtaining drilling permits from the Zone 7 Water Agency and clearing boring locations of potential underground utilities;
- Performed a utility line survey (video and line trace) for the sanitary sewer that services the rear of the building for the two former dry cleaning tenant spaces;
- Advanced borings at 28 locations (IE-01 to IE-27, IE-29) to collect soil and/or first-encountered grab-groundwater samples for chemical analysis;
- Advanced a deep boring (IE-28) to collect a grab-groundwater for chemical analysis;
- Installed eight (8) long-term soil vapor probes (SV-01 to SV-08) to a depth of approximately 5-6 feet bgs;
- Installed three (3) long-term sub-slab vapor probes (SS-01 to SS-03) within the base rock material just beneath the concrete slab;
- Collected soil vapor samples from the soil vapor and sub-slab probes for chemical analysis.

2.0 PREFIELD ACTIVITIES

Iris Environmental completed a HASP for this Phase II in accordance with the requirements of the State of California General Industry Safety Order (GISO) 5192 and Title 29 of the Code of Federal Regulations, Section 1910.120 (29 CFR 1910.120). A copy of the HASP was kept onsite during field activities. The HASP detailed the work to be performed, safety precautions, emergency response procedures, nearest hospital information, and onsite personnel responsible for managing emergency situations.

Prior to conducting work, Iris Environmental submitted required work plans and drilling permit applications to the Zone 7 Water Agency (Zone 7) for approval. A copy of the approved drilling permit is presented in Appendix B. Zone 7 was notified of our field activities in advance of planned investigation activities as required by the permit.

On July 25, 2013, Subdynamic Locating Services, Inc. (Subdynamic), a private utility locating service based in San Jose, California, traced the sanitary sewer utility lines and performed a video inspection of the sanitary sewer lines that services the former dry cleaning units in an effort to document visible joints and/or cracks. The locations of some of the borings outlined in the Work Plan were modified based on the results of the video inspection and line trace. Subdynamic also cleared the proposed drilling locations of potential underground utilities.

Iris Environmental marked each proposed boring location in white paint and contacted Underground Service Alert (USA) at least 48 hours prior to drilling, as required by law. USA Ticket No. 287509 was issued for the Site on July 29, 2013.

3.0 FIELD ACTIVITIES

3.1 Soil Sampling Activities

Between July 31 and August 7, 2013, Iris Environmental supervised the completion of 29 soil borings (IE-01 through IE-29) at the Site using a combination of limited-access and truck-mounted direct-push drilling rigs operated by Environmental Control Associates (ECA), a California C-57 licensed drilling firm, located in Aptos, California. An Iris Environmental staff professional under direct supervision by an Iris Environmental Professional Geologist performed the field activities. The borings were advanced to depths between approximately 10 and 52 feet bgs. The approximate locations of the completed borings are shown in Figure 2.

3.1.1 Soil Logging

With the exception of borings IE-01, -03, -04, -06 and -07, borings were advanced for the dual purpose of soil logging and soil sample collection. Soil samples were collected using an approximate 4-foot long by 2-inch diameter core barrel sampler. New acetate liners were used between sample runs. Field observations were recorded onto borehole-log sheets. The soil cores were examined for soil classification and described on boring logs in general conformance with the Unified Soil Classification System. Soil boring logs are presented in Appendix C.

3.1.2 Soil Sampling

Field screening of soil cores was performed using a photoionization detector (PID) to evaluate the potential presence of VOCs. To initiate this procedure, soil samples were removed from plastic liners, placed into sealable plastic bags. After sufficient time had elapsed for vapor build-up inside the bags, the bag was punctured and the probe tip of the PID was inserted to allow measurement of ionizable substances in the headspace. Measurements of the headspace were obtained in the parts per million (ppm) range for total VOCs. The results of the headspace tests were recorded on boring logs.

Table 1 outlines the sampling an analysis program that was completed for this investigation. In general, three 5-gram Terra Core® samplers were collected at discrete sample depths (2-, 5- and 10-foot samples) for VOC analysis in accordance with United States Environmental Protection Agency (USEPA) Method 5035. Additional samples were collected from deeper depths (15-foot samples) at approximate six-inch discrete soil samples for potential analysis; these target depths for these samples by sawing the acetate liners at the desired six-inch interval and sealing the liner with new Teflon sheets, plastic end caps, and silicon tape. The retrieved samples were labeled with identifying information, and stored in a pre-chilled ice-chest awaiting transportation to the laboratory. Selected soil samples for chemical analysis were recorded onto a chain-of-custody document (Appendix E).

3.2 Grab-Groundwater Sampling Activities

Iris Environmental collected a total of 18 grab-groundwater samples from the boring locations using one of the following methods:

- A closed-system Hydropunch® sampling tool was advanced beyond the drill bit into undisturbed soil at IE-28 to obtain a deep grab-groundwater sample. Upon reaching a depth of 52 feet bgs, the sampling tool was retracted four feet thereby exposing the screen (48-52 feet bgs) and allowing water to flow into the sampling chamber.
- For the remaining borings, one-inch-diameter schedule 40 PVC casing with 5 feet of slotted-screen was inserted into the open borehole at the bottom of each borehole to collect grab-groundwater from first-encountered groundwater.

Prior to sample collection, the depth to groundwater in each boring was gauged to the nearest 0.1 foot with an electronic water level indicator. This information was recorded onto the boring logs (Appendix C).

Single-use disposable bailers or new polyethylene tubing outfitted with a ball-check valve were used to obtain the grab-groundwater samples. Upon retrieval, the grab-groundwater samples were transferred directly into appropriate sample containers provided by the analytical laboratory. A duplicate sample was collected from one of the borings (IE-18) for quality assurance. After collection, the grab-groundwater samples were sealed, labeled and placed in a pre-chilled ice chest for delivery to the laboratory. Chain-of-custody records were completed and accompanied the grab-groundwater sample shipments to the analytical laboratory.

3.3 Soil Gas Sampling Activities

Iris Environmental installed a total of eight (8) long-term soil gas wells and three (3) long-term sub-slab probes at the Site. The probes were installed so that repeat sampling could be performed to monitor remedial progress as was discussed at the meeting with ACEH on July 9, 2013.

3.3.1 Concrete and Asphalt Coring

On July 31, 2013, Iris Environmental contracted with Cal-West Concrete Cutting, Inc. (Cal-West), a professional concrete coring company located in Union City, California to core a total of 11 cores.

Cal-West completed three (3) 1-inch diameter cores through the concrete slab and into the sub-base material so that sub-slab probes could be installed at the following locations: IE-08, IE-11 and IE-29. Prior to completion, Cal-West drilled recessed 2-inch diameter holes to approximately 0.5-inches below finished grade at each location so that flush-mounted tamper-resistant covers could be completed. The cores were approximately 5-6 inches in thickness at each location. After coring activities, the completed sub-slab holes were cleaned with a shop vacuum to allow for sub-slab probe installation.

Cal-West also completed eight (8) 8-inch diameter cores adjacent to the following locations so that soil vapor wells could be installed: IE-05, IE-08, IE-11, IE-14, IE-25 to IE-27 and IE-29. With the exception of IE-05 (asphalt), the surface consisted of concrete. The cores were approximately 5-6 inches in thickness at each location. After coring activities, the holes were drilled to the desired depths with the direct-push rig so that soil vapor probes could be installed for repeat sampling events.

The following presents a summary of the nomenclature and corresponding boring locations for the soil vapor and sub-slab probes.

Soil Vapor Probe ID	Sub-Slab Probe ID	Boring ID
SV-01	SS-01	IE-08
SV-02	SS-02	IE-29
SV-03	SS-03	IE-11
SV-04	--	IE-26
SV-05	--	IE-05
SV-06	--	IE-25
SV-07	--	IE-14
SV-08	--	IE-27

3.3.2 Sub-Slab Probe Installation

Iris Environmental installed sub-slab probes at SS-01 to SS-03. The approximate locations are presented in Figures 2 and 5. After Cal-West cored through the slab and underlying sub-base, 3-inch stainless-steel implant probes were installed just below the concrete slab approximately 3 to 4 inches within the sub-slab material. The probes are manufactured by AMS and consist of a 1-inch diameter rubber shaft plug that is situated along a stainless-steel tube that is positioned just above the base of the slab. The 3-inch implant probe is embedded within the sub-base material beneath the tube and is connected with Swagelok fittings to provide an adequate seal. The 12-inch long stainless-steel tube was then cut to account for actual slab thickness at each location. Once cut, the top of the tube was then connected to a Swagelok connector (SS-400-7-4) that was flush-mounted with the 2-inch diameter recessed core. The annulus of the 1-inch core was then filled with neat cement grout to the top of the rubber plug to provide a seal. Once the grout cured, the top fitting was secured with a threaded "tamper-resistant" top that was sealed flush with the interior surface.

3.3.3 Soil Vapor Probe Installation

After coring, ECA drilled step-out borings to approximately 6-6.5 feet bgs at IE-05, IE-08, IE-11, IE-14, IE-25 to IE-27 and IE-29 to install long-term soil vapor probes SV-01 to SV-08. Before the stainless-steel inlet filter (filter tip) and tubing were set in place at the desired depths, each boring was backfilled with approximately six inches of clean sand into the borehole. The filter tip, with an approximate five-foot length of inert ¼-inch thick-walled Teflon tubing attached, was then positioned at the desired depth within the identified permeable vadose zone soils conducive for soil gas sampling (i.e., sands and/or gravel units). An additional six inches of clean sand was then added above the filter tip. The borehole annulus was then filled with approximately one foot of dry granular bentonite and then completed with hydrated bentonite

chips to about one foot below grade. The top of the Teflon tubing was attached using quick-connect Swagelok body fitting (SS-QC4-B-400) that restricts flow into and out of the tubing. A quick-connect stem fitting (SS-QC4-S-400) is attached to the body to collect samples. Once the quick-connect body fitting was secured to the tubing, the soil vapor probe locations were secured within 6-inch traffic rated EMCO vaults that were set in concrete and finished flush with the ground surface.

3.3.4 Soil Gas Sampling

Soil gas samples were collected from the sub-slab and soil vapor probes to evaluate the current soil gas concentrations beneath the Site in general accordance with the *Advisory - Active Soil Gas Investigations* (April 2012) prepared by California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), Los Angeles Regional Water Quality Control Board, and San Francisco Regional Water Quality Control Board. All soil vapor probes were allowed to stabilize for a minimum of two hours prior to purging and sample collection. A total of nine soil vapor samples (8 samples and 1 duplicate sample) and three sub-slab samples were collected. The sub-slab samples were collected on August 2, 2013; the soil vapor samples were collected on August 7, 2013.

Each soil gas sample for this project was collected using a helium shroud system. The helium shroud system was used to monitor for the intrusion of ambient air into samples through leaks in either the sample train or the annular space of the boring. Each shroud, built by Curtis & Tompkins, Ltd. (C&T) located in Berkeley, California, was constructed in general accordance with the principles illustrated in Appendix C of the 2012 DTSC Advisory. This shroud enclosed the entire above ground portion of the sampling train. A separate laboratory-cleaned shroud and sampling train were used for each sample.

After the minimum two hour equilibration time and prior to purging, the sample tubing was fitted to the sampling train inside the shroud and the shroud was placed over the sampling point and then filled with helium (a tracer gas). The helium concentration in the shroud was monitored continuously using a diffusion cell helium sensor also supplied by C&T. The helium concentration was adjusted as needed to maintain an atmosphere of helium inside the shroud pursuant to the 2012 DTSC Advisory.

For the sub-slab samples, the tamper-resistant cap for the sub-slab probes was removed and a stainless-steel mini ball-valve adaptor was tightened to the Swagelok connector (SS-400-7-4) prior to purging and sampling. A closed hose barb connector (SS-4-AC-1-4) was then attached to the sample tubing that connected to the shroud.

Prior to purging, a vacuum test was performed to confirm that the purge line was secure and that there were no obvious or significant leaks. As well, the vacuum gauge attached on the sampling line, which was attached to the sample Summa canister was checked periodically in order to assure there was no leak in the sampling line (i.e., if the vacuum gauge dropped below the initial SUMMA canister vacuum then ambient air was leaking into sample SUMMA canister).

For the soil vapor probes, approximately three volumes of the sum of the internal volume of tubing used, the void space of the sand pack around the probe tip, and one-half of the void space of the dry bentonite pack was purged from each location using a 60 milliliter (mL) syringe. Three volumes of the sum of the internal volume of stainless steel and Teflon tubing used was purged from each sub-slab location.

During purging, the purge syringe was connected to an in-line helium detector (also supplied by C&T) to monitor whether there were surface leaks into the subsurface, improper installation of the soil gas inlet probe, or leaks in the purge line. Helium was not detected above five percent (recommended DTSC allowance) during purging indicating that the seals and manifolds were intact and representative samples could be collected.

After purging, soil gas samples were collected at a flow rate between approximately 100 and 200 mL per minute using 1.4-liter batch-certified SUMMA canisters provided by C&T. A duplicate soil vapor sample was collected from SV-08 (IE-27) for quality control. The vacuum gauge was recorded prior to the start of sampling and at the end of sampling to confirm sample collection. Upon collection, the soil gas samples were recorded on a chain-of-custody document that accompanied the samples from the point of collection to the analytical laboratory.

3.4 Decontamination

Drilling equipment and down-hole sampling equipment was washed in a solution of non-phosphate detergent, double-rinsed with potable water prior to each use, and allowed to dry.

3.5 Waste Generation

Soil drilling cuttings were containerized in one Department of Transportation (DOT) approved 55-gallon drum that was placed in a secure location onsite. The drum and contents are pending transportation to an appropriate disposal facility.

4.0 LABORATORY ANALYSES

Table 1 outlines the sample depths and analytical testing program completed for this investigation. A total of 83 soil samples, 18 groundwater samples and 12 soil gas samples that were submitted to Curtis & Tompkins, Ltd. (C&T), a State-certified laboratory located in Berkeley, California for chemical analysis.

- Soil: VOCs by Method 8260B
- Groundwater: VOCs by Method 8260B
- Soil vapor and sub-slab vapor samples: VOCs by TO-15

The samples were analyzed on a standard turn-around time. A copy of the analytical laboratory reports are presented in Appendix E.

5.0 RESULTS

5.1 Sanitary Sewer Line Trace and Video Inspection

Subdynamic traced the sanitary sewer line that services the rear of units 7102 and 7104 Dublin Boulevard. The approximate lateral configuration of the sanitary sewer lines that are located in the rear of the building is presented in Figure 2. Subdynamic noted there were two former sanitary sewer lines that connected to the existing system. The first is located outside and is a capped line that terminates near the oil/water separator to the rear of the building. The second former line is located within the 7102 unit and appears to run to the north where a T-junction was identified. The north run of this former line could not be traced or video inspected. This line was likely associated with the former dry cleaning unit with the 7102B tenant space.

After the sanitary sewer lines were traced, Subdynamic attempted to video the accessible sections of the sanitary sewer lines that service these units and that could be video inspected. Based on the information and sections that were able to be viewed, the integrity of the sanitary lines leaving the units and connecting to the street appear to be intact with no visible joints, cracks or breaches identified. Subdynamic noted the presence of typical debris, sediment, cobwebs and natural oil/grease build-up within various sections of the sanitary line that are considered to be normal decay associated with years of continued use.

Based on lateral configuration of the sanitary sewer lines, seven borings (IE-21 to IE-27) were advanced adjacent to the identified lines to further evaluate the potential for soil, groundwater and/or soil vapor impacts along the sewer line. As later discussed in Section 7.0, elevated concentrations of PCE and associated break-down products were not identified in the analyzed samples that would indicate a release associated with the sanitary sewer lines that service the buildings.

5.2 Soil Boring Observations

One boring (IE-28) was continuously logged to a depth of approximately 40 feet bgs. With the exception of IE-01 and IE-03 through IE-07, the remaining borings were logged to depths between 10 and 16 feet bgs. Boring logs indicate soil types generally consisting of interbedded and unconsolidated sediments with one or more of the following soil types: silty sand, silty clay, clayey sand, sandy clay, silty sand with gravel, sandy gravel, sandy silt, clayey silt, and clay.

Iris Environmental did not observe evidence of contaminated soil (*e.g.*, discoloration, petroleum odors, elevated PID results) in the soil borings advanced for this investigation with the exception of slightly elevated PID readings in the soils screened during drilling of IE-17, IE-19, IE-22, IE-23, IE-24, and IE-29.

Where encountered, groundwater was first encountered in the borings between 12 and 36 feet and rose to between approximately 9 and 30.5 feet bgs. Drilling refusal was not encountered in the borings.

Details of the above are presented on boring logs (Appendix C).

5.3 Soil Analytical Results

A summary of the soil analytical results is presented in Table 2. A copy of the laboratory report and chain-of-custody documentation is included in Appendix E. The soil analytical results were

compared to RWQCB ESLs, where groundwater is considered a potential drinking water source. The following is a summary of the key analytical findings:

- VOCs were not detected above residential or commercial ESLs with the exception of PCE in the shallow soils (2-foot and 5-foot samples) at IE-29 beneath the former PCE dry cleaning machine. The concentrations of PCE at these depths were 0.68 mg/kg and 0.88 mg/kg, respectively and exceed the residential ESL of 0.55 mg/kg for PCE. The commercial ESL for PCE is 0.7 mg/kg. The sample collected from 10 feet at IE-29 was 0.075 mg/kg.
- Low-level concentrations of PCE were detected in the analyzed soil samples surrounding the former dry cleaning machine unit. The highest concentrations of PCE adjacent to IE-29 were at IE-19-2.0 (0.058 mg/kg) and IE-19-5.0 (0.12 mg/kg).
- PCE was not detected in the analyzed soils at IE-02, IE-08, IE-09, IE-10, IE-14, IE-15, IE-20 and IE-24.
- Concentrations of benzene, naphthalene or other petroleum-based VOCs were not detected in the analyzed soil samples.

5.4 Grab-Groundwater Analytical Results

A summary of the groundwater analytical results are summarized in Table 3. A copy of the laboratory report and chain-of-custody documentation is included in Appendix E. The groundwater analytical results were compared to California EPA Department of Health Services (DHS) Primary Maximum Contaminant Levels (MCLs) and RWQCB ESLs, where appropriate. The following is a summary of the analytical findings:

- PCE was not detected in the analyzed grab-groundwater samples with the exception of IE-05 (3.8 µg/L), IE-21 (1.2 µg/L) and IE-29 (31 µg/L). Only the concentration of PCE detected at IE-29 exceeded the ESL/MCL established at 5 µg/L.
- PCE was not detected in the remaining analyzed grab-groundwater samples including the deeper sample collected at IE-28.
- Low-levels of trichloroethene (TCE) and cis-1,2-DCE were detected at IE-06 at concentrations of 1.4 µg/L and 0.6 µg/L, respectively. Each of these detections was below applicable ESLs or MCLs.
- Low-level concentrations of acetone, bromodichloromethane, carbon disulfide and chlorobromomethane were detected in one or more of the analyzed grab-groundwater samples, but at concentrations below applicable ESLs and/or MCLs, where established.
- Remaining analyzed VOCs were not detected in the grab-groundwater samples.

5.5 Soil Vapor Analytical Results

A summary of the soil vapor analytical results is presented in Table 4. A copy of the laboratory report and chain-of-custody documentation is included in Appendix E. The soil gas analytical results were compared to ESLs. The following is a summary of the key analytical findings:

- PCE was detected in each of the soil vapor samples at concentrations ranging between 31 $\mu g/m^3$ (SV-03/IE-11) and 610,000 $\mu g/m^3$ (SV-02/IE-29). The commercial use ESL for PCE established at 2,100 $\mu g/m^3$ was exceeded at SV-02, SV-05, SV-06 and SV-08.

- TCE was detected in one soil vapor sample (SV-06) at a concentration of 980 µg/m^3 below the ESL established at 3,000 µg/m^3.
- Other chlorinated VOCs were not detected in the analyzed soil vapor samples above laboratory method reporting limits.
- Benzene was detected in several of the soil vapor samples (SV-03 to SV-05, SV-7 and SV-08) at concentrations ranging between 48 ug/m^3 (SV-03) and 84 µg/m^3 (SV-02). An elevated reporting limit was noted at SV-02 due to the high concentration of PCE that were detected in the analyzed sample. The detected concentrations of benzene do not exceed the commercial use ESL established at 420 µg/m^3.
- Concentrations of other VOCs including acetone, 1,3-butadiene, 2-butanone, carbon disulfide, cyclohexane, 4-ethyltoluene, Heptane, Hexane, 4-meth1-2-pentanone, tetrahydrofuran, toluene, 1,2,3-trimethylbenzene, 1,3,5-trimethylbenzene, and xylenes were detected in one or more of the soil vapor samples. The detected concentrations were not above applicable commercial use ESLs, where established.

5.6 Sub-Slab Soil Vapor Analytical Results

A summary of the sub-slab soil vapor analytical results is presented in Table 5. A copy of the laboratory report and chain-of-custody documentation is included in Appendix E. The soil vapor analytical results were compared to theoretical calculated indoor air ESLs using a default attenuation factor of 0.05, as recommended by DTSC guidance. The following is a summary of the key analytical findings:

- PCE was detected in each of the sub-slab vapor samples at concentrations ranging between 8.6 µg/m^3 (SS-01) and 24,000 µg/m^3 (SS-02). The theoretical calculated indoor air screening ESL for commercial land uses established at 42 µg/m^3 was exceeded at SS-02.
- Benzene was detected in each of the sub-slab vapor samples at concentrations ranging between 5.3 µg/m^3 (SS-03) and 340 µg/m^3 (SS-02). The theoretical calculated indoor air screening ESL for commercial land use established at 8.4 µg/m^3 was exceeded at SS-02.
- Concentrations of acetone, 1,3-butadiene, 2-butanone and toluene were detected in one or more of the sub-slab soil vapor samples. The commercial use indoor air screening ESLs for these compounds were not exceeded, where established.

Assuming a default attenuation factor of 0.05 (per DTSC guidance), the sub-slab soil vapor analytical results indicate that the commercial ESL for PCE and benzene were exceeded at SS-02.

5.7 Quality Assurance/Quality Control

No obvious signs of vapor leakage were observed during the sub-slab and soil vapor sampling activities. Helium (the leak check compound) was not detected during purging at concentrations above DTSC's leakage threshold recommendation of 5% indicating that significant leaks did not occur during collection of the samples.

The analytical laboratory data was reviewed by Iris Environmental to establish its validity and to ensure the laboratory data was complete and accurate. Iris Environmental verified that holding times for each analytical method were achieved and that the laboratory achieved the specific data

quality objectives for each selected analytical method. A review of the data validation process indicates that the laboratories completed QA/QC activities required for the samples such as blanks, lab control samples, matrix spikes, and duplicates. The QA/QC parameters for the samples were within acceptable limits.

In addition, duplicate samples collected from IE-18 and SV-08 showed good precision. Based on the above information, the analytical data are useful for its intended purpose.

6.0 DISCUSSION

The following sections discuss the environmental conditions associated with the Site. An updated Site Conceptual Model for the Site based on the results of this investigation is presented in Appendix F.

6.1 Sources of Contamination

A suspected release of PCE has occurred in the vicinity of the former PCE dry cleaning machine associated with the 7104 tenant space as evidenced by the highest concentrations of PCE being detected at this location. Concentrations of PCE were detected in the shallow soils (up to 0.88 mg/kg), groundwater (31 µg/L), soil vapor (610,000 µg/m^3) and sub-slab (24,000 µg/m^3) samples.

VOCs were not detected in the analyzed soil or grab-groundwater samples in the vicinity of the former PCE dry cleaning machine location in the 7102B tenant space that was removed in 2004 and relocated to the 7104 tenant space. Based on this information, there does not appear to have been a release of PCE to the subsurface with this pre-2004 dry cleaning machine location.

The video inspection conducted on the sanitary sewer lines that service the former dry cleaning units suggest that the integrity of these lines to be intact with no visibly obvious cracks, holes or breaches. In addition, there were no elevated concentrations of VOCs above regulatory screening levels in the analyzed soil and/or grab-groundwater samples collected adjacent to the sanitary sewer lines that would indicate a secondary release from the sewer lines.

Similarly, the analytical results from the grab-groundwater and soil vapor samples collected to the rear of the building did not yield elevated concentrations of VOCs that would indicate migration from surface releases in the investigated areas.

Concentrations of PCE in each media (soil, groundwater and vapor) attenuate with distance from the former PCE dry cleaning machine in the 7104 tenant space, suggesting that there are only limited impacts. Based on the above information, additional investigation to identify potential source locations of VOCs does not appear warranted.

6.2 Degree and Extent of Soil Impacts

Figure 3 illustrates the concentrations of VOCs (primarily PCE) that were detected during this comprehensive investigation. As summarized in Table 2, moderately elevated concentrations of PCE were not detected above residential and/or commercial ESLs with the exception of PCE in the shallow soils (2-foot and 5-foot samples) at IE-29 beneath the former PCE dry cleaning (7104) machine. The concentration of the soil sample collected from 10 feet at IE-29 (0.075 mg/kg) was well below the residential ESL (0.55 mg/kg) and commercial ESL (0.70 mg/kg). In addition, moderately elevated levels concentrations of PCE were also detected in the adjacent sample at IE-19 @ 5 feet bgs (up to 0.12 mg/kg). PCE was not detected in the analyzed soils at, IE-08, IE-09, IE-10, IE-14, IE-15, IE-16, and IE-24. The remainder of the analyzed soil samples detected PCE at low-levels (up to 0.061 mg/kg) and below ESLs. The above information indicates that that there are only limited soil impacts in the shallow soils (<10 feet) beneath the Site.

Iris Environmental estimates that the area of elevated PCE-impacted soils above ESLs to be limited within an approximate 20-foot by 40-foot area to a depth between 8 and 10 feet bgs (Figure 3). These moderately elevated concentrations of PCE in the vadose zone soil are likely partitioning into the vapor phase and into the permeable sandy unit at a depth of 6-8 feet bgs and the overlying sub-base material just beneath the concrete slab. Removal of PCE-impacted soils within this limited identified area will likely remediate the identified source area while alleviating the potential for vapor intrusion.

6.3 Degree and Extent of Groundwater Impacts

Figure 4 illustrates the concentrations of VOCs detected in groundwater to date. As summarized in Table 3, concentrations of PCE were detected in only three analyzed grab-groundwater samples (IE-05, IE-21 and IE-29). PCE was detected at IE-29 at 31 µg/L (above the ESL/MCL of 5.0 µg/L); the remainder of the analyzed shallow grab-groundwater samples were below MCLs or were below analytical laboratory reporting limits.

Natural attenuation appears to be occurring beneath the Site in groundwater, as evidenced by low-level detections of TCE and cis-1,2-DCE beneath the Site at B-4 and IE-06. Trace low-level concentrations of TCE and cis-1,2-DCE were also detected in the deep soil sample collected at 15-feet bgs at IE-25 (beneath the groundwater table); these compounds were not detected in the vadose soil samples. The detections of TCE and cis-1,2-DCE in deeper soil and the groundwater samples indicate that PCE is naturally degrading. The lateral extent of VOCs is currently limited to the property boundary; VOCs were not detected above ESLs/MCLs along the property boundary (downgradient) as evidenced by the lack of VOCs at IE-03 through IE-07. The approximate limits of the shallow VOC plume are presented in Figure 4.

VOCs were not detected in the deeper sample (48-52 feet bgs) at IE-28 where elevated cis-1,2-DCE was detected at B-4 indicating that the extent of impacted groundwater is limited to the shallow first-encountered groundwater beneath the Site. In addition, significant concentrations of PCE were not detected in the vadose zone soils and the shallow grab-groundwater samples that would indicate that there is potential for vertical migration of contaminants through the underlying silty clay sediments that contain occasional thin intermittent more permeable sand units.

Based on the above information, additional investigation to evaluate the lateral and vertical extent of the plume is not warranted. An appropriate number of shallow monitoring wells should be installed to monitor groundwater conditions over time to demonstrate plume stability, flow directions and seasonal fluctuations.

6.4 Potential for Vapor Intrusion

Based on the elevated concentrations of detected VOCs in the analyzed soil vapor and sub-slab soil vapor samples, there appears to be potential for vapor intrusion into the building interior. The highest concentrations of PCE were detected from a depth of 5 feet bgs at SV-02 (610,000 µg/m^3) located beneath the former dry cleaning machine in the 7104 tenant space; a level more than two orders of magnitude than the commercial use ESL established at 2,100 µg/m^3. Concentrations of PCE attenuate with distance to the north, west and east of the former dry cleaning machine indicating that a release was centered in this general location.

TCE was detected in the analyzed soil vapor samples at SV-04 (IE-26) and SV-06 (IE-25) to the south of the former dry cleaning unit. The presence of TCE in the soil vapor samples in these downgradient locations suggests that the VOCs are naturally attenuating in soil vapor.

Elevated concentrations of PCE (51,000 µg/m^3) and TCE (980 µg/m^3) were detected in the soil vapor sample at SV-06 located adjacent to the sanitary sewer line in the alleyway. Although there were no indications that a PCE release has occurred adjacent to the sanitary sewer line based on the analyzed soil samples and groundwater data in the vicinity, the elevated soil gas concentrations are likely associated with the volatilization of the underlying groundwater plume in the vicinity and possibly migration of soil vapors along the backfill material of the sanitary sewer line.

The highest concentration of PCE (24,000 µg/m^3) in the analyzed sub-slab samples (SS-02) was also collected from the vicinity of the former dry cleaning machine in the 7104 tenant space. Although the concentrations of PCE are attenuating with decreasing depth at this location (610,000 µg/m^3 to 24,000 µg/m^3), the theoretical indoor air ESL of 42 µg/m^3 for commercial/industrial land use was exceeded.

The elevated concentrations of PCE in the analyzed soil and soil vapor samples in the former dry cleaning machine location, coupled with the lack of significantly elevated PCE in the analyzed grab-groundwater samples indicate the majority of the PCE that has been released to the subsurface underneath the building within the vadose soils.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the information presented in this Report, Iris Environmental concludes the following:

- A suspected release of PCE to the subsurface has occurred in the vicinity of the former PCE dry cleaning unit located at the 7104 tenant space. The subsurface impacts of the release to subsurface soil appear to be limited in both lateral and vertical extent. We currently estimate the area of PCE-impacted soils above or near ESLs to an approximate 20-foot by 40-foot surface area and to a depth between 8 and 10 feet.

- Groundwater impacts also appear to be limited in lateral and vertical extent. Deeper groundwater does not appear to be impacted with VOCs and the extent of shallow groundwater VOC impacts appears defined to the Site property (as defined by drinking water criteria). Maximum concentrations of PCE, TCE and cDCE detected in groundwater were 31 µg/L, 0.6 µg/L and 1.4 µg/L indicating that a release of PCE has not significantly impacted shallow or deeper groundwater.
- The Site is underlain by silt and clay sediments to an approximate depth of 5-6 feet bgs, where a laterally continuous and more permeable sand/silty sand/clayey sand unit ranging in thickness between 1-3 feet thick is encountered. Unconsolidated silty clay is found below the more permeable unit. Groundwater was encountered beneath the Site at depths ranging between 12 and 36 feet and rose to depths between 9 and 30.5 feet bgs.
- Based on the distribution of detected analytes and topography, groundwater appears to flow towards the south/southeast. Natural attenuation of the groundwater appears to be occurring in groundwater beneath the Site as evidenced by the presence of degradation products. The low-levels of PCE and daughter products in groundwater should further degrade naturally over time. Based on this interpretation, active remediation of groundwater does not appear warranted.
- Concentrations of PCE were detected in the soil vapor samples in excess of commercial ESLs in the vicinity of the former dry cleaning machine at the 7104 tenant space. In addition, concentrations of PCE were detected in the sub-slab samples that indicate a vapor intrusion risk in the vicinity of the former dry cleaning machine near SS-02.
- The elevated concentrations of VOCs detected in the sub-slab and soil vapor in the vicinity of the former dry cleaning machine in the 7104 tenant space are likely associated with the PCE-impacted soils detected in the shallow soils. Removal of these soils will likely reduce the potential for vapor intrusion beneath the Site and remove the residual source of PCE beneath the Site in vadose soil.

Based on the above conclusions, we recommend the following next steps:

- Removal of the PCE-impacted soils in the immediate vicinity of the dry cleaning unit as an interim remedial action. The vacant tenant spaces provide an excellent opportunity to remediate the Site so that the tenant spaces may be re-occupied. Removal of the source material beneath the Site will significantly diminish the potential for vapor intrusion into the building. An *Interim Remedial Action Plan* (IRAP) to excavate and remove the PCE-impacted soils beneath the building will be submitted for ACEH approval under separate cover.
- Install a total of four monitoring wells to further evaluate the groundwater flow direction and monitor analytical concentrations over time to demonstrate plume stability. A work plan for installation of a sufficient number of monitoring wells to monitor groundwater conditions over time will be submitted under separate cover.

8.0 LIMITATIONS

This Report is based upon current Site conditions observed by Iris Environmental and current laws, policies, and regulations as of the date of this Report. Iris Environmental will not distribute or publish this Report without the prior express written consent of the Ready Family Partnership, L.P. except as required by law or court order. The information and opinions expressed in this investigation report are based upon the information available to Iris Environmental and are given in response to a limited assignment and should be considered and implemented only in light of that assignment. The services provided by Iris Environmental in completing this project were consistent with normal standards of the profession. No other warranty, expressed or implied, is made.

9.0 SIGNATURES

This report prepared by:

Craig Pelletier, P.G.
Senior Manager

This report reviewed by:

Christopher Alger, PG, CEG, ChG
Principal

September 6, 2013

Iris Project No. 13-945B

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Tables

Table 1. Summary of Sampling and Analytical Program

Sample Location	Depth Collected (feet bgs)	Media	Summary of Analyses[3] VOCs
IE-01	First Encountered	Groundwater	X
IE-02	2	Soil	*Hold
	6	Soil	*Hold
	10	Soil	*Hold
	15	Soil	*Hold
	First Encountered	Groundwater	X
IE-03	First Encountered	Groundwater	X
IE-04	First Encountered	Groundwater	X
IE-05	5.5	Soil gas	X
	First Encountered	Groundwater	X
IE-06	First Encountered	Groundwater	X
IE-07	First Encountered	Groundwater	X
IE-08	3-inches below slab	Sub-slab soil gas	X
	2	Soil	X
	5	Soil	X
	6	Soil Gas	X
	10	Soil	X
	15	Soil	Hold
IE-09	2	Soil	X
	5	Soil	X
	10	Soil	X
	First Encountered	Groundwater	X
IE-10	2	Soil	X
	5.5	Soil	X
	10	Soil	X
	15	Soil	Hold
IE-11	3-inches below slab	Sub-slab soil gas	X
	2	Soil	*Hold
	5	Soil	*Hold
	5.5	Soil gas	X
	10	Soil	*Hold
	15	Soil	*Hold
	First Encountered	Groundwater	X
IE-12	2	Soil	X
	5	Soil	X
	9	Soil	X
	13.5	Soil	Hold
	First Encountered	Groundwater	X
IE-13	2	Soil	X
	5	Soil	X
	9.5	Soil	X
IE-14	2	Soil	X
	5.5	Soil gas	X
	6	Soil	X
	11.5	Soil	X
	15	Soil	Hold
	First Encountered	Groundwater	X

Table 1. Summary of Sampling and Analytical Program

Sample Location	Depth Collected (feet bgs)	Media	Summary of Analyses[3] VOCs
IE-15	2	Soil	X
	5	Soil	X
	10	Soil	X
	15	Soil	Hold
IE-16	2	Soil	X
	5	Soil	X
	10.5	Soil	X
	15	Soil	*Hold
IE-17	2	Soil	X
	5	Soil	X
	10	Soil	X
	15	Soil	Hold
IE-18	2	Soil	X
	5	Soil	X
	10	Soil	X
	15	Soil	Hold
	First Encountered	Groundwater	X
IE-18DUP	First Encountered	Groundwater	X
IE-19	2	Soil	X
	5	Soil	X
	10	Soil	X
	15	Soil	Hold
IE-20	2	Soil	X
	5	Soil	X
	15	Soil	X
IE-21	2	Soil	X
	5	Soil	X
	8.5	Soil	X
	15	Soil	Hold
	First Encountered	Groundwater	X
IE-22	6	Soil	X
	10	Soil	X
	15	Soil	Hold
IE-23	2	Soil	X
	5.5	Soil	X
	10	Soil	X
	15	Soil	Hold
	First Encountered	Groundwater	X
IE-24	2	Soil	X
	5	Soil	X
	10	Soil	X
	15	Soil	Hold
	First Encountered	Groundwater	X

Table 1. Summary of Sampling and Analytical Program

Sample Location	Depth Collected (feet bgs)	Media	Summary of Analyses[3] VOCs
IE-25	2	Soil	X
	3	Soil	X
	5.5	Soil gas	X
	10	Soil	X
	15	Soil	X
IE-26	5	Soil	X
	5.5	Soil gas	X
	10	Soil	X
	15	Soil	X
IE-27	2	Soil	X
	5	Soil	X
	6	Soil gas	X
	10	Soil	X
	15	Soil	Hold
IE-27DUP	6	Soil gas	X
IE-28	48.5-52	Groundwater	X
IE-29	3-inches below slab	Sub-slab soil gas	X
	2	Soil	X
	5	Soil	X
	6	Soil gas	X
	10	Soil	X
	15	Soil	Hold
	First Encountered	Groundwater	X

Table 1. Summary of Sampling and Analytical Program

Notes:

(1) Sample depths are expressed in feet below ground surface (ft bgs) unless otherwise noted.

(2) A Hydropunch™ tip was used to collect water in-situ for samples IE-28 and IE-29. For the remainder of the samples, a Hydropunch™ tip was also used, but water was not immediately available to sample so the Hydropunch™ casing was pulled out and 1" PVC tubing with a 5' screen and extenders were installed, and water was collected at a later time. Groundwater levels ranged from 17 to 27 feet below ground surface, unless otherwise noted.

(3) "VOCs" indicates volatile organic compounds by Method 8260B (soil and groundwater analyses) or USEPA Method TO-15 (soil gas analyses). Soil samples were collected using TerraCore samplers, or retained in Teflon sleeve, in accordance with EPA prep method 5035 to prevent volatile loss.

X	Sample was analyzed
feet bgs	feet below ground surface
*Hold	Indicates that these soil samples were placed on hold at the laboratory with analyses pending on the analytical results of surrounding soil samples, i.e., if surrounding soil samples have no detected chemical constituents, then these samples will not be analyzed.
Hold	Indicates that these (15 ft bgs) soil samples will be placed on hold at the laboratory with analyses pending on the analytical results of the more shallow samples at this location, i.e., if surrounding soil samples have no detected chemical constituents, then these samples will not be analyzed.
	micrograms per kilogram
Dup	Indicates a duplicate sample of the specifically listed media was collected at this location.
First Encountered	Grab groundwater samples were collected within first-encountered groundwater.

Table 2. Summary of Soil Analytical Results

Parameter	Units	Screening Levels				Samples																			
ID	–	ESL				IE-08	IE-08	IE-08	IE-09	IE-09	IE-09	IE-10	IE-10	IE-10	IE-12	IE-12	IE-12	IE-13	IE-13	IE-13	IE-14	IE-14	IE-14	IE-15	IE-15	IE-15
Type	–	Res		C/I		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Depth	feet bgs	< 9.8	> 9.8	< 9.8	> 9.8	2.0	5.0	10.0	2.0	5.0	10.0	2.0	5.5	10.0	2.0	5.0	9.5	2.0	5.0	9.5	2.0	6.0	11.5	2.0	5.0	10.0
Date	mm/dd/yy	–	–	–	–	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	08/01/13	08/01/13	08/01/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	08/05/13	08/05/13	08/05/13	08/05/13	08/05/13	08/05/13
Acetone	mg/kg	0.50	0.50	0.50	0.50	<0.014	<0.015	<0.016	<0.014	<0.016	<0.016	<0.015	<0.016	<0.017	<0.016	<0.017	<0.017	<0.019	<0.019	<0.016	<0.016	<0.017	<0.017	<0.020	<0.014	<0.026
Benzene	mg/kg	0.044	0.044	0.044	0.044	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Bromobenzene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Bromodichloromethane	mg/kg	0.48	0.48	1.9	1.9	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Bromoform	mg/kg	2.2	2.2	2.2	2.2	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Bromomethane (methyl bromide)	mg/kg	0.35	0.35	0.35	0.35	<0.0070	<0.0076	<0.0081	<0.0071	<0.0078	<0.0082	<0.0074	<0.0079	<0.0083	<0.0082	<0.0086	<0.0087	<0.0094	<0.0093	<0.0080	<0.0081	<0.0084	<0.0085	<0.0099	<0.0070	<0.013
2-Butanone (methyl ethyl ketone)	mg/kg	6.5	6.5	6.5	6.5	<0.0070	<0.0076	<0.0081	<0.0071	<0.0078	<0.0082	<0.0074	<0.0079	<0.0083	<0.0082	<0.0086	<0.0087	<0.0094	<0.0093	<0.0080	<0.0081	<0.0084	<0.0085	<0.0099	<0.0070	<0.013
n-Butylbenzene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
sec-Butylbenzene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
tert-Butylbenzene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Carbon disulfide	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Carbon tetrachloride	mg/kg	0.11	0.11	0.11	0.11	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Chlorobenzene	mg/kg	1.5	1.5	1.5	1.5	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Chlorobromomethane (bromochloromethane)	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Chlorodibromomethane (dibromochloromethane)	mg/kg	7.6	7.6	8.3	8.3	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Chloroethane (ethyl chloride)	mg/kg	1.1	1.1	1.1	1.1	<0.0070	<0.0076	<0.0081	<0.0071	<0.0078	<0.0082	<0.0074	<0.0079	<0.0083	<0.0082	<0.0086	<0.0087	<0.0094	<0.0093	<0.0080	<0.0081	<0.0084	<0.0085	<0.0099	<0.0070	<0.013
Chloroform	mg/kg	1.1	1.1	2.1	2.1	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Chloromethane (methyl chloride)	mg/kg	24	24	24	24	<0.0070	<0.0076	<0.0081	<0.0071	<0.0078	<0.0082	<0.0074	<0.0079	<0.0083	<0.0082	<0.0086	<0.0087	<0.0094	<0.0093	<0.0080	<0.0081	<0.0084	<0.0085	<0.0099	<0.0070	<0.013
2-Chlorotoluene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
4-Chlorotoluene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Cumene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Cymene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,2-Dibromo-3-chloropropane	mg/kg	0.0045	0.0045	0.0045	0.0045	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,2-Dibromoethane (ethylene dibromide)	mg/kg	0.00033	0.00033	0.00033	0.00033	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,2-Dichlorobenzene	mg/kg	1.1	1.1	1.1	1.1	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,3-Dichlorobenzene	mg/kg	7.4	7.4	7.4	7.4	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,4-Dichlorobenzene	mg/kg	0.59	0.59	0.59	0.59	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Dichlorodifluoromethane (Freon 12)	mg/kg	none	none	none	none	<0.0070	<0.0076	<0.0081	<0.0071	<0.0078	<0.0082	<0.0074	<0.0079	<0.0083	<0.0082	<0.0086	<0.0087	<0.0094	<0.0093	<0.0080	<0.0081	<0.0084	<0.0085	<0.0099	<0.0070	<0.013
1,1-Dichloroethane (1,1-DCA)	mg/kg	0.20	0.20	0.20	0.20	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,2-Dichloroethane (1,2-DCA)	mg/kg	0.0045	0.0045	0.0045	0.0045	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,1-Dichloroethene (1,1-DCE)	mg/kg	1.0	1.0	1.0	1.0	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
cis-1,2-Dichloroethene (cis-1,2-DCE)	mg/kg	0.19	0.19	0.19	0.19	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
trans-1,2-Dichloroethene (trans-1,2-DCE)	mg/kg	0.67	0.67	0.67	0.67	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064

Table 2. Summary of Soil Analytical Results

Parameter	Units	Screening Levels				Samples																		
ID	–	ESL				IE-08	IE-08	IE-08	IE-09	IE-09	IE-09	IE-10	IE-10	IE-10	IE-12	IE-12	IE-12	IE-13	IE-13	IE-13	IE-14	IE-14	IE-14	IE-15	IE-15	IE-15
Type	–	Res		C/I		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Depth	feet bgs	< 9.8	> 9.8	< 9.8	> 9.8	2.0	5.0	10.0	2.0	5.0	10.0	2.0	5.5	10.0	2.0	5.0	9.5	2.0	5.0	9.5	2.0	6.0	11.5	2.0	5.0	10.0
Date	mm/dd/yy	–	–	–	–	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	08/01/13	08/01/13	08/01/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	08/05/13	08/05/13	08/05/13	08/05/13	08/05/13	08/05/13
1,2-Dichloropropane	mg/kg	0.12	0.12	0.12	0.12	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,3-Dichloropropane	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
2,2-Dichloropropane	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,1-Dichloropropene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
cis-1,3-Dichloropropene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
trans-1,3-Dichloropropene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Ethylbenzene	mg/kg	3.3	3.3	3.3	3.3	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Hexachlorobutadiene	mg/kg	4.3	4.3	4.3	4.3	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
2-Hexanone (methyl butyl ketone)	mg/kg	none	none	none	none	<0.0070	<0.0076	<0.0081	<0.0071	<0.0078	<0.0082	<0.0074	<0.0079	<0.0083	<0.0082	<0.0086	<0.0087	<0.0094	<0.0093	<0.0080	<0.0081	<0.0084	<0.0085	<0.0099	<0.0070	<0.013
Methyl tert-butyl ether (MTBE)	mg/kg	0.023	0.023	0.023	0.023	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Methylene bromide	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Methylene chloride	mg/kg	0.077	0.077	0.077	0.077	<0.014	<0.015	<0.016	<0.014	<0.016	<0.016	<0.015	<0.016	<0.017	<0.016	<0.017	<0.017	<0.019	<0.019	<0.016	<0.016	<0.017	<0.017	<0.020	<0.014	<0.026
4-Methyl-2-pentanone (methyl isobutyl ketone)	mg/kg	2.8	2.8	2.8	2.8	<0.0070	<0.0076	<0.0081	<0.0071	<0.0078	<0.0082	<0.0074	<0.0079	<0.0083	<0.0082	<0.0086	<0.0087	<0.0094	<0.0093	<0.0080	<0.0081	<0.0084	<0.0085	<0.0099	<0.0070	<0.013
Naphthalene	mg/kg	1.2	1.2	1.2	1.2	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
n-Propylbenzene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Styrene	mg/kg	1.5	1.5	1.5	1.5	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,1,1,2-Tetrachloroethane	mg/kg	0.0091	0.0091	0.0091	0.0091	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,1,2,2-Tetrachloroethane	mg/kg	0.018	0.018	0.018	0.018	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Tetrachloroethene (PCE)	mg/kg	0.55	0.55	0.70	0.70	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	**0.0049**	**0.013**	<0.0047	<0.0047	**0.0065**	<0.0041	<0.0042	**0.0093**	<0.0049	<0.0035	<0.0064
Toluene	mg/kg	2.9	2.9	2.9	2.9	<0.0035	<0.0038	<0.0041	**0.0043**	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,2,3-Trichlorobenzene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,2,4-Trichlorobenzene	mg/kg	1.5	1.5	1.5	1.5	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,1,1-Trichloroethane (1,1,1-TCA)	mg/kg	7.8	7.8	7.8	7.8	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,1,2-Trichloroethane (1,1,2-TCA)	mg/kg	0.070	0.070	0.070	0.070	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Trichloroethene (TCE)	mg/kg	0.46	0.46	0.46	0.46	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Trichlorofluoromethane (Freon 11)	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,2,3-Trichloropropane	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,2,4-Trimethylbenzene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
1,3,5-Trimethylbenzene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Vinyl acetate	mg/kg	none	none	none	none	<0.035	<0.038	<0.041	<0.035	<0.039	<0.041	<0.037	<0.040	<0.042	<0.041	<0.043	<0.043	<0.047	<0.047	<0.040	<0.041	<0.042	<0.043	<0.049	<0.035	<0.064
Vinyl chloride	mg/kg	0.032	0.032	0.085	0.085	<0.0070	<0.0076	<0.0081	<0.0071	<0.0078	<0.0082	<0.0074	<0.0079	<0.0083	<0.0082	<0.0086	<0.0087	<0.0094	<0.0093	<0.0080	<0.0081	<0.0084	<0.0085	<0.0099	<0.0070	<0.013
o-Xylene	mg/kg	none	none	none	none	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064
Xylenes	mg/kg	2.3	2.3	2.3	2.3	<0.0035	<0.0038	<0.0041	<0.0035	<0.0039	<0.0041	<0.0037	<0.0040	<0.0042	<0.0041	<0.0043	<0.0043	<0.0047	<0.0047	<0.0040	<0.0041	<0.0042	<0.0043	<0.0049	<0.0035	<0.0064

Table 2. Summary of Soil Analytical Results

Parameter	Units	Screening Levels				Samples																			
ID	–	ESL				IE-16	IE-16	IE-16	IE-17	IE-17	IE-17	IE-18	IE-18	IE-18	IE-19	IE-19	IE-19	IE-20	IE-20	IE-20	IE-21	IE-21	IE-21	IE-22	IE-22	IE-23
Type	–	Res		C/I		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Depth	feet bgs	< 9.8	> 9.8	< 9.8	> 9.8	2.0	5.0	10.5	2.0	5.0	10.0	2.0	5.0	10.0	2.0	5.0	10.0	2.0	5.0	15.0	2.0	5.0	8.5	6.0	10.0	2.0
Date	mm/dd/yy	–	–	–	–	08/01/13	08/01/13	08/01/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/05/13
Acetone	mg/kg	0.50	0.50	0.50	0.50	<0.016	<0.019	<0.016	<0.016	<0.015	<0.016	<0.017	<0.016	<0.016	<0.018	<0.017	<0.022	<0.019	<0.022	<0.020	<0.017	<0.016	<0.014	<0.017	<0.018	<0.018
Benzene	mg/kg	0.044	0.044	0.044	0.044	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Bromobenzene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Bromodichloromethane	mg/kg	0.48	0.48	1.9	1.9	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Bromoform	mg/kg	2.2	2.2	2.2	2.2	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Bromomethane (methyl bromide)	mg/kg	0.35	0.35	0.35	0.35	<0.0079	<0.0095	<0.0079	<0.0081	<0.0077	<0.0082	<0.0084	<0.0082	<0.0079	<0.0090	<0.0084	<0.011	<0.0093	<0.011	<0.0099	<0.0083	<0.0080	<0.0072	<0.0084	<0.0090	<0.0091
2-Butanone (methyl ethyl ketone)	mg/kg	6.5	6.5	6.5	6.5	<0.0079	<0.0095	<0.0079	<0.0081	<0.0077	<0.0082	<0.0084	<0.0082	<0.0079	<0.0090	<0.0084	<0.011	<0.0093	<0.011	<0.0099	<0.0083	<0.0080	<0.0072	<0.0084	<0.0090	<0.0091
n-Butylbenzene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
sec-Butylbenzene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
tert-Butylbenzene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Carbon disulfide	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Carbon tetrachloride	mg/kg	0.11	0.11	0.11	0.11	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Chlorobenzene	mg/kg	1.5	1.5	1.5	1.5	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Chlorobromomethane (bromochloromethane)	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Chlorodibromomethane (dibromochloromethane)	mg/kg	7.6	7.6	8.3	8.3	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Chloroethane (ethyl chloride)	mg/kg	1.1	1.1	1.1	1.1	<0.0079	<0.0095	<0.0079	<0.0081	<0.0077	<0.0082	<0.0084	<0.0082	<0.0079	<0.0090	<0.0084	<0.011	<0.0093	<0.011	<0.0099	<0.0083	<0.0080	<0.0072	<0.0084	<0.0090	<0.0091
Chloroform	mg/kg	1.1	1.1	2.1	2.1	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Chloromethane (methyl chloride)	mg/kg	24	24	24	24	<0.0079	<0.0095	<0.0079	<0.0081	<0.0077	<0.0082	<0.0084	<0.0082	<0.0079	<0.0090	<0.0084	<0.011	<0.0093	<0.011	<0.0099	<0.0083	<0.0080	<0.0072	<0.0084	<0.0090	<0.0091
2-Chlorotoluene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
4-Chlorotoluene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Cumene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Cymene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,2-Dibromo-3-chloropropane	mg/kg	0.0045	0.0045	0.0045	0.0045	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,2-Dibromoethane (ethylene dibromide)	mg/kg	0.00033	0.00033	0.00033	0.00033	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,2-Dichlorobenzene	mg/kg	1.1	1.1	1.1	1.1	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,3-Dichlorobenzene	mg/kg	7.4	7.4	7.4	7.4	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,4-Dichlorobenzene	mg/kg	0.59	0.59	0.59	0.59	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Dichlorodifluoromethane (Freon 12)	mg/kg	none	none	none	none	<0.0079	<0.0095	<0.0079	<0.0081	<0.0077	<0.0082	<0.0084	<0.0082	<0.0079	<0.0090	<0.0084	<0.011	<0.0093	<0.011	<0.0099	<0.0083	<0.0080	<0.0072	<0.0084	<0.0090	<0.0091
1,1-Dichloroethane (1,1-DCA)	mg/kg	0.20	0.20	0.20	0.20	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,2-Dichloroethane (1,2-DCA)	mg/kg	0.0045	0.0045	0.0045	0.0045	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,1-Dichloroethene (1,1-DCE)	mg/kg	1.0	1.0	1.0	1.0	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
cis-1,2-Dichloroethene (cis-1,2-DCE)	mg/kg	0.19	0.19	0.19	0.19	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
trans-1,2-Dichloroethene (trans-1,2-DCE)	mg/kg	0.67	0.67	0.67	0.67	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046

Table 2. Summary of Soil Analytical Results

Parameter	Units	Screening Levels				Samples																		
ID	–	ESL				IE-16	IE-16	IE-16	IE-17	IE-17	IE-17	IE-18	IE-18	IE-18	IE-19	IE-19	IE-19	IE-20	IE-20	IE-20	IE-21	IE-21	IE-21	IE-22	IE-22	IE-23
Type	–	Res		C/I		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Depth	feet bgs	< 9.8	> 9.8	< 9.8	> 9.8	2.0	5.0	10.5	2.0	5.0	10.0	2.0	5.0	10.0	2.0	5.0	10.0	2.0	5.0	15.0	2.0	5.0	8.5	6.0	10.0	2.0
Date	mm/dd/yy	–	–	–	–	08/01/13	08/01/13	08/01/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	07/31/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/01/13	08/05/13
1,2-Dichloropropane	mg/kg	0.12	0.12	0.12	0.12	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,3-Dichloropropane	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
2,2-Dichloropropane	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,1-Dichloropropene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
cis-1,3-Dichloropropene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
trans-1,3-Dichloropropene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Ethylbenzene	mg/kg	3.3	3.3	3.3	3.3	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Hexachlorobutadiene	mg/kg	4.3	4.3	4.3	4.3	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
2-Hexanone (methyl butyl ketone)	mg/kg	none	none	none	none	<0.0079	<0.0095	<0.0079	<0.0081	<0.0077	<0.0082	<0.0084	<0.0082	<0.0079	<0.0090	<0.0084	<0.011	<0.0093	<0.011	<0.0099	<0.0083	<0.0080	<0.0072	<0.0084	<0.0090	<0.0091
Methyl tert-butyl ether (MTBE)	mg/kg	0.023	0.023	0.023	0.023	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Methylene bromide	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Methylene chloride	mg/kg	0.077	0.077	0.077	0.077	<0.016	<0.019	<0.016	<0.016	<0.015	<0.016	<0.017	<0.016	<0.016	<0.018	<0.017	<0.022	<0.019	<0.022	<0.020	<0.017	<0.016	<0.014	<0.017	<0.018	<0.018
4-Methyl-2-pentanone (methyl isobutyl ketone)	mg/kg	2.8	2.8	2.8	2.8	<0.0079	<0.0095	<0.0079	<0.0081	<0.0077	<0.0082	<0.0084	<0.0082	<0.0079	<0.0090	<0.0084	<0.011	<0.0093	<0.011	<0.0099	<0.0083	<0.0080	<0.0072	<0.0084	<0.0090	<0.0091
Naphthalene	mg/kg	1.2	1.2	1.2	1.2	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
n-Propylbenzene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Styrene	mg/kg	1.5	1.5	1.5	1.5	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,1,1,2-Tetrachloroethane	mg/kg	0.0091	0.0091	0.0091	0.0091	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,1,2,2-Tetrachloroethane	mg/kg	0.018	0.018	0.018	0.018	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Tetrachloroethene (PCE)	mg/kg	0.55	0.55	0.70	0.70	<0.0040	<0.0047	<0.0040	**0.0087**	**0.016**	**0.015**	**0.0060**	**0.038**	**0.0049**	**0.057**	**0.12**	**0.012**	<0.0047	**0.0066**	<0.0050	**0.014**	**0.026**	**0.020**	**0.044**	**0.013**	<0.0046
Toluene	mg/kg	2.9	2.9	2.9	2.9	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,2,3-Trichlorobenzene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,2,4-Trichlorobenzene	mg/kg	1.5	1.5	1.5	1.5	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,1,1-Trichloroethane (1,1,1-TCA)	mg/kg	7.8	7.8	7.8	7.8	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,1,2-Trichloroethane (1,1,2-TCA)	mg/kg	0.070	0.070	0.070	0.070	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Trichloroethene (TCE)	mg/kg	0.46	0.46	0.46	0.46	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Trichlorofluoromethane (Freon 11)	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,2,3-Trichloropropane	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,2,4-Trimethylbenzene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
1,3,5-Trimethylbenzene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Vinyl acetate	mg/kg	none	none	none	none	<0.040	<0.047	<0.040	<0.041	<0.038	<0.041	<0.042	<0.041	<0.039	<0.045	<0.042	<0.054	<0.047	<0.056	<0.050	<0.042	<0.040	<0.036	<0.042	<0.045	<0.046
Vinyl chloride	mg/kg	0.032	0.032	0.085	0.085	<0.0079	<0.0095	<0.0079	<0.0081	<0.0077	<0.0082	<0.0084	<0.0082	<0.0079	<0.0090	<0.0084	<0.011	<0.0093	<0.011	<0.0099	<0.0083	<0.0080	<0.0072	<0.0084	<0.0090	<0.0091
o-Xylene	mg/kg	none	none	none	none	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046
Xylenes	mg/kg	2.3	2.3	2.3	2.3	<0.0040	<0.0047	<0.0040	<0.0041	<0.0038	<0.0041	<0.0042	<0.0041	<0.0039	<0.0045	<0.0042	<0.0054	<0.0047	<0.0056	<0.0050	<0.0042	<0.0040	<0.0036	<0.0042	<0.0045	<0.0046

Table 2. Summary of Soil Analytical Results

Parameter	Units	Screening Levels				Samples																
ID	–	ESL				IE-23	IE-23	IE-24	IE-24	IE-24	IE-25	IE-25	IE-25	IE-25	IE-26	IE-26	IE-26	IE-27	IE-27	IE-27	IE-29	IE-29	IE-29
Type	–	Res		C/I		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Depth	feet bgs	< 9.8	> 9.8	< 9.8	> 9.8	5.5	10.0	2.0	5.0	10.0	2.0	3.0	10.0	15.0	5.0	10.0	15.0	2.0	5.0	10.0	2.0	5.0	10.0
Date	mm/dd/yy	–	–	–	–	08/05/13	08/05/13	08/05/13	08/05/13	08/05/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/01/13	08/01/13	08/01/13
Acetone	mg/kg	0.50	0.50	0.50	0.50	<0.016	<0.018	<0.016	<0.016	<0.016	<0.020	<0.018	<0.019	<0.016	<0.018	<0.018	<0.014	<0.016	<0.017	<0.017	<0.019	<0.015	<0.016
Benzene	mg/kg	0.044	0.044	0.044	0.044	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Bromobenzene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Bromodichloromethane	mg/kg	0.48	0.48	1.9	1.9	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Bromoform	mg/kg	2.2	2.2	2.2	2.2	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Bromomethane (methyl bromide)	mg/kg	0.35	0.35	0.35	0.35	<0.0079	<0.0092	<0.0078	<0.0080	<0.0080	<0.010	<0.0090	<0.0095	<0.0081	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
2-Butanone (methyl ethyl ketone)	mg/kg	6.5	6.5	6.5	6.5	<0.0079	<0.0092	<0.0078	<0.0080	<0.0080	<0.010	<0.0090	<0.0095	<0.0081	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
n-Butylbenzene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
sec-Butylbenzene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
tert-Butylbenzene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Carbon disulfide	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Carbon tetrachloride	mg/kg	0.11	0.11	0.11	0.11	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chlorobenzene	mg/kg	1.5	1.5	1.5	1.5	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chlorobromomethane (bromochloromethane)	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chlorodibromomethane (dibromochloromethane)	mg/kg	7.6	7.6	8.3	8.3	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chloroethane (ethyl chloride)	mg/kg	1.1	1.1	1.1	1.1	<0.0079	<0.0092	<0.0078	<0.0080	<0.0080	<0.010	<0.0090	<0.0095	<0.0081	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
Chloroform	mg/kg	1.1	1.1	2.1	2.1	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chloromethane (methyl chloride)	mg/kg	24	24	24	24	<0.0079	<0.0092	<0.0078	<0.0080	<0.0080	<0.010	<0.0090	<0.0095	<0.0081	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
2-Chlorotoluene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
4-Chlorotoluene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Cumene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Cymene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2-Dibromo-3-chloropropane	mg/kg	0.0045	0.0045	0.0045	0.0045	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2-Dibromoethane (ethylene dibromide)	mg/kg	0.00033	0.00033	0.00033	0.00033	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2-Dichlorobenzene	mg/kg	1.1	1.1	1.1	1.1	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,3-Dichlorobenzene	mg/kg	7.4	7.4	7.4	7.4	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,4-Dichlorobenzene	mg/kg	0.59	0.59	0.59	0.59	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Dichlorodifluoromethane (Freon 12)	mg/kg	none	none	none	none	<0.0079	<0.0092	<0.0078	<0.0080	<0.0080	<0.010	<0.0090	<0.0095	<0.0081	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
1,1-Dichloroethane (1,1-DCA)	mg/kg	0.20	0.20	0.20	0.20	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2-Dichloroethane (1,2-DCA)	mg/kg	0.0045	0.0045	0.0045	0.0045	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,1-Dichloroethene (1,1-DCE)	mg/kg	1.0	1.0	1.0	1.0	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
cis-1,2-Dichloroethene (cis-1,2-DCE)	mg/kg	0.19	0.19	0.19	0.19	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	**0.018**	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
trans-1,2-Dichloroethene (trans-1,2-DCE)	mg/kg	0.67	0.67	0.67	0.67	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041

Table 2. Summary of Soil Analytical Results

Parameter	Units	Screening Levels				Samples																
ID	–	ESL				IE-23	IE-23	IE-24	IE-24	IE-24	IE-25	IE-25	IE-25	IE-25	IE-26	IE-26	IE-26	IE-27	IE-27	IE-27	IE-29	IE-29	IE-29
Type	–	Res		C/I		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Depth	feet bgs	< 9.8	> 9.8	< 9.8	> 9.8	5.5	10.0	2.0	5.0	10.0	2.0	3.0	10.0	15.0	5.0	10.0	15.0	2.0	5.0	10.0	2.0	5.0	10.0
Date	mm/dd/yy	–	–	–	–	08/05/13	08/05/13	08/05/13	08/05/13	08/05/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/01/13	08/01/13	08/01/13
1,2-Dichloropropane	mg/kg	0.12	0.12	0.12	0.12	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,3-Dichloropropane	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
2,2-Dichloropropane	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,1-Dichloropropene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
cis-1,3-Dichloropropene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
trans-1,3-Dichloropropene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Ethylbenzene	mg/kg	3.3	3.3	3.3	3.3	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Hexachlorobutadiene	mg/kg	4.3	4.3	4.3	4.3	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
2-Hexanone (methyl butyl ketone)	mg/kg	none	none	none	none	<0.0079	<0.0092	<0.0078	<0.0080	<0.0080	<0.010	<0.0090	<0.0095	<0.0081	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
Methyl tert-butyl ether (MTBE)	mg/kg	0.023	0.023	0.023	0.023	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Methylene bromide	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Methylene chloride	mg/kg	0.077	0.077	0.077	0.077	<0.016	<0.018	<0.016	<0.016	<0.016	<0.020	<0.018	<0.019	<0.016	<0.018	<0.018	<0.014	<0.016	<0.017	<0.017	<0.019	<0.015	<0.016
4-Methyl-2-pentanone (methyl isobutyl ketone)	mg/kg	2.8	2.8	2.8	2.8	<0.0079	<0.0092	<0.0078	<0.0080	<0.0080	<0.010	<0.0090	<0.0095	<0.0081	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
Naphthalene	mg/kg	1.2	1.2	1.2	1.2	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
n-Propylbenzene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Styrene	mg/kg	1.5	1.5	1.5	1.5	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,1,1,2-Tetrachloroethane	mg/kg	0.0091	0.0091	0.0091	0.0091	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,1,2,2-Tetrachloroethane	mg/kg	0.018	0.018	0.018	0.018	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Tetrachloroethene (PCE)	mg/kg	0.55	0.55	0.70	0.70	**0.0040**	**0.0058**	<0.0039	<0.0040	<0.0040	**0.031**	**0.028**	<0.0048	<0.0040	<0.0045	**0.061**	<0.0036	<0.0041	**0.025**	**0.041**	**0.68**	**0.88**	**0.075**
Toluene	mg/kg	2.9	2.9	2.9	2.9	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2,3-Trichlorobenzene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2,4-Trichlorobenzene	mg/kg	1.5	1.5	1.5	1.5	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,1,1-Trichloroethane (1,1,1-TCA)	mg/kg	7.8	7.8	7.8	7.8	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,1,2-Trichloroethane (1,1,2-TCA)	mg/kg	0.070	0.070	0.070	0.070	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Trichloroethene (TCE)	mg/kg	0.46	0.46	0.46	0.46	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	**0.0087**	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Trichlorofluoromethane (Freon 11)	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2,3-Trichloropropane	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2,4-Trimethylbenzene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,3,5-Trimethylbenzene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Vinyl acetate	mg/kg	none	none	none	none	<0.039	<0.046	<0.039	<0.040	<0.040	<0.051	<0.045	<0.048	<0.040	<0.045	<0.045	<0.036	<0.041	<0.043	<0.041	<0.047	<0.037	<0.041
Vinyl chloride	mg/kg	0.032	0.032	0.085	0.085	<0.0079	<0.0092	<0.0078	<0.0080	<0.0080	<0.010	<0.0090	<0.0095	<0.0081	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
o-Xylene	mg/kg	none	none	none	none	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Xylenes	mg/kg	2.3	2.3	2.3	2.3	<0.0039	<0.0046	<0.0039	<0.0040	<0.0040	<0.0051	<0.0045	<0.0048	<0.0040	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041

Table 2. Summary of Soil Analytical Results

Notes:

(1) Detections are shown in **bold font**.

(2) Highlighted values indicate an exceedance over the screening level.

(3) Soil sampling results are compared to risk-based screening levels consisting of published Environmental Screening Levels (ESLs) for deep and shallow soils for residential and commercial/industrial land use where groundwater is a current or potential source of drinking water (Cal/EPA, May 2013).

Res	Residential
C/I	Commercial/Industrial
feet bgs	feet below ground surface
mg/kg	micrograms per kilogram

Table 3. Summary of Grab-Groundwater Analytical Results

Parameter	Units	Screening Levels		Samples																
Boring ID	–	ESL	MCL	IE-01	IE-02	IE-03	IE-04	IE-05	IE-06	IE-07	IE-09	IE-11	IE-12	IE-14	IE-18	IE-18	IE-21	IE-23	IE-24	IE-28	IE-29
Date	mm/dd/yy	–	–	08/02/13	08/05/13	08/05/13	08/05/13	08/02/13	08/02/13	08/02/13	08/07/13	08/01/13	08/01/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/02/13	08/01/13
Acetone	µg/L	1,500	none	<10	<10	<10	<10	<10	<10	<10	<10	<10	**11**	<10	<10	<10	<10	<10	<10	**14**	<10
Benzene	µg/L	1.0	1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromobenzene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	µg/L	100	80*	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.60**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	µg/L	100	80*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane (methyl bromide)	µg/L	8.7	none	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (methyl ethyl ketone)	µg/L	7,100	none	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
n-Butylbenzene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
tert-Butylbenzene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon disulfide	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.60**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	µg/L	0.50	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene	µg/L	25	70	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobromomethane (bromochloromethane)	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorodibromomethane (dibromochloromethane)	µg/L	100	80*	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.50**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane (ethyl chloride)	µg/L	16	none	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	µg/L	70	80*	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloromethane (methyl chloride)	µg/L	160	none	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Chlorotoluene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chlorotoluene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cumene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cymene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dibromo-3-chloropropane	µg/L	0.20	0.20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2-Dibromoethane (ethylene dibromide)	µg/L	0.050	0.050	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichlorobenzene	µg/L	10	600	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	µg/L	65	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	µg/L	5.0	5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane (Freon 12)	µg/L	none	none	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane (1,1-DCA)	µg/L	5.0	5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane (1,2-DCA)	µg/L	0.50	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene (1,1-DCE)	µg/L	6.0	6.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene (cis-1,2-DCE)	µg/L	6.0	6.0	<0.50	<0.50	<0.50	<0.50	<0.50	**1.4**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene (trans-1,2-DCE)	µg/L	10	10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Table 3. Summary of Grab-Groundwater Analytical Results

Parameter	Units	Screening Levels		Samples																
Boring ID	–	ESL	MCL	IE-01	IE-02	IE-03	IE-04	IE-05	IE-06	IE-07	IE-09	IE-11	IE-12	IE-14	IE-18	IE-18	IE-21	IE-23	IE-24	IE-28	IE-29
Date	mm/dd/yy	–	–	08/02/13	08/05/13	08/05/13	08/05/13	08/02/13	08/02/13	08/02/13	08/07/13	08/01/13	08/01/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/02/13	08/01/13
1,2-Dichloropropane	µg/L	5.0	5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichloropropane	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloropropene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene	µg/L	none	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	µg/L	none	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	µg/L	30	300	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hexachlorobutadiene	µg/L	0.86	none	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Hexanone (methyl butyl ketone)	µg/L	none	none	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methyl tert-butyl ether (MTBE)	µg/L	5.0	13	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene bromide	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene chloride	µg/L	5.0	5.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (methyl isobutyl ketone)	µg/L	120	none	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Naphthalene	µg/L	6.2	none	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
n-Propylbenzene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	µg/L	10	100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	µg/L	0.51	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	µg/L	1.0	1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene (PCE)	µg/L	5.0	5.0	<0.50	<0.50	<0.50	<0.50	**3.8**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**1.2**	<0.50	<0.50	<0.50	**31**
Toluene	µg/L	40	150	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2,3-Trichlorobenzene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2,4-Trichlorobenzene	µg/L	5.0	5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	62	200	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	5.0	5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene (TCE)	µg/L	5.0	5.0	<0.50	<0.50	<0.50	<0.50	<0.50	**0.60**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane (Freon 11)	µg/L	none	150	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-Trichloropropane	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	µg/L	none	1200	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-Trimethylbenzene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3,5-Trimethylbenzene	µg/L	none	none	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vinyl acetate	µg/L	none	none	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl chloride	µg/L	0.50	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
o-Xylene	µg/L	20	1750	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Xylenes	µg/L	20	1750	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Table 3. Summary of Grab-Groundwater Analytical Results

Notes:

* The MCL is not defined for individual trihalomethanes, but is instead defined as 80 µg/L for the total concentration of trihalomethanes consisting of bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

(1) Detections are shown in **bold font**.

(2) Highlighted results indicate an exceedance over the screening level.

(3) Grab-groundwater sampling results are compared to risk-based screening levels consisting of published Environmental Screening Levels (ESLs) for groundwater where groundwater is a current or potential source of drinking water (Cal/EPA, May 2013), and primary Maximum Contaminant Levels (MCLs) for drinking water (CDPH, January 2013).

µg/L micrograms per liter

Table 4. Summary of Soil Vapor Analytical Results

Parameter	Units	ESL	Samples								
Sample ID	–	–	SV-01	SV-02	SV-03	SV-04	SV-05	SV-06	SV-07	SV-08	SV-08 DUP
Boring ID	–	–	IE-08	IE-29	IE-11	IE-26	IE-05	IE-25	IE-14	IE-27	IE-27
Date	mm/dd/yy	–	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13
Acetone	µg/m3	140,000,000	**9.9**	<5,200	**130**	**39**	**320**	<580	**460**	<55	<51
Acrolein	µg/m3	none	<9.3	<5,100	<9.3	<9.6	<57	<560	<9.3	<53	<50
Benzene	µg/m3	420	<3.2	<1,800	**52**	**84**	**48**	<190	**68**	**48**	**45**
Benzyl chloride (alpha chlorotoluene)	µg/m3	none	<5.3	<2,900	<5.2	<5.4	<32	<320	<5.3	<30	<28
Bromodichloromethane	µg/m3	330	<6.8	<3,700	<6.8	<7.0	<41	<410	<6.8	<39	<36
Bromoform	µg/m3	none	<10	<5,700	<10	<11	<64	<630	<10	<60	<56
Bromomethane (methyl bromide)	µg/m3	22,000	<3.9	<2,100	<3.9	<4.1	<24	<240	<3.9	<23	<21
1,3-Butadiene	µg/m3	none	<2.2	<1,200	**6.8**	<2.3	<14	<130	<2.2	<13	<12
2-Butanone (methyl ethyl ketone)	µg/m3	22,000,000	<3.0	<1,600	**69**	**39**	**29**	<180	**46**	<17	<16
Carbon disulfide	µg/m3	none	<3.2	<1,700	**7.0**	**12**	<19	<190	**5.6**	**190**	**170**
Carbon tetrachloride	µg/m3	290	<6.4	<3,500	<6.4	<6.6	<39	<380	<6.4	<37	<34
Chlorobenzene	µg/m3	4,400,000	<4.7	<2,500	<4.6	<4.8	<28	<280	<4.7	<27	<25
Chlorodibromomethane (dibromochloromethane)	µg/m3	none	<8.6	<4,700	<8.6	<8.9	<53	<520	<8.6	<50	<46
Chloroethane (ethyl chloride)	µg/m3	130,000,000	<2.7	<1,500	<2.7	<2.8	<16	<160	<2.7	<15	<14
Chloroform	µg/m3	2,300	<5.0	<2,700	**9.4**	<5.1	<30	<300	<5.0	<28	<26
Chloromethane (methyl chloride)	µg/m3	390,000	<2.1	<1,100	<2.1	<2.2	<13	<130	<2.1	<12	<11
Cyclohexane	µg/m3	none	**3.6**	<1,900	**91**	**100**	**120**	<210	**63**	**550**	**510**
1,2-Dibromoethane (ethylene dibromide)	µg/m3	170	<7.8	<4,200	<7.8	<8.1	<47	<470	<7.8	<45	<41
1,2-Dichlorobenzene	µg/m3	880,000	<6.1	<3,300	<6.1	<6.3	<37	<370	<6.1	<35	<32
1,3-Dichlorobenzene	µg/m3	none	<6.1	<3,300	<6.1	<6.3	<37	<370	<6.1	<35	<32
1,4-Dichlorobenzene	µg/m3	1,100	<6.1	<3,300	<6.1	<6.3	<37	<370	<6.1	<35	<32
Dichlorodifluoromethane (Freon 12)	µg/m3	none	<5.0	<2,700	<5.0	<5.2	<31	<300	<5.0	<29	<27
1,1-Dichloroethane (1,1-DCA)	µg/m3	7,700	<4.1	<2,200	<4.1	<4.2	<25	<250	<4.1	<24	<22
1,2-Dichloroethane (1,2-DCA)	µg/m3	580	<4.1	<2,200	<4.1	<4.2	<25	<250	<4.1	<24	<22
1,1-Dichloroethene (1,1-DCE)	µg/m3	880,000	<4.0	<2,200	<4.0	<4.2	<25	<240	<4.0	<23	<21
cis-1,2-Dichloroethene (cis-1,2-DCE)	µg/m3	none	<4.0	<2,200	<4.0	<4.2	<25	<240	<4.0	<23	<21
trans-1,2-Dichloroethene (trans-1,2-DCE)	µg/m3	260,000	<4.0	<2,200	<4.0	<4.2	<25	<240	<4.0	<23	<21
1,2-Dichloropropane	µg/m3	1,200	<4.7	<2,600	<4.7	<4.9	<29	<280	<4.7	<27	<25
cis-1,3-Dichloropropene	µg/m3	770	<4.6	<2,500	<4.6	<4.8	<28	<280	<4.6	<26	<25
trans-1,3-Dichloropropene	µg/m3	770	<4.6	<2,500	<4.6	<4.8	<28	<280	<4.6	<26	<25

Table 4. Summary of Soil Vapor Analytical Results

Parameter	Units	ESL	Samples								
Sample ID	–	–	SV-01	SV-02	SV-03	SV-04	SV-05	SV-06	SV-07	SV-08	SV-08 DUP
Boring ID	–	–	IE-08	IE-29	IE-11	IE-26	IE-05	IE-25	IE-14	IE-27	IE-27
Date	mm/dd/yy	–	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13	08/07/13
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	µg/m3	none	<7.1	<3,900	<7.1	<7.3	<43	<430	<7.1	<41	<38
Ethyl acetate	µg/m3	none	<3.7	<2,000	<3.6	<3.8	<22	<220	<3.7	<21	<19
Ethylbenzene	µg/m3	4,900	<4.4	<2,400	**14**	**18**	<27	<260	**15**	**120**	**110**
4-Ethyltoluene	µg/m3	none	<5.0	<2,700	**6.5**	**8.0**	<30	<300	**7.0**	**50**	**41**
Heptane	µg/m3	none	<4.2	<2,300	**54**	**87**	**66**	<250	**69**	**25**	**25**
Hexachlorobutadiene	µg/m3	none	<11	<5,900	<11	<11	<66	<650	<11	<62	<58
Hexane	µg/m3	none	<3.6	<1,900	**29**	**100**	**29**	<210	**43**	<21	<19
2-Hexanone (methyl butyl ketone)	µg/m3	none	<4.2	<2,300	<4.1	<4.3	<25	<250	<4.2	<24	<22
Methyl tert-butyl ether (MTBE)	µg/m3	47,000	<3.7	<2,000	<3.6	<3.8	<22	<220	<3.7	<21	<19
Methylene chloride	µg/m3	26,000	<3.5	<1,900	<3.5	<3.6	<21	<210	<3.5	<20	<19
4-Methyl-2-pentanone (methyl isobutyl ketone)	µg/m3	13,000,000	<4.2	<2,300	**37**	**41**	<25	<250	**12**	<24	<22
Naphthalene	µg/m3	360	<21	<12,000	<21	<22	<130	<1,300	<21	<120	<110
Styrene	µg/m3	3,900,000	<4.3	<2,400	<4.3	<4.5	<26	<260	<4.3	<25	<23
1,1,2,2-Tetrachloroethane	µg/m3	210	<7.0	<3,800	<6.9	<7.2	<42	<420	<7.0	<40	<37
Tetrachloroethene (PCE)	µg/m3	2,100	**290**	**610,000**	**31**	**1,200**	**7,300**	**51,000**	**340**	**5,800**	**5,300**
Tetrahydrofuran	µg/m3	none	**3.3**	<1,600	<3.0	**4.3**	**560**	<180	<3.0	<17	<16
Toluene	µg/m3	1,300,000	**4.3**	<2,100	**140**	**170**	**290**	<230	**170**	**570**	**530**
1,2,4-Trichlorobenzene	µg/m3	18,000	<7.5	<4,100	<7.5	<7.8	<46	<450	<7.5	<43	<40
1,1,1-Trichloroethane (1,1,1-TCA)	µg/m3	22,000,000	<5.5	<3,000	<5.5	<5.7	<34	<330	<5.5	<32	<29
1,1,2-Trichloroethane (1,1,2-TCA)	µg/m3	770	<5.5	<3,000	<5.5	<5.7	<34	<330	<5.5	<32	<29
Trichloroethene (TCE)	µg/m3	3,000	<5.5	<3,000	<5.4	**10**	<33	**980**	<5.5	<31	<29
Trichlorofluoromethane (Freon 11)	µg/m3	none	<5.7	<3,100	<5.7	<5.9	<35	<340	<5.7	<33	<30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	µg/m3	none	<7.8	<4,200	<7.7	<8.0	<47	<470	<7.8	<45	<41
1,2,4-Trimethylbenzene	µg/m3	none	<5.0	<2,700	**22**	**23**	<30	<300	**23**	**120**	**110**
1,3,5-Trimethylbenzene	µg/m3	none	<5.0	<2,700	**5.0**	**6.8**	<30	<300	**5.4**	<29	<27
Vinyl acetate	µg/m3	none	<3.6	<1,900	<3.6	<3.7	<22	<210	<3.6	<20	<19
Vinyl chloride	µg/m3	160	<2.6	<1,400	<2.6	<2.7	<16	<160	<2.6	<15	<14
o-Xylene	µg/m3	440,000	<4.4	<2,400	**17**	**21**	**27**	<260	**19**	**130**	**120**
m-,p-Xylene	µg/m3	440,000	**4.7**	<2,400	**53**	**69**	**95**	<260	**59**	**460**	**400**

Table 4. Summary of Soil Vapor Analytical Results

Notes:

(1) Soil gas sampling results are reported in micrograms per cubic meter ($\mu g/m^3$). Detections are shown in **bold font**.

(2) Highlighted results indicate an exceedance over the screening level.

(3) Soil gas sampling results are compared to published risk-based screening levels consisting of:

- Environmental Screening Levels (ESLs) for shallow soil gas, commercial/industrial land use (Cal/EPA, 2013).

Exceedances are highlighted with yellow shading.

Table 5. Summary of Sub-Slab Analytical Results

Parameter	Units	ESL	Samples		
Sample ID	–	–	SS-01	SS-02	SS-03
Boring ID	–	–	IE-08	IE-29	IE-11
Date	mm/dd/yy	–	08/02/13	08/02/13	08/02/13
Acetone	µg/m3	2,800,000	**27**	<350	**21**
Acrolein	µg/m3	none	<8.2	<330	<8.5
Benzene	µg/m3	8.40	**6.5**	**340**	**5.3**
Benzyl chloride (alpha chlorotoluene)	µg/m3	none	<4.6	<190	<4.8
Bromodichloromethane	µg/m3	6.60	<6.0	<240	<6.2
Bromoform	µg/m3	220	<9.2	<380	<9.6
Bromomethane (methyl bromide)	µg/m3	440	<3.5	<140	<3.6
1,3-Butadiene	µg/m3	none	<2.0	**260**	<2.1
2-Butanone (methyl ethyl ketone)	µg/m3	440,000	**3.9**	<110	<2.7
Carbon disulfide	µg/m3	none	<2.8	<110	<2.9
Carbon tetrachloride	µg/m3	5.80	<5.6	<230	<5.9
Chlorobenzene	µg/m3	88,000	<4.1	<170	<4.3
Chlorodibromomethane (dibromochloromethane)	µg/m3	none	<7.6	<310	<7.9
Chloroethane (ethyl chloride)	µg/m3	2,600,000	<2.3	<96	<2.5
Chloroform	µg/m3	46.0	<4.3	<180	<4.5
Chloromethane (methyl chloride)	µg/m3	7,800	<1.8	<75	<1.9
Cyclohexane	µg/m3	none	<3.1	<130	<3.2
1,2-Dibromoethane (ethylene dibromide)	µg/m3	3.40	<6.8	<280	<7.1
1,2-Dichlorobenzene	µg/m3	17,600	<5.4	<220	<5.6
1,3-Dichlorobenzene	µg/m3	none	<5.4	<220	<5.6
1,4-Dichlorobenzene	µg/m3	22.0	<5.4	<220	<5.6
Dichlorodifluoromethane (Freon 12)	µg/m3	none	<4.4	<180	<4.6
1,1-Dichloroethane (1,1-DCA)	µg/m3	154	<3.6	<150	<3.8
1,2-Dichloroethane (1,2-DCA)	µg/m3	11.6	<3.6	<150	<3.8
1,1-Dichloroethene (1,1-DCE)	µg/m3	17,600	<3.5	<140	<3.7
cis-1,2-Dichloroethene (cis-1,2-DCE)	µg/m3	none	<3.5	<140	<3.7
trans-1,2-Dichloroethene (trans-1,2-DCE)	µg/m3	5,200	<3.5	<140	<3.7
1,2-Dichloropropane	µg/m3	24.0	<4.1	<170	<4.3
cis-1,3-Dichloropropene	µg/m3	none	<4.0	<170	<4.2
trans-1,3-Dichloropropene	µg/m3	none	<4.0	<170	<4.2
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	µg/m3	none	<6.2	<250	<6.5

Table 5. Summary of Sub-Slab Analytical Results

Parameter	Units	ESL	Samples		
Sample ID	–	–	SS-01	SS-02	SS-03
Boring ID	–	–	IE-08	IE-29	IE-11
Date	mm/dd/yy	–	08/02/13	08/02/13	08/02/13
Ethyl acetate	µg/m3	none	<3.2	<130	<3.4
Ethylbenzene	µg/m3	98.0	<3.9	<160	<4.0
4-Ethyltoluene	µg/m3	none	<4.4	<180	<4.6
Heptane	µg/m3	none	<3.6	<150	<3.8
Hexachlorobutadiene	µg/m3	none	<9.5	<390	<9.9
Hexane	µg/m3	none	<3.1	<130	<3.3
2-Hexanone (methyl butyl ketone)	µg/m3	none	<3.6	<150	<3.8
Methyl tert-butyl ether (MTBE)	µg/m3	940	<3.2	<130	<3.4
Methylene chloride	µg/m3	520	<3.1	<130	<3.2
4-Methyl-2-pentanone (methyl isobutyl ketone)	µg/m3	260,000	<3.6	<150	<3.8
Naphthalene	µg/m3	7.20	<19	<760	<20
Styrene	µg/m3	78,000	<3.8	<160	<4.0
1,1,2,2-Tetrachloroethane	µg/m3	4.20	<6.1	<250	<6.4
Tetrachloroethene (PCE)	µg/m3	42.0	**8.6**	**24,000**	**17**
Tetrahydrofuran	µg/m3	none	<2.6	<110	<2.7
Toluene	µg/m3	26,000	**4.6**	<140	<3.5
1,2,4-Trichlorobenzene	µg/m3	360	<6.6	<270	<6.9
1,1,1-Trichloroethane (1,1,1-TCA)	µg/m3	440,000	<4.9	<200	<5.1
1,1,2-Trichloroethane (1,1,2-TCA)	µg/m3	15.4	<4.9	<200	<5.1
Trichloroethene (TCE)	µg/m3	60.0	<4.8	<200	<5.0
Trichlorofluoromethane (Freon 11)	µg/m3	none	<5.0	<200	<5.2
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	µg/m3	none	<6.8	<280	<7.1
1,2,4-Trimethylbenzene	µg/m3	none	<4.4	<180	<4.6
1,3,5-Trimethylbenzene	µg/m3	none	<4.4	<180	<4.6
Vinyl acetate	µg/m3	none	<3.1	<130	<3.3
Vinyl chloride	µg/m3	3.20	<2.3	<93	<2.4
o-Xylene	µg/m3	8,800	<3.9	<160	<4.0
Xylenes	µg/m3	8,800	<3.9	<160	<4.0

Table 5. Summary of Sub-Slab Analytical Results

Notes:

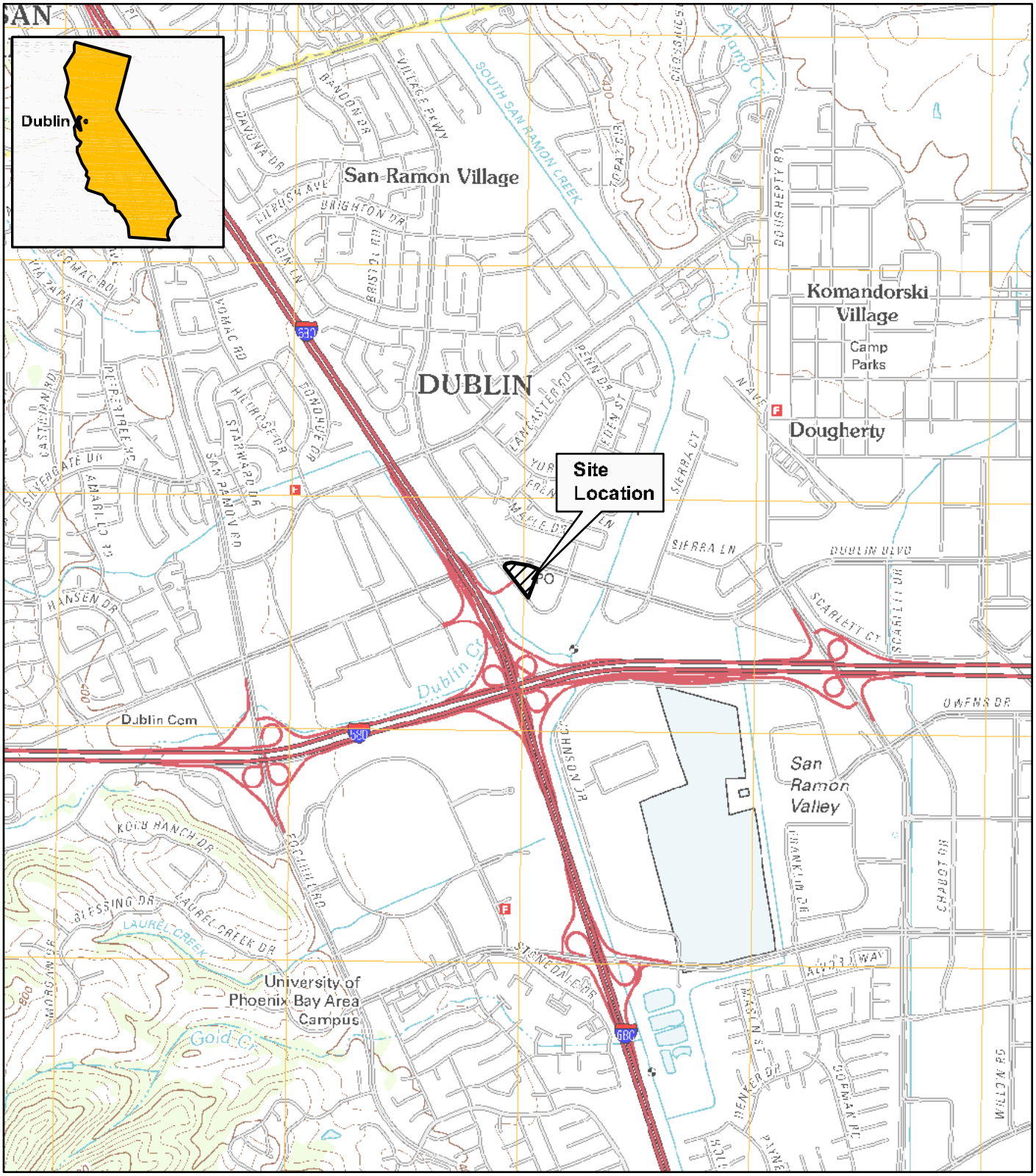
(1) Detections are shown in **bold font**.

(2) Highlighted results indicate an exceedance over the screening level.

(3) Sub-Slab sampling results are compared to risk-based screening levels consisting of published Environmental Screening Levels (ESLs) for ambient and indoor air screening with commercial/industrial screening (Cal/EPA, May 2013). The screening levels presented are divided by an attenuation factor of 0.05 for existing commercial buildings with samples collected sub-slab, as per the Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrustion to Indoor Air (DTSC, October 2011).

µg/m3 micrograms per cubic meter

Figures



Source: USGS 7.5' Quadrangle,Dublin, California, 2012

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Site Location Map
7100 - 7120 Dublin Boulevard
Dublin, California

Figure
1

Drafter: EC | Date: 06/13/13 | Contract Number: 13-945A

EXPLANATION:

- Approximate Site boundary
- B1 — Previous soil sample location (Basics Environmental, 2012)
- SG1 — Previous soil gas sample location (Basics Environmental, 2012)
- B4 — Previous grab-groundwater sample location (Basics Environmental, 2012)
- Soil sample location
- Soil gas sample location
- Subslab soil gas and soil gas sampling location
- Grab-groundwater sample location
- Location of sanitary sewer line (approximate depth of sanitary sewer line noted)
- Presumed groundwater flow direction

Former Dry Cleaning Machine

- Approximate location of former PCE dry cleaning machine based on Appendix E of the Phase I report (Basics Environmental, 2012)
- Approximate location of former petroleum-based dry cleaning machine
- Approximate location of former PCE-based dry cleaning machine

N

0 40

SCALE IN FEET
(APPROXIMATE)

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Site Plan with Soil Boring and Sample Locations
7100 - 7120 Dublin Boulevard
Dublin, California

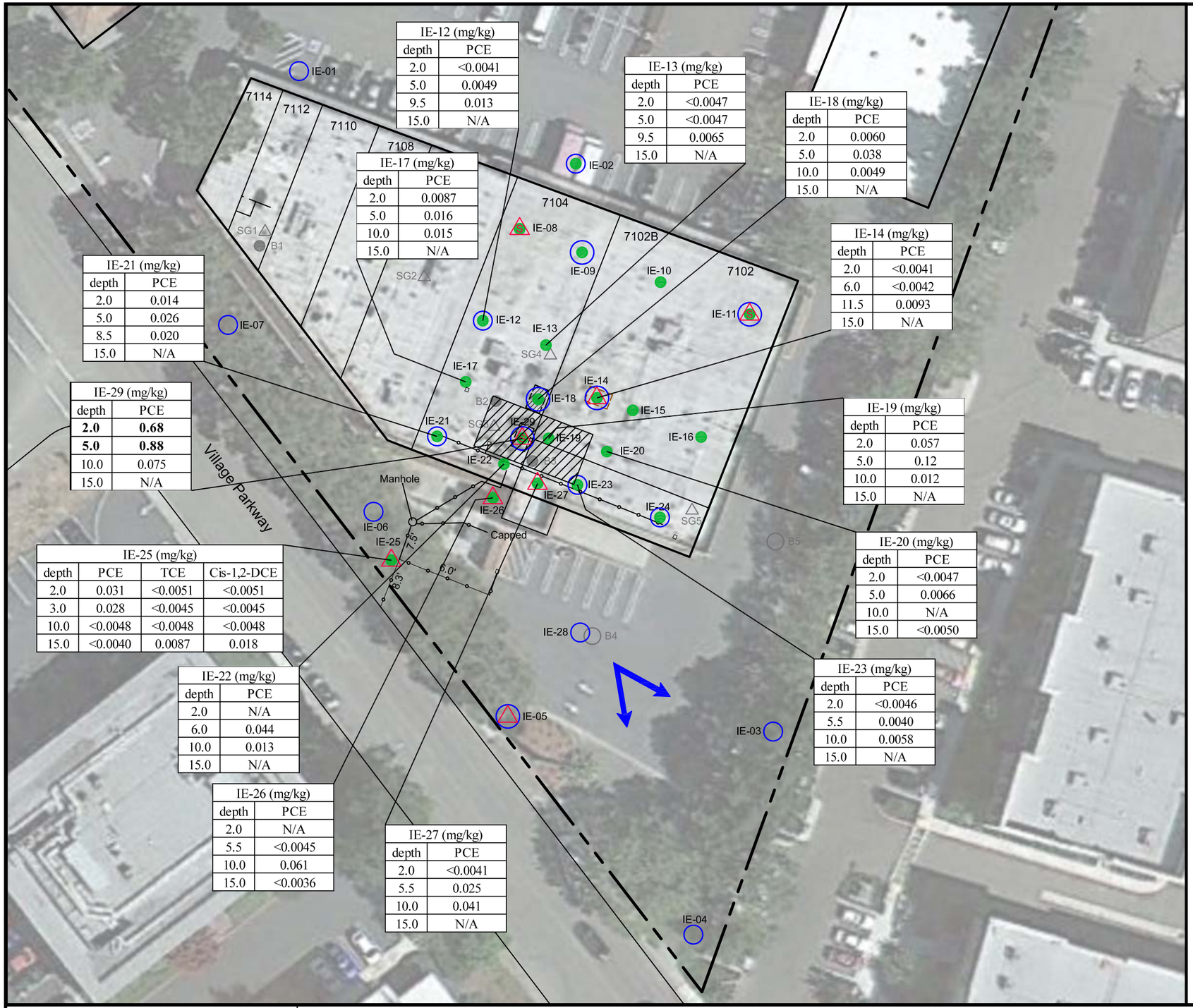
Figure
2

Drafter: EC

Date: 08/27/13

Contract Number: 13-945A

I:\CAD\13\13-945-A\boring locations.dwg



IE-12 (mg/kg)	
depth	PCE
2.0	<0.0041
5.0	0.0049
9.5	0.013
15.0	N/A

IE-13 (mg/kg)	
depth	PCE
2.0	<0.0047
5.0	<0.0047
9.5	0.0065
15.0	N/A

IE-18 (mg/kg)	
depth	PCE
2.0	0.0060
5.0	0.038
10.0	0.0049
15.0	N/A

IE-17 (mg/kg)	
depth	PCE
2.0	0.0087
5.0	0.016
10.0	0.015
15.0	N/A

IE-14 (mg/kg)	
depth	PCE
2.0	<0.0041
6.0	<0.0042
11.5	0.0093
15.0	N/A

IE-21 (mg/kg)	
depth	PCE
2.0	0.014
5.0	0.026
8.5	0.020
15.0	N/A

IE-29 (mg/kg)	
depth	PCE
2.0	**0.68**
5.0	**0.88**
10.0	0.075
15.0	N/A

IE-19 (mg/kg)	
depth	PCE
2.0	0.057
5.0	0.12
10.0	0.012
15.0	N/A

IE-25 (mg/kg)			
depth	PCE	TCE	Cis-1,2-DCE
2.0	0.031	<0.0051	<0.0051
3.0	0.028	<0.0045	<0.0045
10.0	<0.0048	<0.0048	<0.0048
15.0	<0.0040	0.0087	0.018

IE-20 (mg/kg)	
depth	PCE
2.0	<0.0047
5.0	0.0066
10.0	N/A
15.0	<0.0050

IE-22 (mg/kg)	
depth	PCE
2.0	N/A
6.0	0.044
10.0	0.013
15.0	N/A

IE-23 (mg/kg)	
depth	PCE
2.0	<0.0046
5.5	0.0040
10.0	0.0058
15.0	N/A

IE-26 (mg/kg)	
depth	PCE
2.0	N/A
5.5	<0.0045
10.0	0.061
15.0	<0.0036

IE-27 (mg/kg)	
depth	PCE
2.0	<0.0041
5.5	0.025
10.0	0.041
15.0	N/A

EXPLANATION:

- Approximate Site boundary
- B1 — Previous soil sample location (Basics Environmental, 2012)
- SG1 — Previous soil gas sample location (Basics Environmental, 2012)
- B4 — Previous grab-groundwater sample location (Basics Environmental, 2012)
- Soil sample location
- Soil gas sample location
- Subslab soil gas and soil gas sampling location
- Grab-groundwater sample location
- Location of sanitary sewer line (approximate depth of sanitary sewer line noted)
- Presumed groundwater flow direction

mg/kg	milligrams per kilogram
depth	feet below ground surface
PCE	Tetrachloroethene
TCE	Trichloroethene
Cis-1,2-DCE	Cis-1,2-Dichloroethene
NA	Sample results are unavailable either because the sample was not collected, or the sample was collected and put on hold.

Results for TCE and Cis-1,2-DCE are presented for IE-25. Samples for the remainder of the locations yielded non-detect TCE and Cis-1,2-DCE values. Results of anylytes other than PCE, TCE, and Cis-1,2-DCE were not included in this summary. The remainder of the soil sample locations not presented in this figure yielded non-detect results for PCE, TCE, and Cis-1,2-DCE, or samples were collected and put on hold.

Former Dry Cleaning Machine

- Approximate location of former PCE dry cleaning machine based on Appendix E of the Phase I report (Basics Environmental, 2012)
- Approximate location of former petroleum-based dry cleaning machine
- Approximate location of former PCE-based dry cleaning machine
- Approximate extent of imported soil

N

0 40

SCALE IN FEET (APPROXIMATE)

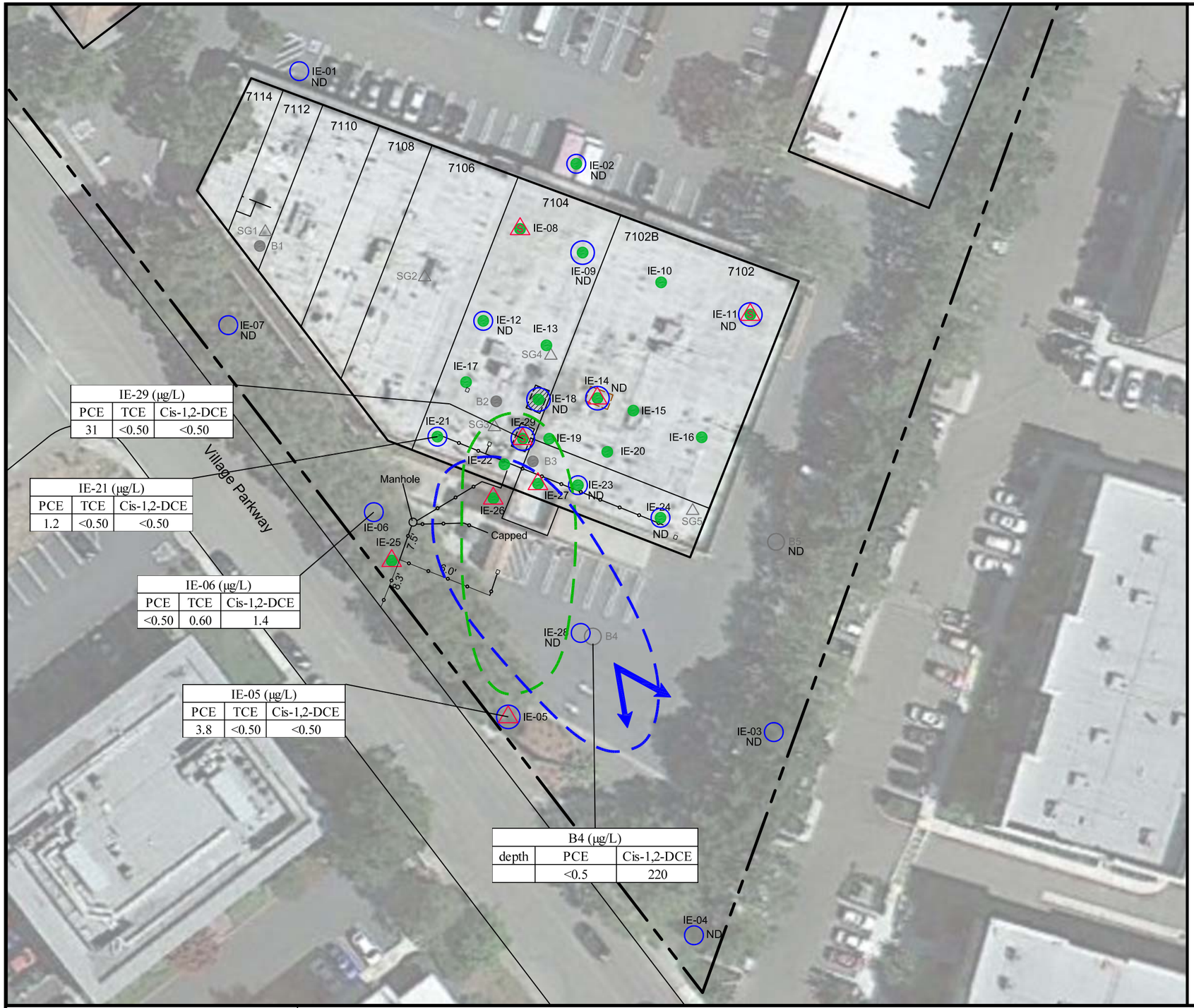
IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Concentrations of VOCs in Soil
7100 - 7120 Dublin Boulevard
Dublin, California

Figure **3**

Drafter: EC Date: 08/27/13 Contract Number: 13-945A

I:\CAD\13\13-945-A\boring locations.dwg



EXPLANATION:

- Approximate Site boundary
- B1 — Previous soil sample location (Basics Environmental, 2012)
- SG1 — Previous soil gas sample location (Basics Environmental, 2012)
- B4 — Previous grab-groundwater sample location (Basics Environmental, 2012)
- Soil sample location
- Soil gas sample location
- Subslab soil gas and soil gas sampling location
- Grab-groundwater sample location
- Location of sanitary sewer line (approximate depth of sanitary sewer line noted)
- Presumed groundwater flow direction

µg/L	micrograms per liter
PCE	Tetrachloroethene
TCE	Trichloroethene
Cis-1,2-DCE	Cis-1,2-Dichloroethene
ND	Not detected

Results of anylytes other than PCE, TCE, and Cis-1,2-DCE were not included in this summary. The remainder of the grab-groundwater locations not presented in this figure yielded non-detect results for PCE, Cis-1,2-DCE, and TCE.

IE-28 was a deep groundwater sample where groundwater was collected from 48.5-52 feet bgs

B4 was sampled by Basics Environmental in 2012.

Former Dry Cleaning Machine

- Approximate location of former PCE dry cleaning machine based on Appendix E of the Phase I report (Basics Environmental, 2012)
- Approximate location of former petroleum-based dry cleaning machine
- Approximate location of former PCE-based dry cleaning machine
- Approximate extent of PCE mapped to 5 µg/L
- Approximate extent of DCE mapped to 6 µg/L

N

0 40

SCALE IN FEET
(APPROXIMATE)

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Concentrations of VOCs in Groundwater
7100 - 7120 Dublin Boulevard
Dublin, California

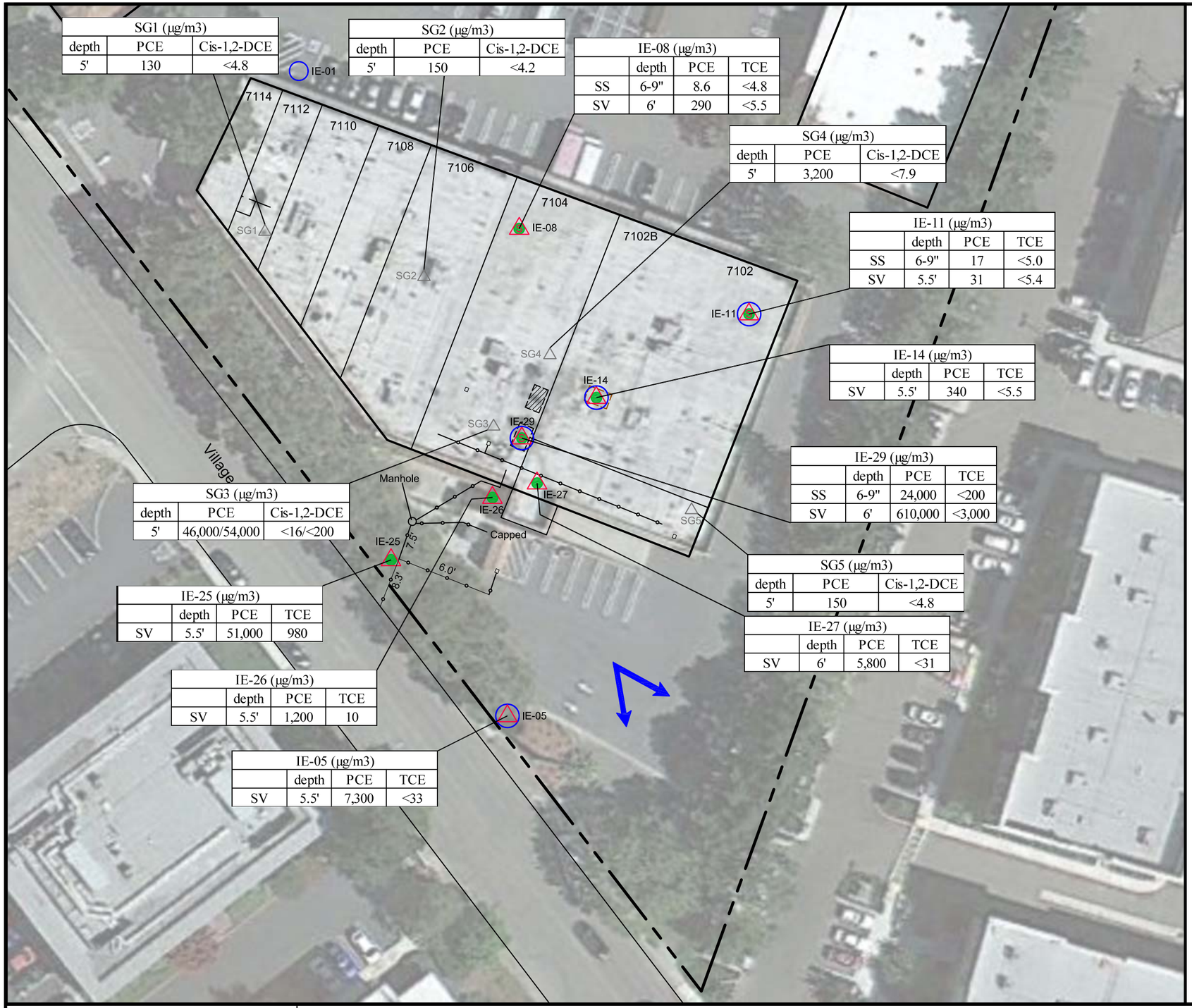
Figure
4

Drafter: EC

Date: 08/28/13

Contract Number: 13-945A

I:\CAD\13\13-945-AVboring locations.dwg



EXPLANATION:

- Approximate Site boundary
- B1 — Previous soil sample location (Basics Environmental, 2012)
- SG1 — Previous soil gas sample location (Basics Environmental, 2012)
- B4 — Previous grab-groundwater sample location (Basics Environmental, 2012)
- Soil sample location
- Soil gas sample location
- Subslab soil gas and soil gas sampling location
- Grab-groundwater sample location
- Location of sanitary sewer line (approximate depth of sanitary sewer line noted)
- Presumed groundwater flow direction

µg/m³ micrograms per cubic meter
depth distance below ground surface, in feet (') or inches (") as indicated.
PCE Tetrachloroethene
Cis-1,2-DCE Cis-1,2-Dichloroethene

Results of anylytes other than PCE and, DCE were not included in this summary. The remainder of the Soil vapor locations not presented in this figure yielded non-detect results for PCE and TCE.

Former Dry Cleaning Machine

- Approximate location of former PCE dry cleaning machine based on Appendix E of the Phase I report (Basics Environmental, 2012)
- Approximate location of former petroleum-based dry cleaning machine
- Approximate location of former PCE-based dry cleaning machine

N

0 40

SCALE IN FEET (APPROXIMATE)

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax: (510) 834-4199

Concentrations of VOCs in Soil Vapor
7100 - 7120 Dublin Boulevard
Dublin, California

Figure **5**

Drafter: EC Date: 08/27/13 Contract Number: 13-945A

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Appendix A
Historical Soil, Groundwater and
Soil Gas Analytical Data

Table 1
Summary of Soil Sample Analytical Results

Sample ID	Sample Date	Sample Depth (Feet)	TPH-G	TPH-SS	TPH-K	TPH-D	TPH-BO	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Other VOCs By EPA Method 8260B
B1-4.5	10/23/2012	4.5	ND<1.0	ND<1.0	1.1	2.1, a	ND<5.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	All ND
B2-4.5	10/23/2012	4.5	ND<1.0	ND<1.0	ND<1.0	1.4, a	ND<5.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	All ND, except PCE = 0.011
B3-4.5	10/23/2012	4.5	ND<1.0	ND<1.0	ND<1.0	1.1, a	ND<5.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	All ND, except PCE = 0.012
ESL			*83*	*83*	*83*	*83*	*2,500*	*2,500*	*0.023*	*0.044*	*2.9*	*3.3*	*2.3*	*PCE = 0.70*

Notes:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent.
TPH-K = Total Petroleum Hydrocarbons as Kerosene.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
MTBE = Methyl-tert-butyl ether
VOCs = Volatile Organic Compounds.
PCE = Tetrachloroethene.
ND = Not Detected.
a = Laboratory Analytical Note: diesel-range compounds are significant; no recognizable pattern.
ESL= Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table A– Shallow Soils, Groundwater is a current or potential source of drinking water, Commercial/ Industrial Land Use.
Results in bold exceed their respective ESL Table A values.
Results and ESLs in milligrams per kilogram (mg/kg) unless otherwise indicated.

Table 2
Summary of Groundwater Sample Analytical Results

Sample ID	Sample Date	TPH-G	TPH-SS	TPH-K	TPH-D	TPH-BO	TPH-MO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Other VOCs By EPA Method 8260B
B4-W	10/23/2012	ND<50	ND<50	ND<50	ND<50	**310, a**	**280, a**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	All ND, except cis-1,2-DCE = **220**
B5-W	10/23/2012	ND<50	ND<50	ND<50	ND<50	**270, a**	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	All ND
ESL		*100*	*100*	*100*	*100*	*100*	*100*	*5.0*	*1.0*	*40*	*30*	*20*	*cis-1,2-DCE = 6.0*

Notes:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-SS = Total Petroleum Hydrocarbons as Stoddard solvent.
TPH-K = Total Petroleum Hydrocarbons as Kerosene.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
MTBE = Methyl-tert-butyl ether
VOCs = Volatile Organic Compounds.
cis-1,2-DCE = cis-1,2-Dichloroethene.
ND = Not Detected.
a = Laboratory Analytical Note: oil-range compounds are significant.
ESL= Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), updated May 2008, from Table A– Shallow Soils, Groundwater is a current or potential source of drinking water.
Results in bold exceed their respective ESL Table A values.
Results and ESLs in micrograms per Liter (ug/L) unless otherwise indicated.

Table 3A
Summary of Soil Gas Sample Analytical Results - VOCs

Compound	Sample ID	SG1	SG2	SG3	SG3-DUP	SG4	SG5	ESL
Sample Collection Date		10/22/2012	10/22/2012	10/22/2012	10/22/2012	10/22/2012	10/22/2012	
Sample Collection Depth (feet)		5	5	5	5	5	5	
Tetrachloroethene (PCE)		130	150	**46,000**	**54,000**	**3,200**	150	1,400
Benzene		35	18	ND<130	ND<160	ND<6.3	5.3	280
Toluene		160	85	ND<160	ND<190	34	47	180,000
Ethylbenzene		29	15	ND<180	ND<220	11	17	3,300
m, p-Xylenes		100	60	ND<180	ND<220	45	78	58,000 (total xylenes)
o-Xylene		32	20	ND<180	ND<220	14	26	
1,3-Butadiene		8.0	ND<2.4	ND<91	ND<110	ND<4.4	ND<2.7	None
2-Butanone (Methyl Ethyl Ketone)		19	14	ND<480	ND<600	ND<23	21	2,900,000
Ethanol		10	14	ND<310	ND<380	ND<15	ND<9.1	None
Acetone		57	46	ND<390	ND<480	ND<47	69	1,800,000
Hexane		59	12	ND<140	ND<180	ND<7.0	5.2	None
Cyclohexane		14	5.0	ND<140	ND<170	ND<6.8	ND<4.2	None
2,2,4-Trimethylpentane		14	7.4	ND<190	ND<240	ND<9.3	ND<5.6	None
Heptane		59	20	ND<170	ND<210	ND<8.1	6.1	None
4-Methyl-2-pentanone (Methyl Isobutyl Ketone)		12	11	ND<170	ND<210	9.1	9.2	1,800,000
4-Ethyltoluene		20	15	ND<200	ND<250	17	ND<5.9	None
1,3,5-Trimethylbenzene		6.2	ND<5.2	ND<200	ND<250	ND<9.8	ND<5.9	None
1,2,4-Trimethylbenzene		19	14	ND<200	ND<250	15	28	None
Carbon Disulfide		ND<15	14	ND<130	ND<160	ND<25	ND<15	None
Propylbenzene		ND<5.9	ND<5.2	ND<200	ND<250	ND<9.8	6.0	None
1,1 - Difluoroethane (tracer gas)		ND<13	ND<12	ND<440	660	ND<21	ND<13	None

Notes:

ND = Not Detected.

ESL = Environmental Screening Level, developed by San Francisco Bay - Regional Water Quality Control Board (SF-RWQCB) updated May 2008, from Table E – Indoor Air and Soil Gas (Vapor Intrusion Concerns) Shallow Soil Gas Screening Levels for Commercial/Industrial Land Use.

Results in bold exceed their respective ESL Table E Shallow Soil Gas values.

Results and ESLs in micrograms per cubic meter ($\mu g/m^3$), unless otherwise noted.

Table 3B

Summary of Soil Gas Sample Shroud Tracer Gas Analytical Results - 1,1-Difluoroethane

Sample ID	Sample Date	Sample Depth (feet)	1,1-Difluoroethane, d
SG2 (Shroud)	10/22/2012	NA	9,800,000
SG4 (Shroud)	10/22/2012	NA	10,000,000
SG5 (Shroud)	10/22/2012	NA	12,000,000
ESL_1			None
ESL_2			None

NOTES:

d = 1,1-Difluoroethane used in field as leak detector for samples collected on 10/22/2012.

ESL_1 = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board(SF-RWQCB), from Table E – Indoor Air and Soil Gas (Vapor Intrusion Concerns) Control Board Shallow Soil Gas Screening Levels for Residential Land Use.

ESL_2 = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB), from Table E – Indoor Air and Soil Gas (Vapor Intrusion Concerns) Shallow Soil Gas Screening Levels for Commercial/Industrial Land Use.

Results in micrograms per cubic meter (µg/m3), unless otherwise indicated.

Appendix B

Zone 7 Water Agency Drilling Permit

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306
E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 7100-7120 Dublin Blvd
Dublin, CA 94568

Coordinates Source Google Earth ft. Accuracy∀ ____ ft.
LAT: 37° 42' 19" N ft. LONG: 121° 55' 22" ft.
APN 941-1401-22

CLIENT
Name Ready Family Partnership c/o Shelter Bay Retail Group
Address 655 Redwood Highway #177 Phone 415.388.4460
City Mill Valley, CA Zip 94941

APPLICANT
Name Craig Almeida / Lois Environmental
Email craig@lrgsenv.com Fax 510 834 4199
Address 1438 Webster St #302 Phone 510 834 4747 x29
City Oakland, CA Zip 94612

TYPE OF PROJECT:
Well Construction ___ Geotechnical Investigation ___
Well Destruction ___ Contamination Investigation X
Cathodic Protection ___ Other ____________ ___

PROPOSED WELL USE:
Domestic ___ Irrigation ___
Municipal ___ Remediation ___
Industrial ___ Groundwater Monitoring ___
Dewatering ___ Other Temp Borings X

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Hollow Stem Auger ___
Cable Tool ___ Direct Push X Other ________ ___

DRILLING COMPANY Environmental Control Associates

DRILLER'S LICENSE NO. 695970

WELL SPECIFICATIONS:
Drill Hole Diameter 2 in. Maximum
Casing Diameter — in. Depth ~20' ft.
Surface Seal Depth — ft. Number 28

SOIL BORINGS:
Number of Borings 28 Maximum
Hole Diameter 2 in. Depth 20' ft. *1 to 50'

ESTIMATED STARTING DATE 7/31/13
ESTIMATED COMPLETION DATE 8/9/13

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [signature] Date 7/15/13

ATTACH SITE PLAN OR SKETCH

FOR OFFICE USE

PERMIT NUMBER 2013084
WELL NUMBER ____________
APN 941-1401-022-00

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller.
3. Permit is void if project not begun within 90 days of approval date.
4. **Notify Zone 7 at least 24 hours before the start of work.**

B. WATER SUPPLY WELLS
1. Minimum surface seal diameter is four inches greater than the well casing diameter.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
5. A sample port is required on the discharge pipe near the wellhead.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie.

(D.) GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

(G) SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report including all soil and water laboratory analysis results.

Approved [signature: Wyman Hong] Date 7/18/13
Wyman Hong

Revised: January 4, 2010

EXPLANATION:

- Approximate Site boundary
- B1 — Previous soil sample location (Basics Environmental, 2012)
- SG1 — Previous soil gas sample location (Basics Environmental, 2012)
- B4 — Previous grab-groundwater sample location (Basics Environmental, 2012)
- Proposed soil sample location
- Proposed soil gas sample location
- Proposed subslab soil gas and soil gas sampling location
- Proposed grab-groundwater sample location
- Presumed location of sanitary sewer line
- Soil sample contingent upon surrounding soil sample results
- Presumed groundwater flow direction

Former Dry Cleaning Machine

- Approximate location of former PCE dry cleaning machine based on Appendix E of the Phase I report (Basics Environmental, 2012)

Current Dry Cleaning Machines

- Approximate location of existing petroleum-based dry cleaning machine
- Approximate location of existing PCE-based dry cleaning machine

** to approx 50' bgs for Gw only

N

0 40

SCALE IN FEET (APPROXIMATE)

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
Ph. (510) 834-4747 Fax (510) 834-4199

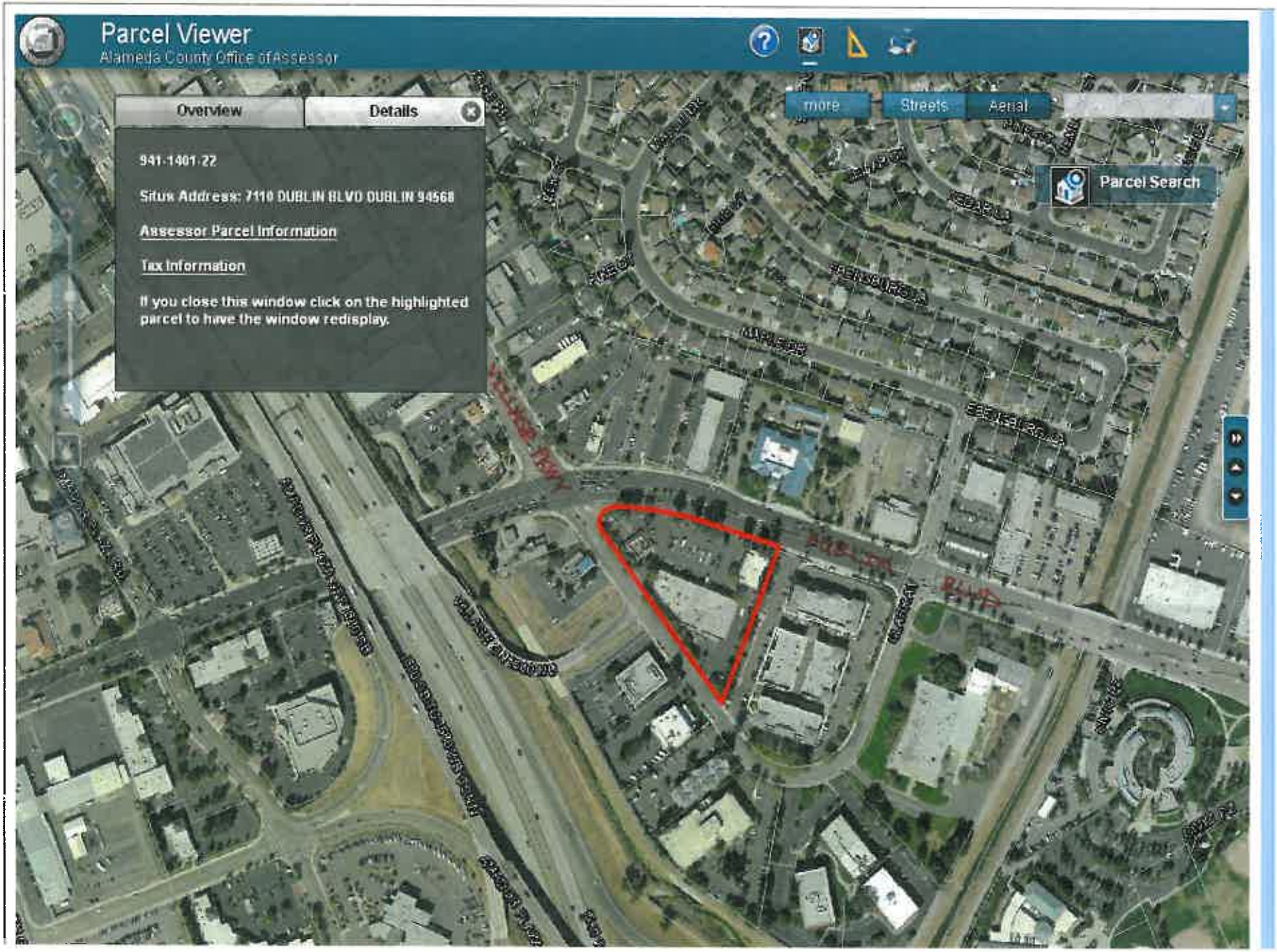
Proposed Boring Locations
7100 - 7120 Dublin Boulevard
Dublin, California

Figure
4

Drafter: EC

Date: 06/18/13

Contract Number: 13-945A


Parcel Viewer
Alameda County Office of Assessor
Overview
Details
941-1401-22
Situs Address: 7110 DUBLIN BLVD DUBLIN 94568
Assessor Parcel Information
Tax Information
If you close this window click on the highlighted parcel to have the window redisplay.
more
Streets
Aerial
Parcel Search

Appendix C
Soil Boring Logs

Iris Environmental
1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-01

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/2/13 **COMPLETED** 8/2/13
DRILL RIG 6600 Track Mounted Rig **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE Ball Check Valve **TOTAL DEPTH** 36.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/5/13

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY	SAMPLES: RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0								Asphalt to 4"; hydropunched to 36'. Dry from 32' to 36'. Installed temporary 1" diameter PVC with a 5' screen to 36' bgs. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1530 hrs on 8/5/13 at a water depth of 30.22'. Sample ID: IE-01-30.5	
5									
10									
15									
20									
25									

ENVR DIRECT PUSH - IRIS SEPT08.GDT - 9/4/13 10:30 - I:\CAD\13\13-945-A\BORING LOGS.GPJ

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Iris Environmental
1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-01

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25							Hydropunched to 36'	
30								
35								Well screen (31-36').

Bottom of Borehole at 36 feet.

Drilling Notes:

1. Boring terminated at 36.0 feet below ground surface.
2. Boring log indicates subsurface conditions at the location and time the boring was drilled.

Iris Environmental
1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-02

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/2/13 **COMPLETED** 8/2/13
DRILL RIG 6600 Track Mounted Rig **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 36.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/5/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0		IE-02-2.0	1429			Asphalt. SILTY SAND (SM): brown; moist; trace gravel; medium to low plasticity (5% gravel, 75% sand, 20% fines).	
						SILTY CLAY (CL): brown; moist; medium to high plasticity (0, 5, 95).	
5		IE-02-6.0	1436			CLAYEY SAND (SC): brown; moist; fine sand; no plasticity (0, 80, 20). SANDY CLAY (CL): brown; wet; high plasticity (0, 10, 90). CLAYEY SAND (SC): brown; moist; fine sand; no plasticity (0, 80, 20). SANDY CLAY (CL): brown; wet; high plasticity (0, 10, 90).	
10		IE-02-10.0	1442			SILTY CLAY (CL): dark brown; moist; medium to high plasticity (0, 5, 95). SILTY SAND WITH GRAVEL (SM): brown; moist; fine sand (25, 60, 15). CLAYEY SAND (SC): brown; moist; fine sand (0, 80, 20). SILTY CLAY (CL): dark brown; moist; trace sand; medium to high plasticity (0, 5, 95).	
15		IE-02-15.0	1447			SILTY SAND WITH GRAVEL (SMG), moist, brown, well graded fine to coarse sand (15, 60, 25). SILTY CLAY (CL), dark brown, moist, medium to high plasticity (0, 5, 95).	
20						Hydropunched to 36', dry. Dry from 32' to 36'. Installed temporary 1" diameter PVC with a 5' screen to 36' bgs. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1510 hrs on 8/5/13 at a water depth of 17.4'. Sample ID: IE-02-17.5 .	
25							

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-02

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25								
30								
35								Well screen (31-36').

Bottom of Borehole at 36 feet.

Drilling Notes:

1. Boring terminated at 36.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

Iris Environmental
1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-03

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/2/13 **COMPLETED** 8/2/13
DRILL RIG 6600 Track Mounted Rig **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE Ball Check Valve **TOTAL DEPTH** 32.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/5/13

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY	SAMPLES: RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0								4" of Asphalt. Hydropunched to 32'. Dry from 28' to 32'. Installed temporary 1" diameter PVC with a 5' screen to 25' bgs. Measured water depth at 1725 hrs on 8/2/13 as 17.29'. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1530 hrs on 8/5/13 at a water depth of 10.5'. Sample ID: IE-03-10.5 .	
5									
10									
15									
20									Well screen (20-25').
25									

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Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-03

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25							Hydropunched to 32'	
30								

Bottom of Borehole at 32 feet.

Drilling Notes:

1. Boring terminated at 32.0 feet below ground surface.
2. Boring log indicates subsurface conditions at the location and time the boring was drilled.

Iris Environmental
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WELL NUMBER IE-04

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/2/13 **COMPLETED** 8/2/13
DRILL RIG 6600 Track Mounted Rig **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE Ball Check Valve **TOTAL DEPTH** 32.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/5/13

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY	SAMPLES: RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0								Landscaping/Ivy. Hydropunched to 32' Dry from 28' to 32'. Installed temporary 1" diameter PVC with a 5' screen to 32' bgs. Measured water depth at 1800 hrs on 8/2/13 as 27.44'. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1555 hrs on 8/5/13 at a water depth of 10.0'. Sample ID: IE-04-10.0 .	
5									
10									
15									
20									
25									

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Fax: Fax: (510)834-4199

WELL NUMBER IE-04

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25							Hydropunched to 32'	
30								Well screen (27-32').

Bottom of Borehole at 32 feet.

Drilling Notes:

1. Boring terminated at 32.0 feet below ground surface.
2. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Fax: Fax: (510)834-4199

WELL NUMBER IE-05

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/2/13 **COMPLETED** 8/2/13
DRILL RIG 6600 Track Mounted Rig **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 31.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/5/13

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY	SAMPLES: RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0								4" Asphalt. Hydropunched to 31' Dry from 27' to 31'. Installed temporary 1" diameter PVC with a 5' screen to 28' bgs. Measured water depth at 1150 hrs on 8/2/13 as dry. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1605 hrs on 8/2/13 at a water depth of 15.51'. Sample ID: IE-05-15.5 . Soil Vapor Well installed on 8/7/13, and collected at 1307 hrs on 8/7/13. Sample ID: SV-05.	
5									
10									
15									
20									
25									

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Fax: Fax: (510)834-4199

WELL NUMBER IE-05

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25							Hydropunched to 32'	Well Screen (23-28').
30								

Bottom of Borehole at 31 feet.

Drilling Notes:

1. Boring terminated at 31.0 feet below ground surface.
2. Boring log indicates subsurface conditions at the location and time the boring was drilled.
3. Soil Vapor Well installed on 8/7/13, and collected at 1305 hrs on 8/7/13. Sample ID: SV-05 .

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-06

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/2/13 **COMPLETED** 8/2/13
DRILL RIG 6600 Track Mounted Rig **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE Ball Check Valve **TOTAL DEPTH** 32.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/5/13

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY	SAMPLES: RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0								4" Asphalt. Hydropunched to 32' Dry from 28' to 32'. Installed temporary 1" diameter PVC with a 5' screen to 31' bgs. Measured water depth at 1320 hrs on 8/2/13 as 29.27'. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1615 hrs on 8/5/13 at a water depth of 11.3'. Sample ID: IE-06-11.3 .	
5									
10									
15									
20									
25									

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WELL NUMBER IE-06

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25							Hydropunched to 32'	Well Screen (26-31').
30								

Bottom of Borehole at 32 feet.

Drilling Notes:

1. Boring terminated at 32.0 feet below ground surface.
2. Boring log indicates subsurface conditions at the location and time the boring was drilled.

Iris Environmental
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Oakland, CA 94612
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WELL NUMBER IE-07

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/2/13 **COMPLETED** 8/2/13
DRILL RIG 6600 Track Mounted Rig **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE Ball Check Valve **TOTAL DEPTH** 32.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/5/13

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY	SAMPLES: RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0								4: Asphalt. Hydropunched to 32' Dry from 28' to 32'. Installed temporary 1" diameter PVC with a 5' screen to 32' bgs. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1620 hrs on 8/2/13 at a water depth of 19.9'. Sample ID: IE-07-19.9 . Collected extra grab-groundwater sample to put on hold using a ball-check valve and new plastic tubing at 1635 hrs on 8/5/13 at a water depth of 16.5'. Sample ID: IE-07-16.5 .	
5									
10									
15									
20									
25									

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-07

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25							Hydropunched to 32'	
30								Well Screen (27-32').

Bottom of Borehole at 32 feet.

Drilling Notes:

1. Boring terminated at 32.0 feet below ground surface.
2. Boring log indicates subsurface conditions at the location and time the boring was drilled.

Iris Environmental
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BORING NUMBER IE-08

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 7/31/13 **COMPLETED** 7/31/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Craig Pelletier **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						SANDY GRAVEL (GP): brown; subrounded.	
		IE-08-2.0	0830	1.1		SILTY CLAY (CL): brown to dark brown; damp; medium plasticity; trace gravel; no odor (0% gravel, 30% sand, 70% fines). Becomes more silty with depth.	
5		IE-08-5.0				SILTY SAND (SM): brown; moist; fine gravel; well sorted; no odor (70, 20, 10).	
			0833	1.3		SILTY CLAY (CL): brown; moist; stiff; medium to high plasticity; no odor (0, 30, 70).	
10		IE-08-10.0	0840	2.1		Moist to wet; very stiff; very plastic.	
						Gray-brown mottled; moist to wet; no odor.	
15		IE-08-15.0	0850	2.1			

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.
4. Soil Vapor Well installed on 7/31/13, and collected at 1105 hrs on 8/7/13. Sample ID: SV-01 . Sub-Slab Soil Vapor Probe installed on 7/31/13, and collected on 8/2/13 at 1542 hrs. Sample ID: SS-01 .

Iris Environmental
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Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-09

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 7/31/13 **COMPLETED** 7/31/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 24.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Craig Pelletier **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-09-2.0				SILTY CLAY (CL): brown to dark brown; dry to damp; low to medium plasticity; no odor (0% gravel, 30% sand, 70% fines).	
						Silt content with depth; increase in moisture; softer (0, 50, 50).	
5		IE-09-5.0	0910	3.3		Increase in clay; stiff (0, 30, 70).	
			0916	4.2		SILTY SAND (SM): brown; moist; medium dense; fine gravel; poorly graded; no odor (80, 15, 5).	
10		IE-09-10.0				SILTY CLAY (CL): brown to dark brown; moist to wet; medium to high plasticity; very stiff; no odor (0, 30, 70).	
			0924	6.0		Hydropunched to 24'. Dry from 20' to 24'. Installed temporary 1" diameter PVC with a 5' screen to 24' bgs. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1230 hrs on 8/7/13 at a water depth of 17.0'. Sample ID: IE-09-17.0 .	
15							
20							Well screen (19-24').

Bottom of Borehole at 24 feet.

(Continued Next Page)

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-09

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS

Drilling Notes:

1. Boring terminated at 24.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-10

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/1/13 **COMPLETED** 8/1/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-10-2.0				SANDY SILT (ML): gray-brown; dry; low to medium plasticity (0% gravel, 20% sand, 80% fines).	
5		IE-10-5.0	1217	3.2			
			1221	5.4		SILTY SAND (SM): brown; moist; fine sand; well graded (0, 80, 20).	
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
10		IE-10-10.0	1240	3.7			
						SILTY SAND WITH GRAVEL (SM): brown; moist; well graded fine to coarse sand (20, 60, 20).	
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
15		IE-10-15.0	1250	1.4			

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-11

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/1/13 **COMPLETED** 8/1/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 35.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-11-2.0				CLAYEY SILT (ML): brown; moist; medium to low plasticity (0% gravel, 10% sand, 90% fines).	
5		IE-11-5.0	1320	2.0			
			1326	5.7			
10		IE-11-10.0				SILTY SAND (SM): brown; moist; poorly graded fine sand; low plasticity (0, 80, 20).	
			1336	2.0			
15				8.5		SILTY CLAY (CL): brown; moist; medium plasticity (0, 10, 90).	
20						Hydropunched to 35'. Dry from 31' to 35'. Installed temporary 1" diameter PVC with a 5' screen to 30' bgs. Measured water depth at 1342 hrs on 8/1/13 as 23.0'. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 0805 hrs on 8/7/13 at a water depth of 12.0'. Sample ID: IE-11-12.0 . Soil Vapor Well installed on 7/31/13, and collected at 1532 hrs on 8/7/13. Sample ID: SV-03 . Sub-Slab Soil Vapor Probe installed on 7/31/13, and collected on 8/2/13 at 1520 hrs. Sample ID: SS-03 .	
25							

ENVR DIRECT PUSH - IRIS SEPT08.GDT - 9/4/13 10:30 - I:\CAD\13\13-945-A\BORING LOGS.GPJ

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-11

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25								
30								Well screen (25-30').
35								

Bottom of Borehole at 35 feet.

Drilling Notes:

1. Boring terminated at 35.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

Iris Environmental
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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-12

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 7/31/13 **COMPLETED** 7/31/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 29.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-12-2.0				CLAYEY SILT (ML): dark brown; dry; medium plasticity (0% gravel, 10% sand, 90% fines).	
5		IE-12-5.0	1136	0.7			
			1146	1.1		SILTY SAND (SM): light brown; moist; low plasticity (0, 60, 40).	
10		IE-12-9.5	1155	1.5		SILTY CLAY (CL): dark brown; moist; high plasticity (0, 10, 90).	
		IE-12-13.5	1212	3.8		Trace to little gravel.	
15						Hydropunched to 29'. Dry from 31' to 35'. Installed temporary 1" diameter PVC with a 5' screen to 29' bgs. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1510 hrs on 8/1/13. Sample ID: IE-12.	
20							
25							

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-12

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25								Well screen (24-29').

Bottom of Borehole at 29 feet.

Drilling Notes:

1. Boring terminated at 29.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-13

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 7/31/13 **COMPLETED** 7/31/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 24.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-13-2.0				CLAYEY SILT (ML): brown; dry to damp; medium plasticity; no odor (0% gravel, 5% sand, 95% fines).	
5		IE-13-5.0	1011	9.0			
			1019	4.8		SILTY SAND (SM): brown; damp; fine sand (0, 70, 30).	
10		IE-13-9.5	1022	5.0		SILTY CLAY (CL): dark brown; damp; high plasticity; no odor (0, 0, 100).	
						Hydropunched to 24'. Dry from 20' to 24'. Attempted to install temporary 1" diameter PVC with a 5' screen, but boring collapsed at 5'. No groundwater was collected.	
15							
20							
						Bottom of Borehole at 24 feet.	

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Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-13

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS

Drilling Notes:

1. Boring terminated at 24.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-14

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/5/13 **COMPLETED** 8/5/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 32.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-13-2.0				CLAYEY SILT (ML): dark brown; dry to moist; medium plasticity (0% gravel, 5% sand, 95% fines).	
5			0905	0.0			
		IE-13-6.0					
			0907	0.0		SILTY SAND (SM): brown; moist; low plasticity (5, 70, 25).	
10							
		IE-13-11.5	0920	3.3		SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
15		IE-13-15.0	0930	2.7			
						Hydropunched to 32'. Dry from 28' to 32'. Installed temporary 1" diameter PVC with a 5' screen to 30.5' bgs. Measured water depth at 0930 hrs on 8/5/13 as dry. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 0830 hrs on 8/7/13 at a water depth of 21.51'. Sample ID: IE-14-21.5 . Soil Vapor Well installed on 8/7/13, and collected at 1417 hrs on 8/7/13. Sample ID: SV-07 .	
20							
25							

ENVR DIRECT PUSH - IRIS SEPT08.GDT - 9/4/13 10:30 - I:\CAD\13\13-945-A\BORING LOGS.GPJ

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-14

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25								
30								Well screen (25.5-30.5').

Bottom of Borehole at 32 feet.

Drilling Notes:

1. Boring terminated at 32.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-15

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/5/13 **COMPLETED** 8/5/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-15-2.0				CLAYEY SILT (ML): brown; dry to moist; medium plasticity (0% gravel, 10% sand, 90% fines).	
5		IE-15-5.0	0805	0.0			
			0815	5.4		SILTY SAND (SM): brown; moist; fine sand (0, 80, 20).	
						CLAYEY SILT (ML): brown; moist; medium plasticity (0, 10, 90).	
10		IE-15-10.0					
						SILTY SAND (SM): brown; moist; fine sand (0, 80, 20).	
			0820	11.5		SANDY CLAY (CL): dark brown; moist; high plasticity (0, 10, 90).	
						CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
15		IE-15-15.0	0855	7.4			

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-16

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/1/13 **COMPLETED** 8/1/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
						CLAYEY SILT (ML): dark brown; dry to moist; medium plasticity (0% gravel, 5% sand, 95% fines).	
		IE-16-2.0					
5			1445	1.8			
		IE-16-5.0					
						SANDY SILT lenses from 6 to 6.5'.	
						SILTY SAND (SP): brown; moist; poorly graded fine sand (0, 80, 20).	
			1450	1.2		SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
10							
		IE-16-10.5					
			1500	1.0			
						SILTY SAND WITH GRAVEL (SM): brown; moist; well graded fine to coarse sand (20, 60, 20).	
						SILTY CLAY (CL): very dark brown; moist; high plasticity; with gravel lenses (0, 5, 95).	
15							
		IE-16-15.0					
			1512	5.7			
						SILTY SAND (SM): brown; moist; fine sand (0, 80, 20).	
						SILTY CLAY (CL): very dark brown; moist; high plasticity (0, 5, 95).	
						Bottom of Borehole at 16 feet.	

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-17

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 7/31/13 **COMPLETED** 7/31/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
						CLAYEY SILT (ML): dark brown; moist; medium plasticity (0% gravel, 5% sand, 95% fines).	
		IE-17-2.0				SILTY SAND lenses.	
5			1445	8.0			
		IE-17-5.0				SILTY SAND (SM): brown; moist; low plasticity (0, 70, 30).	
			1506	9.8			
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
10							
		IE-17-10.0					
			1512	5.4			
						SILTY SAND WITH GRAVEL (SM): brown; moist; fiine to coarse sand; low plasticity (20, 60, 20).	
						SILTY CLAY (CL): dark brown; moist; trace gravel; medium to high plasticity (0, 5, 95).	
15							
		IE-17-15.0					
			1517	9.1			

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-18

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 7/31/13 **COMPLETED** 7/31/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 28.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-18-2.0				CLAYEY SILT (ML): medium dark brown; moist; medium to high plasticity (0% gravel, 10% sand, 90% fines). CLAY lenses.	
5		IE-18-5.0	1308	0.8			
						SILTY SAND (SP): medium dark brown; moist; fine sand (0, 80, 20).	
			1317	3.2			
						SILTY CLAY (CL): dark brown; moist; medium plasticity (0, 10, 90).	
10		IE-18-10.0					
			1327	5.9			
						Hydropunched to 28'. Dry from 24' to 28'. Installed temporary 1" diameter PVC with a 5' screen to 28' bgs. Collected grab-groundwater sample and duplicate sample using a ball-check valve and new plastic tubing at 1105 hrs on 8/7/13 at a water depth of 17.5'. Sample ID: IE-18-17.5 .	
15							
20							
25							

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-18

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25								Well screen (23-28').

Bottom of Borehole at 28 feet.

Drilling Notes:

1. Boring terminated at 28.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-19

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/1/13 **COMPLETED** 8/1/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						No recovery.	
		IE-19-2.0				CLAYEY SILT (ML): dark brown; moist; medium plasticity (0% gravel, 10% sand, 90% fines).	
5		IE-19-5.0	1607	11.1			
			1614	5.3		SILTY SAND (SP): brown; moist; poorly graded fine sand (0, 80, 20).	
10		IE-19-10.0				SILTY CLAY (CL): dark brown; moist; high plasticity (0, 10, 90).	
			1621	8.8			
15		IE-19-15.0					
			1638	9.9			

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

Iris Environmental
1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-20

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 7/31/13 **COMPLETED** 7/31/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-20-2.0				CLAYEY SILT (ML): dark brown; moist; medium plasticity (0% gravel, 10% sand, 90% fines).	
5		IE-20-5.0	1530	0.2			
			1540	0.2		SILTY SAND (SM): brown; moist; fine sand (0, 80, 20).	
						SILTY CLAY (CL): dark brown; moist; medium to high plasticity (0, 10, 90).	
10		IE-20-10.0					
						Poorly graded SILTY SAND (SM): brown; moist; fine gravel (0, 80, 20).	
			1550	9.8		SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
15		IE-20-15.0					
			1600	10.4			

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-21

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/1/13 **COMPLETED** 8/1/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 32.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
						CLAYEY SILT (ML): dark brown; moist; medium plasticity (0% gravel, 5% sand, 95% fines).	
		IE-21-2.0					
						SILTY SAND (SM): brown; moist; poorly graded fine grave (0, 80, 20).	
						CLAYEY SILT (ML): dark brown; moist; medium plasticity (0, 5, 95); gravel lenses.	
5			0940	1.3			
		IE-21-5.0					
						SANDY SILT (ML): brown; moist; low to medium plasticity (0, 20, 80).	
						SILTY SAND (SM): brown; moist; poorly graded fine sand (0, 80, 20).	
			0946	1.4			
		IE-21-8.5				SANDY SILT (ML): brown; moist; low to medium plasticity (0, 20, 80).	
10							
			0952	8.3			
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
15		IE-21-15.0					
			1000	11.9			
						Hydropunched to 32'. Dry from 28' to 32'. Installed temporary 1" diameter PVC with a 5' screen to 32' bgs. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1045 hrs on 8/7/13 at a water depth of 14.5'. Sample ID: IE-21-12.0 .	
20							
25							

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-21

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25								
30								Well screen (27-32').

Bottom of Borehole at 32 feet.

Drilling Notes:

1. Boring terminated at 32.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-22

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/1/13 **COMPLETED** 8/1/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						No recovery.	
5				7.6			
		IE-22-6.0				Subbase fill. SANDY GRAVEL (GP).	
						SILTY SAND (SM): brown; moist; fine sand (0% gravel, 80% sand, 20% fines); with lenses of SANDY SILT (ML): medium plasticity (0, 20, 80).	
			0922	8.8		SILTY SAND (SM): brown; moist; poorly graded fine sand (0, 85, 15).	
						SANDY SILT (ML): dark brown; moist; medium plasticity (0, 20, 80).	
10						SILTY SAND (SM): brown; moist; poorly graded fine sand (0, 85, 15).	
		IE-22-10.0				SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
			0926	12.2		SILTY SAND WITH GRAVEL (SM): brown; moist; well graded fine to coarse sand (20, 60, 20).	
						1 inch SILTY SAND (SM): brown; moist; poorly graded fine sand (0, 80, 20).	
15						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
		IE-22-15.0	0930	14.2			

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-23

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/5/13 **COMPLETED** 8/5/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 32.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0						Concrete.	
						No recovery.	
		IE-23-2.0				CLAYEY SILT (ML): dark brown; dry to moist; medium plasticity (0% gravel, 10% sand, 90% fines).	
5		IE-23-5.0	1235	10.3			
			1250	16.3		SILTY SAND (SM): brown; moist; poorly graded fine sand (0, 65, 35).	
		IE-23-8.5				SILTY CLAY (CL): dark brown; moist; high plasticity (0, 10, 90).	
10						CLAYEY SAND (SC): brown; moist; fiine sand (0, 80, 20).	
			1255	18.2		With SILTY CLAY lenses .5" thick; brown; moist (0, 10, 90).	
15		IE-23-15.0	1305	8.8		Transition to SILTY CLAY (CL): dark brown; moist; high plasticity trace sand and gravel (5, 5, 90).	Well screen (12-17').
						Hydropunched to 32'. Dry from 28' to 32'. Installed temporary 1" diameter PVC with a 5' screen to 17' bgs. Measured water depth at 1415 hrs on 8/5/13 as 8.0'. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1015 hrs on 8/7/13 at a water depth of 9.0'. Sample ID: IE-23-9.0 .	
20							
25							

ENVR DIRECT PUSH - IRIS SEPT08.GDT - 9/4/13 10:30 - I:\CAD\13\13-945-A\BORING LOGS.GPJ

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-23

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25								
30								

Bottom of Borehole at 32 feet.

Drilling Notes:

1. Boring terminated at 32.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-24

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/5/13 **COMPLETED** 8/5/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 32.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0						Concrete.	
						No recovery.	
		IE-24-2.0				CLAYEY SILT (ML): dark brown; moist; medium plasticity (0% gravel, 10% sand, 90% fines).	
5		IE-24-5.0	1105	7.8			
			1110	9.4		CLAYEY SAND (SC): brown; moist; medium plasticity (0, 80, 20). With CLAYEY SILT lenses 1-2" thick; dark brown (0, 10, 90).	
10		IE-24-8.5				SILTY CLAY (CL): dark brown; moist to wet; high plasticity (0, 5, 95).	
			1120	3.0			
						CLAYEY SAND (SC) lenses from 13-14', 1" thick; brown; moist; fine sand (0, 80, 20).	
15		IE-24-15.0					
			1125	10.2		SANDY CLAY (CL): brown; moist; medium plasticity (0, 40, 60).	
						Hydropunched to 32'. Dry from 28' to 32'. Installed temporary 1" diameter PVC with a 5' screen to 32' bgs. Measured water depth at 1220 hrs on 8/5/13 as 26.0'. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 0950 hrs on 8/7/13 at a water depth of 12.0'. Sample ID: IE-24-12.0 .	
20							
25							

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-24

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25								
30								Well screen (27-32').

Bottom of Borehole at 32 feet.

Drilling Notes:

1. Boring terminated at 32.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-25

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/5/13 **COMPLETED** 8/5/13
DRILL RIG 6600 Track Mounted Rig **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						Excavated - no recovery.	
						SILTY SAND (SP-SM): light brown; moist; poorly graded fine sand (0% gravel, 90% sand, 10% fines).	0 - 6' from soil vapor well installation. Stepped out to continue logging and collecting soil.
						CLAYEY SILT (ML): dark brown; moist; medium plasticity (0, 10, 90).	
5		IE-25-5.0	0830	3.5		SILTY SAND (SP-SM): light brown; moist; poorly graded fine sand (0, 90, 10).	
						CLAYEY SILT (ML-MH): dark brown; moist; medium plasticity (0, 10, 90).	
						SANDY CLAY (CL): dark brown; moist; fine sand (0, 80, 20).	
						CLAYEY SAND (SC): dark brown; moist; fine sand (0, 60, 40).	
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 10, 90).	
10		IE-25-8.5	0850				
						CLAYEY SAND (SC): brown; moist to wet; fine sand (0, 80, 20).	
15		IE-25-15.0	1600			SILTY CLAY (CL): dark brown; moist to wet; high plasticity (0, 5, 95).	

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.
4. Soil Vapor Well installed on 8/5/13, and collected at 1335 hrs on 8/7/13. Sample ID: SV-06 .

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-26

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/7/13 **COMPLETED** 8/7/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						Excavated - no recovery.	
		IE-25-2.0	0830			CLAYEY SILT (ML): dark brown; moist; medium plasticity (0% gravel, 5% sand, 95% fines).	
						SILTY SAND (SM): brown; moist; fine sand (0, 80, 20).	0 - 6' from soil vapor well installation. Stepped out to continue logging and collecting soil.
						CLAYEY SILT (ML): dark brown; moist; medium plasticity (0, 5, 95).	
5		IE-25-5.0	0845			SILTY SAND (SM): brown; moist; fine sand (0, 80, 20).	
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 10, 90).	
						CLAYEY SAND (SC): brown; moist; fine sand (0, 80, 20).	
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 10, 90).	
10		IE-25-8.5	1620				
						CLAYEY SAND WITH GRAVEL (SC): brown; moist; well graded fine sand to coarse gravel (20, 60, 20).	
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 10, 90).	
15		IE-25-15.0	1630				

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-27

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/5/13 **COMPLETED** 8/5/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS **TOTAL DEPTH** 16.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Concrete.	
						No recovery.	
		IE-27-2.0				CLAYEY SILT (ML): dark brown; moist; medium plasticity (0, 5, 95).	
5		IE-27-5.0	1620	1.5			
			1625	1.8		CLAYEY SAND (SC): brown; moist; fine sand (0, 80, 20).	
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
						CLAYEY SAND (SC): brown; moist; fine sand (0, 80, 20).	
10		IE-27-10.0				SILTY CLAY (CL): dark brown; moist; high plasticity (0, 5, 95).	
			1634	1.2			
						CLAYEY SAND (SC): brown; moist; fine sand (0, 80, 20).	
						SILTY CLAY (CL): dark brown; moist; high plasticity (0, 10, 90).	
15		IE-27-15.0	1640	1.4			

Bottom of Borehole at 16 feet.

Drilling Notes:

1. Boring terminated at 16.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.
4. Soil Vapor Well installed on 8/5/13, and collected sample and duplicate at 1502 hrs on 8/7/13 Sample ID: SV-08 .

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-28

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/2/13 **COMPLETED** 8/2/13
DRILL RIG 6600 Track Mounted Rig **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE Dual Tube **TOTAL DEPTH** 52.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/7/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
0						Asphalt - gravel.	
						SILTY SAND WITH GRAVEL (SM): brown; moist; well graded fine to coarse sand (20% gravel, 80% sand, 0% fines).	
						CLAYEY SAND (SC): dark brown; moist; medium density (0, 5, 95).	
						SILTY SAND lens.	First 4' macrocore, then switched to dual tube.
5							
						SILTY SAND WITH GRAVEL (SM): brown; moist; well graded (20, 60, 20)..	
						SANDY SILT (ML): brown; moist; medium plasticity (0, 20, 80). With SILTY SAND lenses (0, 80, 20).	
				0.4		SILTY SAND (SM): brown; moist; poorly graded fine sand; (5, 80, 15).	
10							
						CLAY (CL): brown; wet; high plasticity (0, 0, 100). Increases in darkness and sand content with depth.	
				0.5		CLAYEY SAND (SC): brown-gray; moist; poorly graded fine sand; no plasticity (0, 80, 20).	
15							
				1.4			
						CLAYEY SAND (SC): brown; moist; fine sand (0, 80, 20).	
						CLAY (CL): dark brown; moist; high plasticity (5, 0, 95).	
				1.1			
20							
25				1.5			

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1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

BORING NUMBER IE-28

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	REMARKS
25					0.5			
30					1.1		Clay becomes very tight (CH): dark brown; moist; high plasticity; expansive (5, 0 95).	2' drive would fill with 4' clay in sleeve.
35							Intermittend SAND lenses.	
40							Becomes SANDY CLAY (SC); gray; wet; trace gravel; high plasticity (3, 10, 87).	
45					0.3		Stepped out. Hydropunched to 52'. Measured water depth at 1125 hrs on 8/2/13 as 48.51'. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1600 hrs on 8/2/13 at a water depth of 45.6'. Sample ID: IE-28-35.5 .	
50							Drilling Notes: 1. Boring terminated at 52.0 feet below ground surface. 2. Field estimates of percent gravel, sand and fines are shown in parentheses. 3. Boring log indicates subsurface conditions at the location and time the boring was drilled.	

Bottom of Borehole at 52 feet.

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Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-29

PROJECT NAME 7100 - 7120 Dublin Boulevard
CLIENT Park Avenue Cleaners
PROJECT NUMBER 13-945A
PROJECT LOCATION 7100 - 7120 Dublin Boulevard, Dublin, California
DATE STARTED 8/1/13 **COMPLETED** 8/1/13
DRILL RIG LAR **HOLE DIAM.** 2 inches
DRILLING CONTRACTOR Environmental Control Associates
SAMPLER TYPE CBS/Ball Check Valve **TOTAL DEPTH** 31.0 ft
DRILLING METHOD Direct Push
GW DEPTH DURING DRILLING ---
LOGGED BY Bill Chen **CHECKED BY** Craig Pelletier
BOREHOLE BACKFILL Neat Cement
NOTES Backfilled hole using a tremmie-pipe to grade on 8/1/13

DEPTH (FEET)	SAMPLES: DRIVE / RECOVERY / RETAINED	SAMPLE NUMBER	TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
0						Concrete.	
						Subbase fill. SANDY GRAVEL (GP).	
		IE-29-2.0				CLAYEY SILT (ML): dark brown; dry to moist; medium to high plasticity (0% gravel, 5% sand, 95% fines).	
5		IE-29-5.0	0748	3.1			
			0755	7.3		Poorly graded SILTY SAND (SM): brown; moist; fine sand; low plasticity (0, 80, 20).	
10		IE-29-10.	0800	9.6		SILTY CLAY (CL): dark brown; moist; medium to high plasticity (0, 5, 95).	
						SILTY SAND WITH GRAVEL (SMG): gray brown; moist; well graded fine to coarse sand (15, 65, 20).	
15		IE-29-15.0	0807	7.5		SILTY CLAY (CL): dark brown; moist; medium to high plasticity (0, 5, 95).	
20						Hydropunched to 31'. Dry from 27' to 31'. Installed temporary 1" diameter PVC with a 5' screen to 31' bgs. Collected grab-groundwater sample using a ball-check valve and new plastic tubing at 1500 hrs on 8/1/13 at a water depth of 27.0'. Sample ID: IE-29 . Soil Vapor Well installed on 8/7/13, and collected at 1532 hrs on 8/7/13. Sample ID: SV-02 . Sub-Slab Soil Vapor Probe installed on 8/1/13, and collected on 8/2/13 at 1605 hrs. Sample ID: SS-02.	
25							

ENVR DIRECT PUSH - IRIS SEPT08.GDT - 9/4/13 10:31 - I:\CAD\13\13-945-A\BORING LOGS.GPJ

(Continued Next Page)

Iris Environmental
1438 Webster Street, Suite 302
Oakland, CA 94612
Telephone: Ph. (510)834-4747
Fax: Fax: (510)834-4199

WELL NUMBER IE-29

PROJECT NAME 7100 - 7120 Dublin Boulevard **CLIENT** Park Avenue Cleaners

PROJECT NUMBER 13-945A **PROJECT LOCATION** 7100 - 7120 Dublin Boulevard, Dublin, California

DEPTH (FEET)	SAMPLES: DRIVE	SAMPLES: RECOVERY RETAINED	SAMPLES: SAMPLE NUMBER	SAMPLES: TIME	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM AND REMARKS
25								
30								Well screen (26-31').

Bottom of Borehole at 31 feet.

Drilling Notes:

1. Boring terminated at 31.0 feet below ground surface.
2. Field estimates of percent gravel, sand and fines are shown in parentheses.
3. Boring log indicates subsurface conditions at the location and time the boring was drilled.

Appendix D
Purge Calculations and Soil Gas
Field Sampling Forms

Purge Volume Calculation

Boring diameter	2.25	in	Diameter of flared end of outer rod
Sandpack depth	18	in	Includes sandpack and half of dry bentonite pack
Sandpack total volume	72	in^3	$V_{total} = L \times \pi/4 \times D^2$
Sandpack total volume	1173	cm^3	Units conversion
Sandpack porosity	0.3	cm^3/cm^3	Engineering judgment
Sandpack pore volume	352	cm^3	$V_{pore} = V_{total} \times n$
Tubing ID	0.125	in	Thick walled tubing
Tubing length	96	in	Assume 8 feet of sampling/purge line
Tubing volume	1.18	in^3	$V = L \times \pi/4 \times D^2$
Tubing volume	19	cm^3	Units conversion
ONE VOLUME	371	cm^3	Sum of sand pack and tubing
	371	ml	
THREE VOLUMES	1113	ml	Purged amount at each location
	19	pulls	Number of pulls at 60 ml/pull

Purge Volume Calculation

Steel Tubing ID	0.25	in	Stainless steel tubing
Tubing length	6	in	Cut length of tubing within slab
Tubing volume	0.29	in^3	$V_{total} = L \times \pi/4 \times D^2$
Tubing volume	5	cm^3	Units conversion
Teflon Tubing ID	0.125	in	Thick walled tubing
Tubing length	24	in	Assume 2 feet of sampling/purge line
Tubing volume	0.29	in^3	$V = L \times \pi/4 \times D^2$
Tubing volume	5	cm^3	Units conversion
ONE VOLUME	10	cm^3	Sum of sand pack and tubing
	10	ml	Units conversion
THREE VOLUMES	30	ml	Purged amount at each location

CANISTER SAMPLING LOG

PROJECT NAME: Dublin Park Ave Cleaners

PROJECT NUMBER: 13-945A

FIELD STAFF: CPeterson

DATE: 8/2/13

PAGE: 1 OF 1

FIELD SAMPLE ID	LOCATION	CANISTER SERIAL NO.	FLOW CONTROLLER SERIAL NO.	VACUUM		TIME	
				START (in Hg)	END (in Hg)	START (hh:mm)	END (hh:mm)
SS-03	IE-11	#64	AD0051	-30	-3	1452	1520
SS-01	IE-08	#106	AU0051	-30	-2	1537	1542
SS-02	IE-09	#83	AU0051	-30	-1	1555	1605

NOTES: Soil Vapor - Sub Slab Samples

SIGNATURE

DATE 8/2/13

IRIS ENVIRONMENTAL

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave Cleaners	**Contract #:** 13-745A	**Boring #:** SS-01 / IE-08
Date: 8/2/13	**Weather:** Sunny	**Sampler:** CP
# of purge volumes: 3	**Leak check compound: Helium**	**Sample flow rate:** 100 - 200 mL/min

Helium Shroud

% Helium in shroud prior to sampling: 32%	**% Helium in shroud post sampling:** 30.1%
% Helium in sample line prior to sampling: 0.6%	**% Helium in sample line post sampling:** 0.6%

Sample 1

Depth: 3" below slab	**Time installed:** 7/31/13	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3): see calc
Sample start time: 1537	**Sample finish time:** 1542	**Sample volume:** 1.4 L
Initial Summa vacuum: -30"	**Final Summa vacuum:** -2"	
Samples taken (circle): Summa (TO15)		
Notes: No evidence of leakage ~6" slab		

Sample Dup N/A

Depth:	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes:		

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave Cleaners	**Contract #:** 12-945A	**Boring #:** SS-02 / IE-24
Date: 8/2/13	**Weather:** Sunny	**Sampler:** CP
# of purge volumes: 3	**Leak check compound:** Helium	**Sample flow rate:** 100-200 mL/min

Helium Shroud

% Helium in shroud prior to sampling: 25.2%	**% Helium in shroud post sampling:** 22.1%
% Helium in sample line prior to sampling: 0.4%	**% Helium in sample line post sampling:** 0.4%

Sample 1

Depth: 3" Below slab	**Time installed:** 7/31/13	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3): See calc
Sample start time: 1355	**Sample finish time:** 1605	**Sample volume:** 1.4 L.
Initial Summa vacuum: -30"	**Final Summa vacuum:** -1"	
Samples taken (circle): Summa (TO15)		
Notes: No evidence of leakage - 5/8" slab		

Sample Dup

N/A

Depth:	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes:		

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave Cleaners	**Contract #:** 13-1451	**Boring #:** SS-03/IE-11
Date: 8/2/13	**Weather:** Sunny	**Sampler:** CP
# of purge volumes: 3	**Leak check compound:** Helium	**Sample flow rate:** 100-200 ml/min

Helium Shroud

% Helium in shroud prior to sampling: 22%	**% Helium in shroud post sampling:** 2%
% Helium in sample line prior to sampling: 0.4%	**% Helium in sample line post sampling:** 0.4%

Sample 1

Depth: 3" Below slab	**Time installed:** 7/31/13	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3): See calc
Sample start time: 1452	**Sample finish time:** 1500	**Sample volume:** 1.4 L Summa
Initial Summa vacuum: -30 in	**Final Summa vacuum:** -3 in	
Samples taken (circle): Summa (TO15)		
Notes: 6" slab - no evidence of leakage		

Sample Dup N/A

Depth:	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes:		

CANISTER SAMPLING LOG

PROJECT NAME: Park Ave Cleaners

PROJECT NUMBER: 13-945A

FIELD STAFF: C Pelletier / M. Burn

DATE: 8/7/13

PAGE: 1 OF 1

FIELD SAMPLE ID	LOCATION	CANISTER SERIAL NO.	FLOW CONTROLLER SERIAL NO.	VACUUM		TIME	
				START (in Hg)	END (in Hg)	START (hh:mm)	END (hh:mm)
SV-01 IE-08	IE-08	132	A00051	-30"	-5.5"	1055	1105
SV-02	IE-29	71		-30"	-2.5"	1126	1136
SV-03	IE-11	331		-30"	-5"	15:21	1532
SV-04	IE-26	289		-30"	-6.5"	1210	1225
SV-05	IE-05	97		-30"	-4.0"	1300	1307
SV-06	IE-25	243		-30"	-5.0"	1329	1335
SV-07	IE-14	272		-30"	-5.0"	1407	1417
SV-08	IE-27	393		-30"	-3.0"	1443	1502
X-Dup	IE-27	139		-30"	-3.0"	1443	1502

NOTES: Soil Vapor Samples - 5'

SIGNATURE

8/7/13
DATE

IRIS ENVIRONMENTAL

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave Cleaners	**Contract #:** 13-945A	**Boring #:** SV-01 / IE-08
Date: 8/7/13	**Weather:** P. Sunny / 70's	**Sampler:** CR Mathis
# of purge volumes: 3	**Leak check compound: Helium**	**Sample flow rate:** 100-200 ml/min

Helium Shroud

% Helium in shroud prior to sampling: 31.7%	**% Helium in shroud post sampling:** 21.0%
% Helium in sample line prior to sampling: ~0.3%	**% Helium in sample line post sampling:** ~0.6%

Sample 1

Depth: 6.0'	**Time installed:** 7/31/13	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3): ~19 pulls @ 60mL (see attached)
Sample start time: 1055	**Sample finish time:** 1105	**Sample volume:** 1.4L
Initial Summa vacuum: -30"	**Final Summa vacuum:** -5.5"	1.4L Summa
Samples taken (circle): Summa (TO15)		
Notes: NO leakage / 19 pulls @ 60mL for Purge		

Sample Dup N/A

Depth:	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes: N/A		

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave Chem	**Contract #:** 13-945A	**Boring #:** SV-02 / IE-29
Date: 8/7/13	**Weather:** sunny, 70's	**Sampler:** C Pelletier / M. Bork
# of purge volumes: 3	**Leak check compound: Helium**	**Sample flow rate:** 100 - 200mL/min

Helium Shroud

% Helium in shroud prior to sampling: 20.7%	**% Helium in shroud post sampling:** 17.9%
% Helium in sample line prior to sampling: -0.4%	**% Helium in sample line post sampling:** -0.9%

Sample 1

Depth: 6'	**Time installed:** 7/31/13	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3): See attached 19 mLs @ 60mL each
Sample start time: 1126	**Sample finish time:** 1136	**Sample volume:** 1.4L Summa
Initial Summa vacuum: -30"	**Final Summa vacuum:** -2.5"	
Samples taken (circle): Summa (TO15)		
Notes: No evidence of leaks / purged 19 x 60-mL for 3P.		

Sample Dup N/A

Depth:	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes:		

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Avenue Cleaners	**Contract #:** 13-945A	**Boring #:** SV-03 / IE-11
Date: 8/7/13	**Weather:** sunny / 70's	**Sampler:** CP / MB
# of purge volumes: 3P	**Leak check compound: Helium**	**Sample flow rate:** 100-200 mL/min

Helium Shroud

% Helium in shroud prior to sampling: 25.1 %	**% Helium in shroud post sampling:** 16.4 %
% Helium in sample line prior to sampling: ~ 0.5%	**% Helium in sample line post sampling:** ~0.5%

Sample 1

Depth: 5'	**Time installed:** 8/7/13 @ 13:15	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3): See attached
Sample start time: 15:21	**Sample finish time:** 15:32	**Sample volume:** 19 pulls @ 60mL
Initial Summa vacuum: -30	**Final Summa vacuum:** -5	1.4L Summa
Samples taken (circle): Summa (TO15)		
Notes: no evidence of leaks		

Sample Dup N/A

Depth:	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes:		

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave - Clermont	**Contract #:** 13-945A	**Boring #:** SV-04/1E-26
Date: 8/7/13	**Weather:** Sunny, 70's	**Sampler:** Collection/M.Burk
# of purge volumes: 3P	**Leak check compound: Helium**	**Sample flow rate:** 100-200 mL/min

Helium Shroud

% Helium in shroud prior to sampling: 25.4%	**% Helium in shroud post sampling:** 15.4%
% Helium in sample line prior to sampling: -0.4%	**% Helium in sample line post sampling:** -0.4%

Sample 1

Depth: 5'	**Time installed:** 8/7/13 - 900	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time: 1210	**Sample finish time:** 1225	**Sample volume:** 19@60mL
Initial Summa vacuum: -30"	**Final Summa vacuum:** -6.5"	1.4L Summa
Samples taken (circle): Summa (TO15)		
Notes: 19 purges @ 60mL each for 3P - no evidence of leaks.		

Sample Dup N/A

Depth:	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes:		

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave	**Contract #:** 13-845A	**Boring #:** SV-05 / IE-05
Date: 8/7/13	**Weather:** Sunny 70's	**Sampler:** C[illegible]
# of purge volumes: 3	**Leak check compound: Helium**	**Sample flow rate:** 100-200 mL/min

Helium Shroud

% Helium in shroud prior to sampling: ~20.1%	**% Helium in shroud post sampling:** 22.%
% Helium in sample line prior to sampling: ~0.5%	**% Helium in sample line post sampling:** ~2.6%

Sample 1

Depth: ~5'	**Time installed:** 8/7/13 @1100	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3): see attached
Sample start time: 1300	**Sample finish time:** 1307	**Sample volume:** @ 19 pulls 60 mL
Initial Summa vacuum: -30"	**Final Summa vacuum:** -4"	1.4 L - Summa
Samples taken (circle): Summa (TO15) Helium		
Notes: Got drift on He detector; used different shrouds + tightened all fittings during purge tests		

Sample Dup

Depth: NA	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes:		

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave Cleaners	**Contract #:** 13-9451	**Boring #:** SV-06 / IE-25
Date: 8/7/13	**Weather:** Sunny, breezy 70's	**Sampler:** C Pelletier / [illegible]
# of purge volumes: 3P	**Leak check compound: Helium**	**Sample flow rate:** 100-200 ml/min

Helium Shroud

% Helium in shroud prior to sampling: 28.5%	**% Helium in shroud post sampling:** 18.2%
% Helium in sample line prior to sampling: ~0.5%	**% Helium in sample line post sampling:** ~2.5%

Sample 1

Depth: 5'	**Time installed:** 1000 8/7/13	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time: 1379	**Sample finish time:** 1335	**Sample volume:** 1 gallon 6 oml
Initial Summa vacuum: -30"	**Final Summa vacuum:** -5"	1.4 Liter
Samples taken (circle): Summa (TO15) Helium		
Notes: No evidence of leakage		

Sample Dup N/A

Depth:	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes:		

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave. Cleaners	**Contract #:** 13-945A	**Boring #:** SV-07 / IE-14
Date: 8/7/13	**Weather:** Sunny, 70's	**Sampler:** GS / MJB
# of purge volumes: 3P	**Leak check compound:** Helium	**Sample flow rate:** 100-200 ml/min

Helium Shroud

% Helium in shroud prior to sampling: 26.5%	**% Helium in shroud post sampling:** 16.0%
% Helium in sample line prior to sampling: ≥ 0.5%	**% Helium in sample line post sampling:** ~0.5%

Sample 1

Depth: ~5'	**Time installed:** 8/7/13 @ 1200	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3): See attached
Sample start time: 1407	**Sample finish time:** 1417	**Sample volume:** 1 Purge @ 60 mL
Initial Summa vacuum: 30"	**Final Summa vacuum:** ~5.0"	
Samples taken (circle): Summa (TO15)		
Notes: No leakage		

Sample Dup N/A

Depth:	**Time installed:**	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time:	**Sample finish time:**	**Sample volume:**
Initial Summa vacuum:	**Final Summa vacuum:**	
Samples taken (circle): Summa (TO15)		
Notes:		

SOIL GAS SAMPLING LOG
IRIS ENVIRONMENTAL

COMPLETE ONE LOG PER SAMPLING LOCATION 1 in^3=16.387 ml, 1 gallon=2785.412 ml

Project: Park Ave Cleaners	**Contract #:** 13-945A	**Boring #:** SV-08/TE-27
Date: 8/7/13	**Weather:** Sunny, 70's	**Sampler:** CP/MB
# of purge volumes: 3P	**Leak check compound: Helium**	**Sample flow rate:** 100-200mL/min

Helium Shroud

% Helium in shroud prior to sampling: 32.1%	**% Helium in shroud post sampling:** 16.4%
% Helium in sample line prior to sampling: -0.4%	**% Helium in sample line post sampling:** -0.4%

Sample 1

Depth: 5'	**Time installed:** 8/7/13 @ 1130	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3): See attached
Sample start time: 1443	**Sample finish time:** 1502	**Sample volume:** 19 purge @ 60mL
Initial Summa vacuum: -30"	**Final Summa vacuum:** -3.0"	1.4-L Summa
Samples taken (circle): Summa (TO15)		
Notes: no evidence of leaks / SV-08		

Sample Dup

Depth: see above	**Time installed:** see above	**Calculated purge volume** (R_{tube}^2*3.14*L_{tube} + $R_{borehole}^2$*3.14*$H_{sandpack}$*0.3):
Sample start time: 1443	**Sample finish time:** 1502	**Sample volume:** 19 purge @ 60mL
Initial Summa vacuum: -30"	**Final Summa vacuum:** -3"	1.4 L Summa
Samples taken (circle): Summa (TO15)		
Notes: no evidence of leaks X-Dup		

Appendix E
Analytical Laboratory Reports and
Chain of Custody Information


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247539
ANALYTICAL REPORT

Iris Environmental
1438 Webster Street
Oakland, CA 94612

Project : 13-945A
Location : Park Ave. Cleaners
Level : II

Sample ID	Lab ID	Sample ID	Lab ID
IE-08-2.0	247539-001	IE-29-5.0	247539-023
IE-08-5.0	247539-002	IE-29-10.0	247539-024
IE-08-10.0	247539-003	IE-29-15.0	247539-025
IE-08-15.0	247539-004	IE-22-6.0	247539-026
IE-09-2.0	247539-005	IE-22-10.0	247539-027
IE-09-5.0	247539-006	IE-22-15.0	247539-028
IE-09-10.0	247539-007	IE-21-2.0	247539-029
IE-12-2.0	247539-008	IE-21-5.0	247539-030
IE-12-5.0	247539-009	IE-21-8.5	247539-031
IE-12-9.5	247539-010	IE-21-15.0	247539-032
IE-12-13.5	247539-011	IE-10-2.0	247539-033
IE-13-2.0	247539-012	IE-10-5.5	247539-034
IE-13-5.0	247539-013	IE-10-10.0	247539-035
IE-13-9.5	247539-014	IE-10-15.0	247539-036
IE-18-2.0	247539-015	IE-11-2.0	247539-037
IE-18-5.0	247539-016	IE-11-5.0	247539-038
IE-18-10.0	247539-017	IE-11-10.0	247539-039
IE-17-2.0	247539-018	IE-16-2.0	247539-040
IE-17-5.0	247539-019	IE-16-5.0	247539-041
IE-17-10.0	247539-020	IE-16-10.5	247539-042
IE-17-15.0	247539-021	IE-16-15.0	247539-043
IE-29-2.0	247539-022		

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/08/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247539**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/01/13**
Samples Received:	**08/01/13**

This data package contains sample and QC results for thirty two soil samples, requested for the above referenced project on 08/01/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):

Matrix spikes were not performed for this analysis in batch 201321 due to insufficient sample amount. Matrix spikes were not performed for this analysis in batch 201334 due to insufficient sample amount. Matrix spikes were not performed for this analysis in batch 201364 due to insufficient sample amount. High surrogate recoveries were observed for dibromofluoromethane in many samples. High surrogate recovery was observed for 1,2-dichloroethane-d4 in IE-22-10.0 (lab # 247539-027). No other analytical problems were encountered.

247539

IRIS ENVIRONMENTAL — CHAIN-OF-CUSTODY

1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

Date: 8/1/2013 Page: 1 of 5 **№** 003583

Sampler Name(s): Bill Chen

Signature(s):

Analyses Required

	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260	Hold	Number of Containers
1	IE-08-2.0	7/31/13	0830	Soil	YES	X		3
2	IE-08-5.0	7/31/13	0833		YES	X		3
3	IE-08-10.0		0840		YES	X		3
4	IE-08-15.0		0850		NO		X	3
5	IE-09-2.0		0910		Y	X		3
6	IE-09-5.0		0916		Y			3
7	IE-09-10.0		0924		Y			3
8	IE-12-2.0		1136		Y			3
9	IE-12-5.0		1146		Y			3
10	IE-12-9.5		1155		Y			3

PROJECT INFORMATION

Project Name: PARK AVE CLEANERS

Project Number: 13-945A

Contact Person: Craig Petersen

E-mail: craig@irisenv.com

Contact Telephone: 510.834.4747 x29

Report: Routine (Level 2) Level 3 Level 4 EDD

TAT: 10-day 5-day 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Bill Chen	Printed Name: Ricky Cramer
Signature:	Signature:
Company: IRIS ENV	Company: C&T
Time/Date: 8/1/13 1645	Time/Date: 8/1/13 1645
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Cramer	Printed Name: TINA RAIKAR
Signature:	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/1/13 1835	Time/Date: 8/1/13 1835

247539

IRIS ENVIRONMENTAL — CHAIN-OF-CUSTODY

1438 Webster Street, Suite 302
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Date: 8/1/13 Page: 2 of 5 **№** 003582

Sampler Name(s): Bill Chen

Signature(s):

Analyses Required

	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260	4 Hall	Number of Containers
11	IE-12-13.5	7/31/13	1212	soil	N	X		
12	IE-13-2.0	7/31/13	1011		Y	X		3
13	IE-13-5.0		1019		Y	X		3
14	IE-13-9.5		1022		Y	X		3
15	IE-18-2.0		1308		Y	X		3
16	IE-18-5.0		1317		Y	X		3
17	IE-18-10.0		1327		Y	X		3
18	IE-17-2.0		1445		Y	X		3
19	IE-17-5.0		1506		Y	X		3
20	IE-17-10.0		1512		Y	X		3

PROJECT INFORMATION

Project Name: Park Avenue Chevron
Project Number: 13-7015A
Contact Person: Craig Schafer
E-mail: cschafer@iris-env.com
Contact Telephone:
Report: Routine (Level 2) Level 3 Level 4 EDD
TAT: 10-day 5-day 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: B. Chen	Printed Name: Ricky Gomez
Signature:	Signature:
Company: Iris Env	Company: C&T
Time/Date: 8/1/13 1645	Time/Date: 8/1/13 1645
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Gomez	Printed Name: TINA RAIKAR
Signature:	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/1/13 1835	Time/Date: 8/1/13 1835

247539

IRIS ENVIRONMENTAL

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CHAIN-OF-CUSTODY

Date: 8/1/13 Page: 3 of 5 №: 003584

Sampler Name(s): Bill Chen Signature(s): [signature]

#	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260	Hold	Number of Containers
21	IE-17-15.0	7/31/13	1517	Soil	N		X	
22	IE-29-2.0	8/1/13	0748	↓	Y	X		
23	IE-29-5.0	↓	0755	↓	Y	X		
24	IE-29-10.0	↓	0800	↓	Y	X		
25	IE-29-15.0	↓	0807	↓	N		X	
26	IE-22-6.0	↓	~~0945~~ 0915 [initials]	↓	Y	X		
27	IE-22-10.0	↓	0926	↓	Y	X		
28	IE-22-15.0	↓	0930	↓	N		X	
29	IE-21-2.0	↓	0940	↓	Y	X		
30	IE-21-5.0	↓	0946	↓	Y	X		

PROJECT INFORMATION

Project Name: Park Ave Cleaners
Project Number: 13-945A
Contact Person: Craig [illegible]
E-mail: craig@[illegible].com
Contact Telephone:
Report: Routine (Level 2) Level 3 Level 4 EDD
TAT: 10-day (5-day) 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Bill Chen	Printed Name: Ricky Grans
Signature: [signature]	Signature: [signature]
Company: Iris Env.	Company: C&T
Time/Date: 8/1/13 1645	Time/Date: 8/1/13 1645

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Ricky Grans	Printed Name: TINA RAIKAR
Signature: [signature]	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/1/13 1835	Time/Date: 8/1/13 1835

247539

IRIS ENVIRONMENTAL
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(510) 834-4199 fax

CHAIN-OF-CUSTODY

Date: 8/1/13 Page: 4 of 5 Nº 003585

Sampler Name(s): B.H Chin
Signature(s): [signature]

#	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260	Hold
31	IE-21-8.5	8/1/13	0752	soil	Y	X	
32	IE-21-15.0	↓	1000	↓	N		X
33	IE-10-2.0	↓	1217	↓	Y	X	
34	IE-10-5.5	↓	1226	↓	Y	X	
35	IE-10-10.0	↓	1240	↓	Y	X	
36	IE-10-15.0	↓	1250	↓	N		X
37	IE-11-2.0	↓	1320	↓	Y		X
38	IE-11-5.0	↓	1326	↓	Y		X
39	IE-11-10.0	↓	1336	↓	Y		X
40	IE-16-2.0	↓	1445	↓	Y	X	

Analyses Required — Number of Containers: (blank)

PROJECT INFORMATION

Project Name: Park Ave Cleaners
Project Number: 13-945A
Contact Person: craig@iris-env.com
E-mail: Craig Rauter
Contact Telephone: 510 834 4747 x79
Report: Routine (Level 2) Level 3 Level 4 EDD
TAT: 10-day (5-day) 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: B.H Chin	Printed Name: Ricky Evans
Signature: [signature]	Signature: [signature]
Company: Iris Env.	Company: C&T
Time/Date: 8/1/13 1645	Time/Date: 8/1/13 1645

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Ricky Evans	Printed Name: TINA RAIKAR
Signature: [signature]	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/1/13 1835	Time/Date: 8/1/13 1835

247539

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CHAIN-OF-CUSTODY

Date: 8/1/13 Page: 5 of 5 **№** 003586

Sampler Name(s): Bill Chen Signature(s):

	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260 Hold	Number of Containers
41	IE-16-5.0	8/1/13	~~1445~~ 1450	soil	Y	X	
42	IE-16-10.5		~~1450~~ 1500		Y	X	
43	IE-16-15.0		1512		N	X	

PROJECT INFORMATION

Project Name: Park Ave Cleaners
Project Number: 13-945A
Contact Person: Craig Pelletier
E-mail: craig@iris-env.com
Contact Telephone: 510.834.4747 x 19
Report: Routine (Level 2) Level 3 Level 4 EDD
TAT: 10-day 5-day 72-hr 48-hr 24-hr Other:
Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Bill Chen	Printed Name: Ricky Crans
Signature:	Signature:
Company: Iris Envl	Company: C&T
Time/Date: 8/2/13 1645	Time/Date: 8/2/13 1645
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Crans	Printed Name: TINA RAIKAR
Signature:	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/2/13 1730	Time/Date: 8/2/13 1730

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247539 Date Received 8/1/13 Number of coolers 2
Client IRIS Project PARK AVENUE CLEANERS (13-945A)

Date Opened 8/1/13 By (print) TR (sign) Tina Lankan
Date Logged in 8/2/13 By (print) [illegible] (sign) [illegible]

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 3.9, 2.9

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ (YES) NO
If YES, what time were they transferred to freezer? 2110
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ (YES) NO N/A
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-08-2.0	Diln Fac:	0.6983
Lab ID:	247539-001	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	7.0
Chloromethane	ND	7.0
Vinyl Chloride	ND	7.0
Bromomethane	ND	7.0
Chloroethane	ND	7.0
Trichlorofluoromethane	ND	3.5
Acetone	ND	14
Freon 113	ND	3.5
1,1-Dichloroethene	ND	3.5
Methylene Chloride	ND	14
Carbon Disulfide	ND	3.5
MTBE	ND	3.5
trans-1,2-Dichloroethene	ND	3.5
Vinyl Acetate	ND	35
1,1-Dichloroethane	ND	3.5
2-Butanone	ND	7.0
cis-1,2-Dichloroethene	ND	3.5
2,2-Dichloropropane	ND	3.5
Chloroform	ND	3.5
Bromochloromethane	ND	3.5
1,1,1-Trichloroethane	ND	3.5
1,1-Dichloropropene	ND	3.5
Carbon Tetrachloride	ND	3.5
1,2-Dichloroethane	ND	3.5
Benzene	ND	3.5
Trichloroethene	ND	3.5
1,2-Dichloropropane	ND	3.5
Bromodichloromethane	ND	3.5
Dibromomethane	ND	3.5
4-Methyl-2-Pentanone	ND	7.0
cis-1,3-Dichloropropene	ND	3.5
Toluene	ND	3.5
trans-1,3-Dichloropropene	ND	3.5
1,1,2-Trichloroethane	ND	3.5
2-Hexanone	ND	7.0
1,3-Dichloropropane	ND	3.5
Tetrachloroethene	ND	3.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-08-2.0	Diln Fac:	0.6983
Lab ID:	247539-001	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	3.5
1,2-Dibromoethane	ND	3.5
Chlorobenzene	ND	3.5
1,1,1,2-Tetrachloroethane	ND	3.5
Ethylbenzene	ND	3.5
m,p-Xylenes	ND	3.5
o-Xylene	ND	3.5
Styrene	ND	3.5
Bromoform	ND	3.5
Isopropylbenzene	ND	3.5
1,1,2,2-Tetrachloroethane	ND	3.5
1,2,3-Trichloropropane	ND	3.5
Propylbenzene	ND	3.5
Bromobenzene	ND	3.5
1,3,5-Trimethylbenzene	ND	3.5
2-Chlorotoluene	ND	3.5
4-Chlorotoluene	ND	3.5
tert-Butylbenzene	ND	3.5
1,2,4-Trimethylbenzene	ND	3.5
sec-Butylbenzene	ND	3.5
para-Isopropyl Toluene	ND	3.5
1,3-Dichlorobenzene	ND	3.5
1,4-Dichlorobenzene	ND	3.5
n-Butylbenzene	ND	3.5
1,2-Dichlorobenzene	ND	3.5
1,2-Dibromo-3-Chloropropane	ND	3.5
1,2,4-Trichlorobenzene	ND	3.5
Hexachlorobutadiene	ND	3.5
Naphthalene	ND	3.5
1,2,3-Trichlorobenzene	ND	3.5

Surrogate	%REC	Limits
Dibromofluoromethane	116	80-124
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	101	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-08-5.0	Diln Fac:	0.7587
Lab ID:	247539-002	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	7.6
Chloromethane	ND	7.6
Vinyl Chloride	ND	7.6
Bromomethane	ND	7.6
Chloroethane	ND	7.6
Trichlorofluoromethane	ND	3.8
Acetone	ND	15
Freon 113	ND	3.8
1,1-Dichloroethene	ND	3.8
Methylene Chloride	ND	15
Carbon Disulfide	ND	3.8
MTBE	ND	3.8
trans-1,2-Dichloroethene	ND	3.8
Vinyl Acetate	ND	38
1,1-Dichloroethane	ND	3.8
2-Butanone	ND	7.6
cis-1,2-Dichloroethene	ND	3.8
2,2-Dichloropropane	ND	3.8
Chloroform	ND	3.8
Bromochloromethane	ND	3.8
1,1,1-Trichloroethane	ND	3.8
1,1-Dichloropropene	ND	3.8
Carbon Tetrachloride	ND	3.8
1,2-Dichloroethane	ND	3.8
Benzene	ND	3.8
Trichloroethene	ND	3.8
1,2-Dichloropropane	ND	3.8
Bromodichloromethane	ND	3.8
Dibromomethane	ND	3.8
4-Methyl-2-Pentanone	ND	7.6
cis-1,3-Dichloropropene	ND	3.8
Toluene	ND	3.8
trans-1,3-Dichloropropene	ND	3.8
1,1,2-Trichloroethane	ND	3.8
2-Hexanone	ND	7.6
1,3-Dichloropropane	ND	3.8
Tetrachloroethene	ND	3.8

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-08-5.0	Diln Fac:	0.7587
Lab ID:	247539-002	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	3.8
1,2-Dibromoethane	ND	3.8
Chlorobenzene	ND	3.8
1,1,1,2-Tetrachloroethane	ND	3.8
Ethylbenzene	ND	3.8
m,p-Xylenes	ND	3.8
o-Xylene	ND	3.8
Styrene	ND	3.8
Bromoform	ND	3.8
Isopropylbenzene	ND	3.8
1,1,2,2-Tetrachloroethane	ND	3.8
1,2,3-Trichloropropane	ND	3.8
Propylbenzene	ND	3.8
Bromobenzene	ND	3.8
1,3,5-Trimethylbenzene	ND	3.8
2-Chlorotoluene	ND	3.8
4-Chlorotoluene	ND	3.8
tert-Butylbenzene	ND	3.8
1,2,4-Trimethylbenzene	ND	3.8
sec-Butylbenzene	ND	3.8
para-Isopropyl Toluene	ND	3.8
1,3-Dichlorobenzene	ND	3.8
1,4-Dichlorobenzene	ND	3.8
n-Butylbenzene	ND	3.8
1,2-Dichlorobenzene	ND	3.8
1,2-Dibromo-3-Chloropropane	ND	3.8
1,2,4-Trichlorobenzene	ND	3.8
Hexachlorobutadiene	ND	3.8
Naphthalene	ND	3.8
1,2,3-Trichlorobenzene	ND	3.8

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-124
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	102	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-08-10.0	Diln Fac:	0.8117
Lab ID:	247539-003	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.1
Chloromethane	ND	8.1
Vinyl Chloride	ND	8.1
Bromomethane	ND	8.1
Chloroethane	ND	8.1
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.1
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.1
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.1
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	ND	4.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-08-10.0	Diln Fac:	0.8117
Lab ID:	247539-003	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-124
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	104	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-09-2.0	Diln Fac:	0.7062
Lab ID:	247539-005	Batch#:	201361
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	7.1
Chloromethane	ND	7.1
Vinyl Chloride	ND	7.1
Bromomethane	ND	7.1
Chloroethane	ND	7.1
Trichlorofluoromethane	ND	3.5
Acetone	ND	14
Freon 113	ND	3.5
1,1-Dichloroethene	ND	3.5
Methylene Chloride	ND	14
Carbon Disulfide	ND	3.5
MTBE	ND	3.5
trans-1,2-Dichloroethene	ND	3.5
Vinyl Acetate	ND	35
1,1-Dichloroethane	ND	3.5
2-Butanone	ND	7.1
cis-1,2-Dichloroethene	ND	3.5
2,2-Dichloropropane	ND	3.5
Chloroform	ND	3.5
Bromochloromethane	ND	3.5
1,1,1-Trichloroethane	ND	3.5
1,1-Dichloropropene	ND	3.5
Carbon Tetrachloride	ND	3.5
1,2-Dichloroethane	ND	3.5
Benzene	ND	3.5
Trichloroethene	ND	3.5
1,2-Dichloropropane	ND	3.5
Bromodichloromethane	ND	3.5
Dibromomethane	ND	3.5
4-Methyl-2-Pentanone	ND	7.1
cis-1,3-Dichloropropene	ND	3.5
Toluene	4.3	3.5
trans-1,3-Dichloropropene	ND	3.5
1,1,2-Trichloroethane	ND	3.5
2-Hexanone	ND	7.1
1,3-Dichloropropane	ND	3.5
Tetrachloroethene	ND	3.5
Dibromochloromethane	ND	3.5
1,2-Dibromoethane	ND	3.5
Chlorobenzene	ND	3.5
1,1,1,2-Tetrachloroethane	ND	3.5
Ethylbenzene	ND	3.5
m,p-Xylenes	ND	3.5
o-Xylene	ND	3.5
Styrene	ND	3.5
Bromoform	ND	3.5
Isopropylbenzene	ND	3.5
1,1,2,2-Tetrachloroethane	ND	3.5
1,2,3-Trichloropropane	ND	3.5
Propylbenzene	ND	3.5
Bromobenzene	ND	3.5
1,3,5-Trimethylbenzene	ND	3.5
2-Chlorotoluene	ND	3.5

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-09-2.0	Dil'n Fac:	0.7062
Lab ID:	247539-005	Batch#:	201361
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
4-Chlorotoluene	ND	3.5
tert-Butylbenzene	ND	3.5
1,2,4-Trimethylbenzene	ND	3.5
sec-Butylbenzene	ND	3.5
para-Isopropyl Toluene	ND	3.5
1,3-Dichlorobenzene	ND	3.5
1,4-Dichlorobenzene	ND	3.5
n-Butylbenzene	ND	3.5
1,2-Dichlorobenzene	ND	3.5
1,2-Dibromo-3-Chloropropane	ND	3.5
1,2,4-Trichlorobenzene	ND	3.5
Hexachlorobutadiene	ND	3.5
Naphthalene	ND	3.5
1,2,3-Trichlorobenzene	ND	3.5

Surrogate	%REC	Limits
Dibromofluoromethane	129 *	80-124
1,2-Dichloroethane-d4	115	80-137
Toluene-d8	111	80-120
Bromofluorobenzene	119	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-09-5.0	Diln Fac:	0.7800
Lab ID:	247539-006	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	7.8
Chloromethane	ND	7.8
Vinyl Chloride	ND	7.8
Bromomethane	ND	7.8
Chloroethane	ND	7.8
Trichlorofluoromethane	ND	3.9
Acetone	ND	16
Freon 113	ND	3.9
1,1-Dichloroethene	ND	3.9
Methylene Chloride	ND	16
Carbon Disulfide	ND	3.9
MTBE	ND	3.9
trans-1,2-Dichloroethene	ND	3.9
Vinyl Acetate	ND	39
1,1-Dichloroethane	ND	3.9
2-Butanone	ND	7.8
cis-1,2-Dichloroethene	ND	3.9
2,2-Dichloropropane	ND	3.9
Chloroform	ND	3.9
Bromochloromethane	ND	3.9
1,1,1-Trichloroethane	ND	3.9
1,1-Dichloropropene	ND	3.9
Carbon Tetrachloride	ND	3.9
1,2-Dichloroethane	ND	3.9
Benzene	ND	3.9
Trichloroethene	ND	3.9
1,2-Dichloropropane	ND	3.9
Bromodichloromethane	ND	3.9
Dibromomethane	ND	3.9
4-Methyl-2-Pentanone	ND	7.8
cis-1,3-Dichloropropene	ND	3.9
Toluene	ND	3.9
trans-1,3-Dichloropropene	ND	3.9
1,1,2-Trichloroethane	ND	3.9
2-Hexanone	ND	7.8
1,3-Dichloropropane	ND	3.9
Tetrachloroethene	ND	3.9

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-09-5.0	Diln Fac:	0.7800
Lab ID:	247539-006	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	3.9
1,2-Dibromoethane	ND	3.9
Chlorobenzene	ND	3.9
1,1,1,2-Tetrachloroethane	ND	3.9
Ethylbenzene	ND	3.9
m,p-Xylenes	ND	3.9
o-Xylene	ND	3.9
Styrene	ND	3.9
Bromoform	ND	3.9
Isopropylbenzene	ND	3.9
1,1,2,2-Tetrachloroethane	ND	3.9
1,2,3-Trichloropropane	ND	3.9
Propylbenzene	ND	3.9
Bromobenzene	ND	3.9
1,3,5-Trimethylbenzene	ND	3.9
2-Chlorotoluene	ND	3.9
4-Chlorotoluene	ND	3.9
tert-Butylbenzene	ND	3.9
1,2,4-Trimethylbenzene	ND	3.9
sec-Butylbenzene	ND	3.9
para-Isopropyl Toluene	ND	3.9
1,3-Dichlorobenzene	ND	3.9
1,4-Dichlorobenzene	ND	3.9
n-Butylbenzene	ND	3.9
1,2-Dichlorobenzene	ND	3.9
1,2-Dibromo-3-Chloropropane	ND	3.9
1,2,4-Trichlorobenzene	ND	3.9
Hexachlorobutadiene	ND	3.9
Naphthalene	ND	3.9
1,2,3-Trichlorobenzene	ND	3.9

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-124
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	108	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-09-10.0	Diln Fac:	0.8170
Lab ID:	247539-007	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.2
Chloromethane	ND	8.2
Vinyl Chloride	ND	8.2
Bromomethane	ND	8.2
Chloroethane	ND	8.2
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.2
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.2
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.2
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	ND	4.1
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-09-10.0	Dil'n Fac:	0.8170
Lab ID:	247539-007	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	125 *	80-124
1,2-Dichloroethane-d4	111	80-137
Toluene-d8	104	80-120
Bromofluorobenzene	110	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-12-2.0	Diln Fac:	0.8210
Lab ID:	247539-008	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.2
Chloromethane	ND	8.2
Vinyl Chloride	ND	8.2
Bromomethane	ND	8.2
Chloroethane	ND	8.2
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.2
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.2
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.2
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	ND	4.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-12-2.0	Diln Fac:	0.8210
Lab ID:	247539-008	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	118	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	102	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-12-5.0	Diln Fac:	0.8606
Lab ID:	247539-009	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.6
Chloromethane	ND	8.6
Vinyl Chloride	ND	8.6
Bromomethane	ND	8.6
Chloroethane	ND	8.6
Trichlorofluoromethane	ND	4.3
Acetone	ND	17
Freon 113	ND	4.3
1,1-Dichloroethene	ND	4.3
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.3
MTBE	ND	4.3
trans-1,2-Dichloroethene	ND	4.3
Vinyl Acetate	ND	43
1,1-Dichloroethane	ND	4.3
2-Butanone	ND	8.6
cis-1,2-Dichloroethene	ND	4.3
2,2-Dichloropropane	ND	4.3
Chloroform	ND	4.3
Bromochloromethane	ND	4.3
1,1,1-Trichloroethane	ND	4.3
1,1-Dichloropropene	ND	4.3
Carbon Tetrachloride	ND	4.3
1,2-Dichloroethane	ND	4.3
Benzene	ND	4.3
Trichloroethene	ND	4.3
1,2-Dichloropropane	ND	4.3
Bromodichloromethane	ND	4.3
Dibromomethane	ND	4.3
4-Methyl-2-Pentanone	ND	8.6
cis-1,3-Dichloropropene	ND	4.3
Toluene	ND	4.3
trans-1,3-Dichloropropene	ND	4.3
1,1,2-Trichloroethane	ND	4.3
2-Hexanone	ND	8.6
1,3-Dichloropropane	ND	4.3
Tetrachloroethene	4.9	4.3

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-12-5.0	Diln Fac:	0.8606
Lab ID:	247539-009	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Chlorobenzene	ND	4.3
1,1,1,2-Tetrachloroethane	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
Styrene	ND	4.3
Bromoform	ND	4.3
Isopropylbenzene	ND	4.3
1,1,2,2-Tetrachloroethane	ND	4.3
1,2,3-Trichloropropane	ND	4.3
Propylbenzene	ND	4.3
Bromobenzene	ND	4.3
1,3,5-Trimethylbenzene	ND	4.3
2-Chlorotoluene	ND	4.3
4-Chlorotoluene	ND	4.3
tert-Butylbenzene	ND	4.3
1,2,4-Trimethylbenzene	ND	4.3
sec-Butylbenzene	ND	4.3
para-Isopropyl Toluene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
n-Butylbenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3
1,2-Dibromo-3-Chloropropane	ND	4.3
1,2,4-Trichlorobenzene	ND	4.3
Hexachlorobutadiene	ND	4.3
Naphthalene	ND	4.3
1,2,3-Trichlorobenzene	ND	4.3

Surrogate	%REC	Limits
Dibromofluoromethane	115	80-124
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	105	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-12-9.5	Diln Fac:	0.8651
Lab ID:	247539-010	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.7
Chloromethane	ND	8.7
Vinyl Chloride	ND	8.7
Bromomethane	ND	8.7
Chloroethane	ND	8.7
Trichlorofluoromethane	ND	4.3
Acetone	ND	17
Freon 113	ND	4.3
1,1-Dichloroethene	ND	4.3
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.3
MTBE	ND	4.3
trans-1,2-Dichloroethene	ND	4.3
Vinyl Acetate	ND	43
1,1-Dichloroethane	ND	4.3
2-Butanone	ND	8.7
cis-1,2-Dichloroethene	ND	4.3
2,2-Dichloropropane	ND	4.3
Chloroform	ND	4.3
Bromochloromethane	ND	4.3
1,1,1-Trichloroethane	ND	4.3
1,1-Dichloropropene	ND	4.3
Carbon Tetrachloride	ND	4.3
1,2-Dichloroethane	ND	4.3
Benzene	ND	4.3
Trichloroethene	ND	4.3
1,2-Dichloropropane	ND	4.3
Bromodichloromethane	ND	4.3
Dibromomethane	ND	4.3
4-Methyl-2-Pentanone	ND	8.7
cis-1,3-Dichloropropene	ND	4.3
Toluene	ND	4.3
trans-1,3-Dichloropropene	ND	4.3
1,1,2-Trichloroethane	ND	4.3
2-Hexanone	ND	8.7
1,3-Dichloropropane	ND	4.3
Tetrachloroethene	13	4.3

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-12-9.5	Diln Fac:	0.8651
Lab ID:	247539-010	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Chlorobenzene	ND	4.3
1,1,1,2-Tetrachloroethane	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
Styrene	ND	4.3
Bromoform	ND	4.3
Isopropylbenzene	ND	4.3
1,1,2,2-Tetrachloroethane	ND	4.3
1,2,3-Trichloropropane	ND	4.3
Propylbenzene	ND	4.3
Bromobenzene	ND	4.3
1,3,5-Trimethylbenzene	ND	4.3
2-Chlorotoluene	ND	4.3
4-Chlorotoluene	ND	4.3
tert-Butylbenzene	ND	4.3
1,2,4-Trimethylbenzene	ND	4.3
sec-Butylbenzene	ND	4.3
para-Isopropyl Toluene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
n-Butylbenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3
1,2-Dibromo-3-Chloropropane	ND	4.3
1,2,4-Trichlorobenzene	ND	4.3
Hexachlorobutadiene	ND	4.3
Naphthalene	ND	4.3
1,2,3-Trichlorobenzene	ND	4.3

Surrogate	%REC	Limits
Dibromofluoromethane	123	80-124
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	107	80-120
Bromofluorobenzene	114	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-13-2.0	Diln Fac:	0.9381
Lab ID:	247539-012	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	9.4
Chloromethane	ND	9.4
Vinyl Chloride	ND	9.4
Bromomethane	ND	9.4
Chloroethane	ND	9.4
Trichlorofluoromethane	ND	4.7
Acetone	ND	19
Freon 113	ND	4.7
1,1-Dichloroethene	ND	4.7
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.7
MTBE	ND	4.7
trans-1,2-Dichloroethene	ND	4.7
Vinyl Acetate	ND	47
1,1-Dichloroethane	ND	4.7
2-Butanone	ND	9.4
cis-1,2-Dichloroethene	ND	4.7
2,2-Dichloropropane	ND	4.7
Chloroform	ND	4.7
Bromochloromethane	ND	4.7
1,1,1-Trichloroethane	ND	4.7
1,1-Dichloropropene	ND	4.7
Carbon Tetrachloride	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Trichloroethene	ND	4.7
1,2-Dichloropropane	ND	4.7
Bromodichloromethane	ND	4.7
Dibromomethane	ND	4.7
4-Methyl-2-Pentanone	ND	9.4
cis-1,3-Dichloropropene	ND	4.7
Toluene	ND	4.7
trans-1,3-Dichloropropene	ND	4.7
1,1,2-Trichloroethane	ND	4.7
2-Hexanone	ND	9.4
1,3-Dichloropropane	ND	4.7
Tetrachloroethene	ND	4.7

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-13-2.0	Diln Fac:	0.9381
Lab ID:	247539-012	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Chlorobenzene	ND	4.7
1,1,1,2-Tetrachloroethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
Styrene	ND	4.7
Bromoform	ND	4.7
Isopropylbenzene	ND	4.7
1,1,2,2-Tetrachloroethane	ND	4.7
1,2,3-Trichloropropane	ND	4.7
Propylbenzene	ND	4.7
Bromobenzene	ND	4.7
1,3,5-Trimethylbenzene	ND	4.7
2-Chlorotoluene	ND	4.7
4-Chlorotoluene	ND	4.7
tert-Butylbenzene	ND	4.7
1,2,4-Trimethylbenzene	ND	4.7
sec-Butylbenzene	ND	4.7
para-Isopropyl Toluene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
n-Butylbenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7
1,2-Dibromo-3-Chloropropane	ND	4.7
1,2,4-Trichlorobenzene	ND	4.7
Hexachlorobutadiene	ND	4.7
Naphthalene	ND	4.7
1,2,3-Trichlorobenzene	ND	4.7

Surrogate	%REC	Limits
Dibromofluoromethane	123	80-124
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	106	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-13-5.0	Diln Fac:	0.9328
Lab ID:	247539-013	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	9.3
Chloromethane	ND	9.3
Vinyl Chloride	ND	9.3
Bromomethane	ND	9.3
Chloroethane	ND	9.3
Trichlorofluoromethane	ND	4.7
Acetone	ND	19
Freon 113	ND	4.7
1,1-Dichloroethene	ND	4.7
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.7
MTBE	ND	4.7
trans-1,2-Dichloroethene	ND	4.7
Vinyl Acetate	ND	47
1,1-Dichloroethane	ND	4.7
2-Butanone	ND	9.3
cis-1,2-Dichloroethene	ND	4.7
2,2-Dichloropropane	ND	4.7
Chloroform	ND	4.7
Bromochloromethane	ND	4.7
1,1,1-Trichloroethane	ND	4.7
1,1-Dichloropropene	ND	4.7
Carbon Tetrachloride	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Trichloroethene	ND	4.7
1,2-Dichloropropane	ND	4.7
Bromodichloromethane	ND	4.7
Dibromomethane	ND	4.7
4-Methyl-2-Pentanone	ND	9.3
cis-1,3-Dichloropropene	ND	4.7
Toluene	ND	4.7
trans-1,3-Dichloropropene	ND	4.7
1,1,2-Trichloroethane	ND	4.7
2-Hexanone	ND	9.3
1,3-Dichloropropane	ND	4.7
Tetrachloroethene	ND	4.7

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-13-5.0	Diln Fac:	0.9328
Lab ID:	247539-013	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Chlorobenzene	ND	4.7
1,1,1,2-Tetrachloroethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
Styrene	ND	4.7
Bromoform	ND	4.7
Isopropylbenzene	ND	4.7
1,1,2,2-Tetrachloroethane	ND	4.7
1,2,3-Trichloropropane	ND	4.7
Propylbenzene	ND	4.7
Bromobenzene	ND	4.7
1,3,5-Trimethylbenzene	ND	4.7
2-Chlorotoluene	ND	4.7
4-Chlorotoluene	ND	4.7
tert-Butylbenzene	ND	4.7
1,2,4-Trimethylbenzene	ND	4.7
sec-Butylbenzene	ND	4.7
para-Isopropyl Toluene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
n-Butylbenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7
1,2-Dibromo-3-Chloropropane	ND	4.7
1,2,4-Trichlorobenzene	ND	4.7
Hexachlorobutadiene	ND	4.7
Naphthalene	ND	4.7
1,2,3-Trichlorobenzene	ND	4.7

Surrogate	%REC	Limits
Dibromofluoromethane	121	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	105	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-13-9.5	Dil'n Fac:	0.8026
Lab ID:	247539-014	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.0
Chloromethane	ND	8.0
Vinyl Chloride	ND	8.0
Bromomethane	ND	8.0
Chloroethane	ND	8.0
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	8.0
cis-1,2-Dichloroethene	ND	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	8.0
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	8.0
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	6.5	4.0
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-13-9.5	Dil'n Fac:	0.8026
Lab ID:	247539-014	Batch#:	201321
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	125 *	80-124
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	110	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-2.0	Diln Fac:	0.8375
Lab ID:	247539-015	Batch#:	201361
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	8.4
Chloromethane	ND	8.4
Vinyl Chloride	ND	8.4
Bromomethane	ND	8.4
Chloroethane	ND	8.4
Trichlorofluoromethane	ND	4.2
Acetone	ND	17
Freon 113	ND	4.2
1,1-Dichloroethene	ND	4.2
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.2
MTBE	ND	4.2
trans-1,2-Dichloroethene	ND	4.2
Vinyl Acetate	ND	42
1,1-Dichloroethane	ND	4.2
2-Butanone	ND	8.4
cis-1,2-Dichloroethene	ND	4.2
2,2-Dichloropropane	ND	4.2
Chloroform	ND	4.2
Bromochloromethane	ND	4.2
1,1,1-Trichloroethane	ND	4.2
1,1-Dichloropropene	ND	4.2
Carbon Tetrachloride	ND	4.2
1,2-Dichloroethane	ND	4.2
Benzene	ND	4.2
Trichloroethene	ND	4.2
1,2-Dichloropropane	ND	4.2
Bromodichloromethane	ND	4.2
Dibromomethane	ND	4.2
4-Methyl-2-Pentanone	ND	8.4
cis-1,3-Dichloropropene	ND	4.2
Toluene	ND	4.2
trans-1,3-Dichloropropene	ND	4.2
1,1,2-Trichloroethane	ND	4.2
2-Hexanone	ND	8.4
1,3-Dichloropropane	ND	4.2
Tetrachloroethene	6.0	4.2
Dibromochloromethane	ND	4.2
1,2-Dibromoethane	ND	4.2
Chlorobenzene	ND	4.2
1,1,1,2-Tetrachloroethane	ND	4.2
Ethylbenzene	ND	4.2
m,p-Xylenes	ND	4.2
o-Xylene	ND	4.2
Styrene	ND	4.2
Bromoform	ND	4.2
Isopropylbenzene	ND	4.2
1,1,2,2-Tetrachloroethane	ND	4.2
1,2,3-Trichloropropane	ND	4.2
Propylbenzene	ND	4.2
Bromobenzene	ND	4.2
1,3,5-Trimethylbenzene	ND	4.2
2-Chlorotoluene	ND	4.2

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-2.0	Diln Fac:	0.8375
Lab ID:	247539-015	Batch#:	201361
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.2
tert-Butylbenzene	ND	4.2
1,2,4-Trimethylbenzene	ND	4.2
sec-Butylbenzene	ND	4.2
para-Isopropyl Toluene	ND	4.2
1,3-Dichlorobenzene	ND	4.2
1,4-Dichlorobenzene	ND	4.2
n-Butylbenzene	ND	4.2
1,2-Dichlorobenzene	ND	4.2
1,2-Dibromo-3-Chloropropane	ND	4.2
1,2,4-Trichlorobenzene	ND	4.2
Hexachlorobutadiene	ND	4.2
Naphthalene	ND	4.2
1,2,3-Trichlorobenzene	ND	4.2

Surrogate	%REC	Limits
Dibromofluoromethane	138 *	80-124
1,2-Dichloroethane-d4	111	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	103	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-5.0	Diln Fac:	0.8237
Lab ID:	247539-016	Batch#:	201361
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	8.2
Chloromethane	ND	8.2
Vinyl Chloride	ND	8.2
Bromomethane	ND	8.2
Chloroethane	ND	8.2
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.2
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.2
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.2
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	38	4.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-5.0	Diln Fac:	0.8237
Lab ID:	247539-016	Batch#:	201361
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	124	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	107	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-10.0	Diln Fac:	0.7899
Lab ID:	247539-017	Batch#:	201334
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	7.9
Chloromethane	ND	7.9
Vinyl Chloride	ND	7.9
Bromomethane	ND	7.9
Chloroethane	ND	7.9
Trichlorofluoromethane	ND	3.9
Acetone	ND	16
Freon 113	ND	3.9
1,1-Dichloroethene	ND	3.9
Methylene Chloride	ND	16
Carbon Disulfide	ND	3.9
MTBE	ND	3.9
trans-1,2-Dichloroethene	ND	3.9
Vinyl Acetate	ND	39
1,1-Dichloroethane	ND	3.9
2-Butanone	ND	7.9
cis-1,2-Dichloroethene	ND	3.9
2,2-Dichloropropane	ND	3.9
Chloroform	ND	3.9
Bromochloromethane	ND	3.9
1,1,1-Trichloroethane	ND	3.9
1,1-Dichloropropene	ND	3.9
Carbon Tetrachloride	ND	3.9
1,2-Dichloroethane	ND	3.9
Benzene	ND	3.9
Trichloroethene	ND	3.9
1,2-Dichloropropane	ND	3.9
Bromodichloromethane	ND	3.9
Dibromomethane	ND	3.9
4-Methyl-2-Pentanone	ND	7.9
cis-1,3-Dichloropropene	ND	3.9
Toluene	ND	3.9
trans-1,3-Dichloropropene	ND	3.9
1,1,2-Trichloroethane	ND	3.9
2-Hexanone	ND	7.9
1,3-Dichloropropane	ND	3.9
Tetrachloroethene	4.9	3.9

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-10.0	Diln Fac:	0.7899
Lab ID:	247539-017	Batch#:	201334
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	3.9
1,2-Dibromoethane	ND	3.9
Chlorobenzene	ND	3.9
1,1,1,2-Tetrachloroethane	ND	3.9
Ethylbenzene	ND	3.9
m,p-Xylenes	ND	3.9
o-Xylene	ND	3.9
Styrene	ND	3.9
Bromoform	ND	3.9
Isopropylbenzene	ND	3.9
1,1,2,2-Tetrachloroethane	ND	3.9
1,2,3-Trichloropropane	ND	3.9
Propylbenzene	ND	3.9
Bromobenzene	ND	3.9
1,3,5-Trimethylbenzene	ND	3.9
2-Chlorotoluene	ND	3.9
4-Chlorotoluene	ND	3.9
tert-Butylbenzene	ND	3.9
1,2,4-Trimethylbenzene	ND	3.9
sec-Butylbenzene	ND	3.9
para-Isopropyl Toluene	ND	3.9
1,3-Dichlorobenzene	ND	3.9
1,4-Dichlorobenzene	ND	3.9
n-Butylbenzene	ND	3.9
1,2-Dichlorobenzene	ND	3.9
1,2-Dibromo-3-Chloropropane	ND	3.9
1,2,4-Trichlorobenzene	ND	3.9
Hexachlorobutadiene	ND	3.9
Naphthalene	ND	3.9
1,2,3-Trichlorobenzene	ND	3.9

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	122	80-137
Toluene-d8	92	80-120
Bromofluorobenzene	98	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-17-2.0	Diln Fac:	0.8104
Lab ID:	247539-018	Batch#:	201334
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.1
Chloromethane	ND	8.1
Vinyl Chloride	ND	8.1
Bromomethane	ND	8.1
Chloroethane	ND	8.1
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.1
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.1
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.1
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	8.7	4.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-17-2.0	Diln Fac:	0.8104
Lab ID:	247539-018	Batch#:	201334
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-124
1,2-Dichloroethane-d4	118	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	94	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-17-5.0	Diln Fac:	0.7669
Lab ID:	247539-019	Batch#:	201334
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	7.7
Chloromethane	ND	7.7
Vinyl Chloride	ND	7.7
Bromomethane	ND	7.7
Chloroethane	ND	7.7
Trichlorofluoromethane	ND	3.8
Acetone	ND	15
Freon 113	ND	3.8
1,1-Dichloroethene	ND	3.8
Methylene Chloride	ND	15
Carbon Disulfide	ND	3.8
MTBE	ND	3.8
trans-1,2-Dichloroethene	ND	3.8
Vinyl Acetate	ND	38
1,1-Dichloroethane	ND	3.8
2-Butanone	ND	7.7
cis-1,2-Dichloroethene	ND	3.8
2,2-Dichloropropane	ND	3.8
Chloroform	ND	3.8
Bromochloromethane	ND	3.8
1,1,1-Trichloroethane	ND	3.8
1,1-Dichloropropene	ND	3.8
Carbon Tetrachloride	ND	3.8
1,2-Dichloroethane	ND	3.8
Benzene	ND	3.8
Trichloroethene	ND	3.8
1,2-Dichloropropane	ND	3.8
Bromodichloromethane	ND	3.8
Dibromomethane	ND	3.8
4-Methyl-2-Pentanone	ND	7.7
cis-1,3-Dichloropropene	ND	3.8
Toluene	ND	3.8
trans-1,3-Dichloropropene	ND	3.8
1,1,2-Trichloroethane	ND	3.8
2-Hexanone	ND	7.7
1,3-Dichloropropane	ND	3.8
Tetrachloroethene	16	3.8

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-17-5.0	Diln Fac:	0.7669
Lab ID:	247539-019	Batch#:	201334
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	3.8
1,2-Dibromoethane	ND	3.8
Chlorobenzene	ND	3.8
1,1,1,2-Tetrachloroethane	ND	3.8
Ethylbenzene	ND	3.8
m,p-Xylenes	ND	3.8
o-Xylene	ND	3.8
Styrene	ND	3.8
Bromoform	ND	3.8
Isopropylbenzene	ND	3.8
1,1,2,2-Tetrachloroethane	ND	3.8
1,2,3-Trichloropropane	ND	3.8
Propylbenzene	ND	3.8
Bromobenzene	ND	3.8
1,3,5-Trimethylbenzene	ND	3.8
2-Chlorotoluene	ND	3.8
4-Chlorotoluene	ND	3.8
tert-Butylbenzene	ND	3.8
1,2,4-Trimethylbenzene	ND	3.8
sec-Butylbenzene	ND	3.8
para-Isopropyl Toluene	ND	3.8
1,3-Dichlorobenzene	ND	3.8
1,4-Dichlorobenzene	ND	3.8
n-Butylbenzene	ND	3.8
1,2-Dichlorobenzene	ND	3.8
1,2-Dibromo-3-Chloropropane	ND	3.8
1,2,4-Trichlorobenzene	ND	3.8
Hexachlorobutadiene	ND	3.8
Naphthalene	ND	3.8
1,2,3-Trichlorobenzene	ND	3.8

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-124
1,2-Dichloroethane-d4	125	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	95	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-17-10.0	Diln Fac:	0.8210
Lab ID:	247539-020	Batch#:	201334
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.2
Chloromethane	ND	8.2
Vinyl Chloride	ND	8.2
Bromomethane	ND	8.2
Chloroethane	ND	8.2
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.2
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.2
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.2
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	15	4.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-17-10.0	Diln Fac:	0.8210
Lab ID:	247539-020	Batch#:	201334
Matrix:	Soil	Sampled:	07/31/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-124
1,2-Dichloroethane-d4	125	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	99	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-29-2.0	Basis:	as received
Lab ID:	247539-022	Sampled:	08/01/13
Matrix:	Soil	Received:	08/01/13
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	9.3	0.9346	201334	08/05/13
Chloromethane	ND	9.3	0.9346	201334	08/05/13
Vinyl Chloride	ND	9.3	0.9346	201334	08/05/13
Bromomethane	ND	9.3	0.9346	201334	08/05/13
Chloroethane	ND	9.3	0.9346	201334	08/05/13
Trichlorofluoromethane	ND	4.7	0.9346	201334	08/05/13
Acetone	ND	19	0.9346	201334	08/05/13
Freon 113	ND	4.7	0.9346	201334	08/05/13
1,1-Dichloroethene	ND	4.7	0.9346	201334	08/05/13
Methylene Chloride	ND	19	0.9346	201334	08/05/13
Carbon Disulfide	ND	4.7	0.9346	201334	08/05/13
MTBE	ND	4.7	0.9346	201334	08/05/13
trans-1,2-Dichloroethene	ND	4.7	0.9346	201334	08/05/13
Vinyl Acetate	ND	47	0.9346	201334	08/05/13
1,1-Dichloroethane	ND	4.7	0.9346	201334	08/05/13
2-Butanone	ND	9.3	0.9346	201334	08/05/13
cis-1,2-Dichloroethene	ND	4.7	0.9346	201334	08/05/13
2,2-Dichloropropane	ND	4.7	0.9346	201334	08/05/13
Chloroform	ND	4.7	0.9346	201334	08/05/13
Bromochloromethane	ND	4.7	0.9346	201334	08/05/13
1,1,1-Trichloroethane	ND	4.7	0.9346	201334	08/05/13
1,1-Dichloropropene	ND	4.7	0.9346	201334	08/05/13
Carbon Tetrachloride	ND	4.7	0.9346	201334	08/05/13
1,2-Dichloroethane	ND	4.7	0.9346	201334	08/05/13
Benzene	ND	4.7	0.9346	201334	08/05/13
Trichloroethene	ND	4.7	0.9346	201334	08/05/13
1,2-Dichloropropane	ND	4.7	0.9346	201334	08/05/13
Bromodichloromethane	ND	4.7	0.9346	201334	08/05/13
Dibromomethane	ND	4.7	0.9346	201334	08/05/13
4-Methyl-2-Pentanone	ND	9.3	0.9346	201334	08/05/13
cis-1,3-Dichloropropene	ND	4.7	0.9346	201334	08/05/13
Toluene	ND	4.7	0.9346	201334	08/05/13
trans-1,3-Dichloropropene	ND	4.7	0.9346	201334	08/05/13
1,1,2-Trichloroethane	ND	4.7	0.9346	201334	08/05/13
2-Hexanone	ND	9.3	0.9346	201334	08/05/13
1,3-Dichloropropane	ND	4.7	0.9346	201334	08/05/13
Tetrachloroethene	680	190	37.88	201361	08/06/13
Dibromochloromethane	ND	4.7	0.9346	201334	08/05/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-29-2.0	Basis:	as received
Lab ID:	247539-022	Sampled:	08/01/13
Matrix:	Soil	Received:	08/01/13
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,2-Dibromoethane	ND	4.7	0.9346	201334	08/05/13
Chlorobenzene	ND	4.7	0.9346	201334	08/05/13
1,1,1,2-Tetrachloroethane	ND	4.7	0.9346	201334	08/05/13
Ethylbenzene	ND	4.7	0.9346	201334	08/05/13
m,p-Xylenes	ND	4.7	0.9346	201334	08/05/13
o-Xylene	ND	4.7	0.9346	201334	08/05/13
Styrene	ND	4.7	0.9346	201334	08/05/13
Bromoform	ND	4.7	0.9346	201334	08/05/13
Isopropylbenzene	ND	4.7	0.9346	201334	08/05/13
1,1,2,2-Tetrachloroethane	ND	4.7	0.9346	201334	08/05/13
1,2,3-Trichloropropane	ND	4.7	0.9346	201334	08/05/13
Propylbenzene	ND	4.7	0.9346	201334	08/05/13
Bromobenzene	ND	4.7	0.9346	201334	08/05/13
1,3,5-Trimethylbenzene	ND	4.7	0.9346	201334	08/05/13
2-Chlorotoluene	ND	4.7	0.9346	201334	08/05/13
4-Chlorotoluene	ND	4.7	0.9346	201334	08/05/13
tert-Butylbenzene	ND	4.7	0.9346	201334	08/05/13
1,2,4-Trimethylbenzene	ND	4.7	0.9346	201334	08/05/13
sec-Butylbenzene	ND	4.7	0.9346	201334	08/05/13
para-Isopropyl Toluene	ND	4.7	0.9346	201334	08/05/13
1,3-Dichlorobenzene	ND	4.7	0.9346	201334	08/05/13
1,4-Dichlorobenzene	ND	4.7	0.9346	201334	08/05/13
n-Butylbenzene	ND	4.7	0.9346	201334	08/05/13
1,2-Dichlorobenzene	ND	4.7	0.9346	201334	08/05/13
1,2-Dibromo-3-Chloropropane	ND	4.7	0.9346	201334	08/05/13
1,2,4-Trichlorobenzene	ND	4.7	0.9346	201334	08/05/13
Hexachlorobutadiene	ND	4.7	0.9346	201334	08/05/13
Naphthalene	ND	4.7	0.9346	201334	08/05/13
1,2,3-Trichlorobenzene	ND	4.7	0.9346	201334	08/05/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	99	80-124	0.9346	201334	08/05/13
1,2-Dichloroethane-d4	105	80-137	0.9346	201334	08/05/13
Toluene-d8	97	80-120	0.9346	201334	08/05/13
Bromofluorobenzene	100	79-127	0.9346	201334	08/05/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-29-5.0	Basis:	as received
Lab ID:	247539-023	Sampled:	08/01/13
Matrix:	Soil	Received:	08/01/13
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	7.3	0.7321	201334	08/05/13
Chloromethane	ND	7.3	0.7321	201334	08/05/13
Vinyl Chloride	ND	7.3	0.7321	201334	08/05/13
Bromomethane	ND	7.3	0.7321	201334	08/05/13
Chloroethane	ND	7.3	0.7321	201334	08/05/13
Trichlorofluoromethane	ND	3.7	0.7321	201334	08/05/13
Acetone	ND	15	0.7321	201334	08/05/13
Freon 113	ND	3.7	0.7321	201334	08/05/13
1,1-Dichloroethene	ND	3.7	0.7321	201334	08/05/13
Methylene Chloride	ND	15	0.7321	201334	08/05/13
Carbon Disulfide	ND	3.7	0.7321	201334	08/05/13
MTBE	ND	3.7	0.7321	201334	08/05/13
trans-1,2-Dichloroethene	ND	3.7	0.7321	201334	08/05/13
Vinyl Acetate	ND	37	0.7321	201334	08/05/13
1,1-Dichloroethane	ND	3.7	0.7321	201334	08/05/13
2-Butanone	ND	7.3	0.7321	201334	08/05/13
cis-1,2-Dichloroethene	ND	3.7	0.7321	201334	08/05/13
2,2-Dichloropropane	ND	3.7	0.7321	201334	08/05/13
Chloroform	ND	3.7	0.7321	201334	08/05/13
Bromochloromethane	ND	3.7	0.7321	201334	08/05/13
1,1,1-Trichloroethane	ND	3.7	0.7321	201334	08/05/13
1,1-Dichloropropene	ND	3.7	0.7321	201334	08/05/13
Carbon Tetrachloride	ND	3.7	0.7321	201334	08/05/13
1,2-Dichloroethane	ND	3.7	0.7321	201334	08/05/13
Benzene	ND	3.7	0.7321	201334	08/05/13
Trichloroethene	ND	3.7	0.7321	201334	08/05/13
1,2-Dichloropropane	ND	3.7	0.7321	201334	08/05/13
Bromodichloromethane	ND	3.7	0.7321	201334	08/05/13
Dibromomethane	ND	3.7	0.7321	201334	08/05/13
4-Methyl-2-Pentanone	ND	7.3	0.7321	201334	08/05/13
cis-1,3-Dichloropropene	ND	3.7	0.7321	201334	08/05/13
Toluene	ND	3.7	0.7321	201334	08/05/13
trans-1,3-Dichloropropene	ND	3.7	0.7321	201334	08/05/13
1,1,2-Trichloroethane	ND	3.7	0.7321	201334	08/05/13
2-Hexanone	ND	7.3	0.7321	201334	08/05/13
1,3-Dichloropropane	ND	3.7	0.7321	201334	08/05/13
Tetrachloroethene	880	190	37.65	201361	08/06/13
Dibromochloromethane	ND	3.7	0.7321	201334	08/05/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-29-5.0	Basis:	as received
Lab ID:	247539-023	Sampled:	08/01/13
Matrix:	Soil	Received:	08/01/13
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,2-Dibromoethane	ND	3.7	0.7321	201334	08/05/13
Chlorobenzene	ND	3.7	0.7321	201334	08/05/13
1,1,1,2-Tetrachloroethane	ND	3.7	0.7321	201334	08/05/13
Ethylbenzene	ND	3.7	0.7321	201334	08/05/13
m,p-Xylenes	ND	3.7	0.7321	201334	08/05/13
o-Xylene	ND	3.7	0.7321	201334	08/05/13
Styrene	ND	3.7	0.7321	201334	08/05/13
Bromoform	ND	3.7	0.7321	201334	08/05/13
Isopropylbenzene	ND	3.7	0.7321	201334	08/05/13
1,1,2,2-Tetrachloroethane	ND	3.7	0.7321	201334	08/05/13
1,2,3-Trichloropropane	ND	3.7	0.7321	201334	08/05/13
Propylbenzene	ND	3.7	0.7321	201334	08/05/13
Bromobenzene	ND	3.7	0.7321	201334	08/05/13
1,3,5-Trimethylbenzene	ND	3.7	0.7321	201334	08/05/13
2-Chlorotoluene	ND	3.7	0.7321	201334	08/05/13
4-Chlorotoluene	ND	3.7	0.7321	201334	08/05/13
tert-Butylbenzene	ND	3.7	0.7321	201334	08/05/13
1,2,4-Trimethylbenzene	ND	3.7	0.7321	201334	08/05/13
sec-Butylbenzene	ND	3.7	0.7321	201334	08/05/13
para-Isopropyl Toluene	ND	3.7	0.7321	201334	08/05/13
1,3-Dichlorobenzene	ND	3.7	0.7321	201334	08/05/13
1,4-Dichlorobenzene	ND	3.7	0.7321	201334	08/05/13
n-Butylbenzene	ND	3.7	0.7321	201334	08/05/13
1,2-Dichlorobenzene	ND	3.7	0.7321	201334	08/05/13
1,2-Dibromo-3-Chloropropane	ND	3.7	0.7321	201334	08/05/13
1,2,4-Trichlorobenzene	ND	3.7	0.7321	201334	08/05/13
Hexachlorobutadiene	ND	3.7	0.7321	201334	08/05/13
Naphthalene	ND	3.7	0.7321	201334	08/05/13
1,2,3-Trichlorobenzene	ND	3.7	0.7321	201334	08/05/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	101	80-124	0.7321	201334	08/05/13
1,2-Dichloroethane-d4	110	80-137	0.7321	201334	08/05/13
Toluene-d8	101	80-120	0.7321	201334	08/05/13
Bromofluorobenzene	95	79-127	0.7321	201334	08/05/13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-29-10.0	Diln Fac:	0.8237
Lab ID:	247539-024	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	8.2
Chloromethane	ND	8.2
Vinyl Chloride	ND	8.2
Bromomethane	ND	8.2
Chloroethane	ND	8.2
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.2
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.2
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.2
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	75	4.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-29-10.0	Diln Fac:	0.8237
Lab ID:	247539-024	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	124	80-124
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	103	80-120
Bromofluorobenzene	113	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-22-6.0	Diln Fac:	0.8361
Lab ID:	247539-026	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	8.4
Chloromethane	ND	8.4
Vinyl Chloride	ND	8.4
Bromomethane	ND	8.4
Chloroethane	ND	8.4
Trichlorofluoromethane	ND	4.2
Acetone	ND	17
Freon 113	ND	4.2
1,1-Dichloroethene	ND	4.2
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.2
MTBE	ND	4.2
trans-1,2-Dichloroethene	ND	4.2
Vinyl Acetate	ND	42
1,1-Dichloroethane	ND	4.2
2-Butanone	ND	8.4
cis-1,2-Dichloroethene	ND	4.2
2,2-Dichloropropane	ND	4.2
Chloroform	ND	4.2
Bromochloromethane	ND	4.2
1,1,1-Trichloroethane	ND	4.2
1,1-Dichloropropene	ND	4.2
Carbon Tetrachloride	ND	4.2
1,2-Dichloroethane	ND	4.2
Benzene	ND	4.2
Trichloroethene	ND	4.2
1,2-Dichloropropane	ND	4.2
Bromodichloromethane	ND	4.2
Dibromomethane	ND	4.2
4-Methyl-2-Pentanone	ND	8.4
cis-1,3-Dichloropropene	ND	4.2
Toluene	ND	4.2
trans-1,3-Dichloropropene	ND	4.2
1,1,2-Trichloroethane	ND	4.2
2-Hexanone	ND	8.4
1,3-Dichloropropane	ND	4.2
Tetrachloroethene	44	4.2
Dibromochloromethane	ND	4.2
1,2-Dibromoethane	ND	4.2
Chlorobenzene	ND	4.2
1,1,1,2-Tetrachloroethane	ND	4.2
Ethylbenzene	ND	4.2
m,p-Xylenes	ND	4.2
o-Xylene	ND	4.2
Styrene	ND	4.2
Bromoform	ND	4.2
Isopropylbenzene	ND	4.2
1,1,2,2-Tetrachloroethane	ND	4.2
1,2,3-Trichloropropane	ND	4.2
Propylbenzene	ND	4.2
Bromobenzene	ND	4.2
1,3,5-Trimethylbenzene	ND	4.2
2-Chlorotoluene	ND	4.2

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-22-6.0	Dil'n Fac:	0.8361
Lab ID:	247539-026	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.2
tert-Butylbenzene	ND	4.2
1,2,4-Trimethylbenzene	ND	4.2
sec-Butylbenzene	ND	4.2
para-Isopropyl Toluene	ND	4.2
1,3-Dichlorobenzene	ND	4.2
1,4-Dichlorobenzene	ND	4.2
n-Butylbenzene	ND	4.2
1,2-Dichlorobenzene	ND	4.2
1,2-Dibromo-3-Chloropropane	ND	4.2
1,2,4-Trichlorobenzene	ND	4.2
Hexachlorobutadiene	ND	4.2
Naphthalene	ND	4.2
1,2,3-Trichlorobenzene	ND	4.2

Surrogate	%REC	Limits
Dibromofluoromethane	136 *	80-124
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	108	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-22-10.0	Diln Fac:	0.9042
Lab ID:	247539-027	Batch#:	201334
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	9.0
Chloromethane	ND	9.0
Vinyl Chloride	ND	9.0
Bromomethane	ND	9.0
Chloroethane	ND	9.0
Trichlorofluoromethane	ND	4.5
Acetone	ND	18
Freon 113	ND	4.5
1,1-Dichloroethene	ND	4.5
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.5
MTBE	ND	4.5
trans-1,2-Dichloroethene	ND	4.5
Vinyl Acetate	ND	45
1,1-Dichloroethane	ND	4.5
2-Butanone	ND	9.0
cis-1,2-Dichloroethene	ND	4.5
2,2-Dichloropropane	ND	4.5
Chloroform	ND	4.5
Bromochloromethane	ND	4.5
1,1,1-Trichloroethane	ND	4.5
1,1-Dichloropropene	ND	4.5
Carbon Tetrachloride	ND	4.5
1,2-Dichloroethane	ND	4.5
Benzene	ND	4.5
Trichloroethene	ND	4.5
1,2-Dichloropropane	ND	4.5
Bromodichloromethane	ND	4.5
Dibromomethane	ND	4.5
4-Methyl-2-Pentanone	ND	9.0
cis-1,3-Dichloropropene	ND	4.5
Toluene	ND	4.5
trans-1,3-Dichloropropene	ND	4.5
1,1,2-Trichloroethane	ND	4.5
2-Hexanone	ND	9.0
1,3-Dichloropropane	ND	4.5
Tetrachloroethene	13	4.5
Dibromochloromethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Chlorobenzene	ND	4.5
1,1,1,2-Tetrachloroethane	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
Styrene	ND	4.5
Bromoform	ND	4.5
Isopropylbenzene	ND	4.5
1,1,2,2-Tetrachloroethane	ND	4.5
1,2,3-Trichloropropane	ND	4.5
Propylbenzene	ND	4.5
Bromobenzene	ND	4.5
1,3,5-Trimethylbenzene	ND	4.5
2-Chlorotoluene	ND	4.5

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-22-10.0	Dil'n Fac:	0.9042
Lab ID:	247539-027	Batch#:	201334
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.5
tert-Butylbenzene	ND	4.5
1,2,4-Trimethylbenzene	ND	4.5
sec-Butylbenzene	ND	4.5
para-Isopropyl Toluene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
n-Butylbenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5
1,2-Dibromo-3-Chloropropane	ND	4.5
1,2,4-Trichlorobenzene	ND	4.5
Hexachlorobutadiene	ND	4.5
Naphthalene	ND	4.5
1,2,3-Trichlorobenzene	ND	4.5

Surrogate	%REC	Limits
Dibromofluoromethane	120	80-124
1,2-Dichloroethane-d4	148 *	80-137
Toluene-d8	90	80-120
Bromofluorobenzene	91	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-21-2.0	Diln Fac:	0.8319
Lab ID:	247539-029	Batch#:	201334
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.3
Chloromethane	ND	8.3
Vinyl Chloride	ND	8.3
Bromomethane	ND	8.3
Chloroethane	ND	8.3
Trichlorofluoromethane	ND	4.2
Acetone	ND	17
Freon 113	ND	4.2
1,1-Dichloroethene	ND	4.2
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.2
MTBE	ND	4.2
trans-1,2-Dichloroethene	ND	4.2
Vinyl Acetate	ND	42
1,1-Dichloroethane	ND	4.2
2-Butanone	ND	8.3
cis-1,2-Dichloroethene	ND	4.2
2,2-Dichloropropane	ND	4.2
Chloroform	ND	4.2
Bromochloromethane	ND	4.2
1,1,1-Trichloroethane	ND	4.2
1,1-Dichloropropene	ND	4.2
Carbon Tetrachloride	ND	4.2
1,2-Dichloroethane	ND	4.2
Benzene	ND	4.2
Trichloroethene	ND	4.2
1,2-Dichloropropane	ND	4.2
Bromodichloromethane	ND	4.2
Dibromomethane	ND	4.2
4-Methyl-2-Pentanone	ND	8.3
cis-1,3-Dichloropropene	ND	4.2
Toluene	ND	4.2
trans-1,3-Dichloropropene	ND	4.2
1,1,2-Trichloroethane	ND	4.2
2-Hexanone	ND	8.3
1,3-Dichloropropane	ND	4.2
Tetrachloroethene	14	4.2

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-21-2.0	Diln Fac:	0.8319
Lab ID:	247539-029	Batch#:	201334
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.2
1,2-Dibromoethane	ND	4.2
Chlorobenzene	ND	4.2
1,1,1,2-Tetrachloroethane	ND	4.2
Ethylbenzene	ND	4.2
m,p-Xylenes	ND	4.2
o-Xylene	ND	4.2
Styrene	ND	4.2
Bromoform	ND	4.2
Isopropylbenzene	ND	4.2
1,1,2,2-Tetrachloroethane	ND	4.2
1,2,3-Trichloropropane	ND	4.2
Propylbenzene	ND	4.2
Bromobenzene	ND	4.2
1,3,5-Trimethylbenzene	ND	4.2
2-Chlorotoluene	ND	4.2
4-Chlorotoluene	ND	4.2
tert-Butylbenzene	ND	4.2
1,2,4-Trimethylbenzene	ND	4.2
sec-Butylbenzene	ND	4.2
para-Isopropyl Toluene	ND	4.2
1,3-Dichlorobenzene	ND	4.2
1,4-Dichlorobenzene	ND	4.2
n-Butylbenzene	ND	4.2
1,2-Dichlorobenzene	ND	4.2
1,2-Dibromo-3-Chloropropane	ND	4.2
1,2,4-Trichlorobenzene	ND	4.2
Hexachlorobutadiene	ND	4.2
Naphthalene	ND	4.2
1,2,3-Trichlorobenzene	ND	4.2

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-124
1,2-Dichloroethane-d4	127	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	99	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-21-5.0	Diln Fac:	0.7987
Lab ID:	247539-030	Batch#:	201334
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	8.0
Chloromethane	ND	8.0
Vinyl Chloride	ND	8.0
Bromomethane	ND	8.0
Chloroethane	ND	8.0
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	8.0
cis-1,2-Dichloroethene	ND	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	8.0
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	8.0
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	26	4.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-21-5.0	Diln Fac:	0.7987
Lab ID:	247539-030	Batch#:	201334
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-124
1,2-Dichloroethane-d4	128	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	101	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-21-8.5	Diln Fac:	0.7205
Lab ID:	247539-031	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	7.2
Chloromethane	ND	7.2
Vinyl Chloride	ND	7.2
Bromomethane	ND	7.2
Chloroethane	ND	7.2
Trichlorofluoromethane	ND	3.6
Acetone	ND	14
Freon 113	ND	3.6
1,1-Dichloroethene	ND	3.6
Methylene Chloride	ND	14
Carbon Disulfide	ND	3.6
MTBE	ND	3.6
trans-1,2-Dichloroethene	ND	3.6
Vinyl Acetate	ND	36
1,1-Dichloroethane	ND	3.6
2-Butanone	ND	7.2
cis-1,2-Dichloroethene	ND	3.6
2,2-Dichloropropane	ND	3.6
Chloroform	ND	3.6
Bromochloromethane	ND	3.6
1,1,1-Trichloroethane	ND	3.6
1,1-Dichloropropene	ND	3.6
Carbon Tetrachloride	ND	3.6
1,2-Dichloroethane	ND	3.6
Benzene	ND	3.6
Trichloroethene	ND	3.6
1,2-Dichloropropane	ND	3.6
Bromodichloromethane	ND	3.6
Dibromomethane	ND	3.6
4-Methyl-2-Pentanone	ND	7.2
cis-1,3-Dichloropropene	ND	3.6
Toluene	ND	3.6
trans-1,3-Dichloropropene	ND	3.6
1,1,2-Trichloroethane	ND	3.6
2-Hexanone	ND	7.2
1,3-Dichloropropane	ND	3.6
Tetrachloroethene	20	3.6
Dibromochloromethane	ND	3.6
1,2-Dibromoethane	ND	3.6
Chlorobenzene	ND	3.6
1,1,1,2-Tetrachloroethane	ND	3.6
Ethylbenzene	ND	3.6
m,p-Xylenes	ND	3.6
o-Xylene	ND	3.6
Styrene	ND	3.6
Bromoform	ND	3.6
Isopropylbenzene	ND	3.6
1,1,2,2-Tetrachloroethane	ND	3.6
1,2,3-Trichloropropane	ND	3.6
Propylbenzene	ND	3.6
Bromobenzene	ND	3.6
1,3,5-Trimethylbenzene	ND	3.6
2-Chlorotoluene	ND	3.6

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-21-8.5	Dil'n Fac:	0.7205
Lab ID:	247539-031	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
4-Chlorotoluene	ND	3.6
tert-Butylbenzene	ND	3.6
1,2,4-Trimethylbenzene	ND	3.6
sec-Butylbenzene	ND	3.6
para-Isopropyl Toluene	ND	3.6
1,3-Dichlorobenzene	ND	3.6
1,4-Dichlorobenzene	ND	3.6
n-Butylbenzene	ND	3.6
1,2-Dichlorobenzene	ND	3.6
1,2-Dibromo-3-Chloropropane	ND	3.6
1,2,4-Trichlorobenzene	ND	3.6
Hexachlorobutadiene	ND	3.6
Naphthalene	ND	3.6
1,2,3-Trichlorobenzene	ND	3.6

Surrogate	%REC	Limits
Dibromofluoromethane	127 *	80-124
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	102	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-10-2.0	Diln Fac:	0.7353
Lab ID:	247539-033	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	7.4
Chloromethane	ND	7.4
Vinyl Chloride	ND	7.4
Bromomethane	ND	7.4
Chloroethane	ND	7.4
Trichlorofluoromethane	ND	3.7
Acetone	ND	15
Freon 113	ND	3.7
1,1-Dichloroethene	ND	3.7
Methylene Chloride	ND	15
Carbon Disulfide	ND	3.7
MTBE	ND	3.7
trans-1,2-Dichloroethene	ND	3.7
Vinyl Acetate	ND	37
1,1-Dichloroethane	ND	3.7
2-Butanone	ND	7.4
cis-1,2-Dichloroethene	ND	3.7
2,2-Dichloropropane	ND	3.7
Chloroform	ND	3.7
Bromochloromethane	ND	3.7
1,1,1-Trichloroethane	ND	3.7
1,1-Dichloropropene	ND	3.7
Carbon Tetrachloride	ND	3.7
1,2-Dichloroethane	ND	3.7
Benzene	ND	3.7
Trichloroethene	ND	3.7
1,2-Dichloropropane	ND	3.7
Bromodichloromethane	ND	3.7
Dibromomethane	ND	3.7
4-Methyl-2-Pentanone	ND	7.4
cis-1,3-Dichloropropene	ND	3.7
Toluene	ND	3.7
trans-1,3-Dichloropropene	ND	3.7
1,1,2-Trichloroethane	ND	3.7
2-Hexanone	ND	7.4
1,3-Dichloropropane	ND	3.7
Tetrachloroethene	ND	3.7
Dibromochloromethane	ND	3.7
1,2-Dibromoethane	ND	3.7
Chlorobenzene	ND	3.7
1,1,1,2-Tetrachloroethane	ND	3.7
Ethylbenzene	ND	3.7
m,p-Xylenes	ND	3.7
o-Xylene	ND	3.7
Styrene	ND	3.7
Bromoform	ND	3.7
Isopropylbenzene	ND	3.7
1,1,2,2-Tetrachloroethane	ND	3.7
1,2,3-Trichloropropane	ND	3.7
Propylbenzene	ND	3.7
Bromobenzene	ND	3.7
1,3,5-Trimethylbenzene	ND	3.7
2-Chlorotoluene	ND	3.7

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-10-2.0	Dil'n Fac:	0.7353
Lab ID:	247539-033	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
4-Chlorotoluene	ND	3.7
tert-Butylbenzene	ND	3.7
1,2,4-Trimethylbenzene	ND	3.7
sec-Butylbenzene	ND	3.7
para-Isopropyl Toluene	ND	3.7
1,3-Dichlorobenzene	ND	3.7
1,4-Dichlorobenzene	ND	3.7
n-Butylbenzene	ND	3.7
1,2-Dichlorobenzene	ND	3.7
1,2-Dibromo-3-Chloropropane	ND	3.7
1,2,4-Trichlorobenzene	ND	3.7
Hexachlorobutadiene	ND	3.7
Naphthalene	ND	3.7
1,2,3-Trichlorobenzene	ND	3.7

Surrogate	%REC	Limits
Dibromofluoromethane	138 *	80-124
1,2-Dichloroethane-d4	109	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	106	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-10-5.5	Diln Fac:	0.7937
Lab ID:	247539-034	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	7.9
Chloromethane	ND	7.9
Vinyl Chloride	ND	7.9
Bromomethane	ND	7.9
Chloroethane	ND	7.9
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	7.9
cis-1,2-Dichloroethene	ND	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	7.9
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	7.9
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	ND	4.0
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-10-5.5	Dil'n Fac:	0.7937
Lab ID:	247539-034	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	129 *	80-124
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	103	80-120
Bromofluorobenzene	109	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-10-10.0	Diln Fac:	0.8306
Lab ID:	247539-035	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	8.3
Chloromethane	ND	8.3
Vinyl Chloride	ND	8.3
Bromomethane	ND	8.3
Chloroethane	ND	8.3
Trichlorofluoromethane	ND	4.2
Acetone	ND	17
Freon 113	ND	4.2
1,1-Dichloroethene	ND	4.2
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.2
MTBE	ND	4.2
trans-1,2-Dichloroethene	ND	4.2
Vinyl Acetate	ND	42
1,1-Dichloroethane	ND	4.2
2-Butanone	ND	8.3
cis-1,2-Dichloroethene	ND	4.2
2,2-Dichloropropane	ND	4.2
Chloroform	ND	4.2
Bromochloromethane	ND	4.2
1,1,1-Trichloroethane	ND	4.2
1,1-Dichloropropene	ND	4.2
Carbon Tetrachloride	ND	4.2
1,2-Dichloroethane	ND	4.2
Benzene	ND	4.2
Trichloroethene	ND	4.2
1,2-Dichloropropane	ND	4.2
Bromodichloromethane	ND	4.2
Dibromomethane	ND	4.2
4-Methyl-2-Pentanone	ND	8.3
cis-1,3-Dichloropropene	ND	4.2
Toluene	ND	4.2
trans-1,3-Dichloropropene	ND	4.2
1,1,2-Trichloroethane	ND	4.2
2-Hexanone	ND	8.3
1,3-Dichloropropane	ND	4.2
Tetrachloroethene	ND	4.2
Dibromochloromethane	ND	4.2
1,2-Dibromoethane	ND	4.2
Chlorobenzene	ND	4.2
1,1,1,2-Tetrachloroethane	ND	4.2
Ethylbenzene	ND	4.2
m,p-Xylenes	ND	4.2
o-Xylene	ND	4.2
Styrene	ND	4.2
Bromoform	ND	4.2
Isopropylbenzene	ND	4.2
1,1,2,2-Tetrachloroethane	ND	4.2
1,2,3-Trichloropropane	ND	4.2
Propylbenzene	ND	4.2
Bromobenzene	ND	4.2
1,3,5-Trimethylbenzene	ND	4.2
2-Chlorotoluene	ND	4.2

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-10-10.0	Dil'n Fac:	0.8306
Lab ID:	247539-035	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.2
tert-Butylbenzene	ND	4.2
1,2,4-Trimethylbenzene	ND	4.2
sec-Butylbenzene	ND	4.2
para-Isopropyl Toluene	ND	4.2
1,3-Dichlorobenzene	ND	4.2
1,4-Dichlorobenzene	ND	4.2
n-Butylbenzene	ND	4.2
1,2-Dichlorobenzene	ND	4.2
1,2-Dibromo-3-Chloropropane	ND	4.2
1,2,4-Trichlorobenzene	ND	4.2
Hexachlorobutadiene	ND	4.2
Naphthalene	ND	4.2
1,2,3-Trichlorobenzene	ND	4.2

Surrogate	%REC	Limits
Dibromofluoromethane	125 *	80-124
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	103	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-16-2.0	Diln Fac:	0.7924
Lab ID:	247539-040	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	7.9
Chloromethane	ND	7.9
Vinyl Chloride	ND	7.9
Bromomethane	ND	7.9
Chloroethane	ND	7.9
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	7.9
cis-1,2-Dichloroethene	ND	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	7.9
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	7.9
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	ND	4.0
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-16-2.0	Dil'n Fac:	0.7924
Lab ID:	247539-040	Batch#:	201361
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	126 *	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	104	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-16-5.0	Diln Fac:	0.9452
Lab ID:	247539-041	Batch#:	201364
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	9.5
Chloromethane	ND	9.5
Vinyl Chloride	ND	9.5
Bromomethane	ND	9.5
Chloroethane	ND	9.5
Trichlorofluoromethane	ND	4.7
Acetone	ND	19
Freon 113	ND	4.7
1,1-Dichloroethene	ND	4.7
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.7
MTBE	ND	4.7
trans-1,2-Dichloroethene	ND	4.7
Vinyl Acetate	ND	47
1,1-Dichloroethane	ND	4.7
2-Butanone	ND	9.5
cis-1,2-Dichloroethene	ND	4.7
2,2-Dichloropropane	ND	4.7
Chloroform	ND	4.7
Bromochloromethane	ND	4.7
1,1,1-Trichloroethane	ND	4.7
1,1-Dichloropropene	ND	4.7
Carbon Tetrachloride	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Trichloroethene	ND	4.7
1,2-Dichloropropane	ND	4.7
Bromodichloromethane	ND	4.7
Dibromomethane	ND	4.7
4-Methyl-2-Pentanone	ND	9.5
cis-1,3-Dichloropropene	ND	4.7
Toluene	ND	4.7
trans-1,3-Dichloropropene	ND	4.7
1,1,2-Trichloroethane	ND	4.7
2-Hexanone	ND	9.5
1,3-Dichloropropane	ND	4.7
Tetrachloroethene	ND	4.7

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-16-5.0	Diln Fac:	0.9452
Lab ID:	247539-041	Batch#:	201364
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Dibromochloromethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Chlorobenzene	ND	4.7
1,1,1,2-Tetrachloroethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
Styrene	ND	4.7
Bromoform	ND	4.7
Isopropylbenzene	ND	4.7
1,1,2,2-Tetrachloroethane	ND	4.7
1,2,3-Trichloropropane	ND	4.7
Propylbenzene	ND	4.7
Bromobenzene	ND	4.7
1,3,5-Trimethylbenzene	ND	4.7
2-Chlorotoluene	ND	4.7
4-Chlorotoluene	ND	4.7
tert-Butylbenzene	ND	4.7
1,2,4-Trimethylbenzene	ND	4.7
sec-Butylbenzene	ND	4.7
para-Isopropyl Toluene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
n-Butylbenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7
1,2-Dibromo-3-Chloropropane	ND	4.7
1,2,4-Trichlorobenzene	ND	4.7
Hexachlorobutadiene	ND	4.7
Naphthalene	ND	4.7
1,2,3-Trichlorobenzene	ND	4.7

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-124
1,2-Dichloroethane-d4	120	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	97	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-16-10.5	Diln Fac:	0.7911
Lab ID:	247539-042	Batch#:	201364
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Freon 12	ND	7.9
Chloromethane	ND	7.9
Vinyl Chloride	ND	7.9
Bromomethane	ND	7.9
Chloroethane	ND	7.9
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	7.9
cis-1,2-Dichloroethene	ND	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	7.9
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	7.9
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	ND	4.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-16-10.5	Diln Fac:	0.7911
Lab ID:	247539-042	Batch#:	201364
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/01/13
Basis:	as received	Analyzed:	08/06/13

Analyte	Result	RL
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	128	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	98	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	201321
Units:	ug/Kg	Analyzed:	08/05/13
Diln Fac:	1.000		

Type: BS Lab ID: QC700301

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	22.07	88	67-132
Benzene	25.00	24.68	99	77-126
Trichloroethene	25.00	24.13	97	76-127
Toluene	25.00	24.13	97	76-124
Chlorobenzene	25.00	22.79	91	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-124
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	102	79-127

Type: BSD Lab ID: QC700302

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	22.77	91	67-132	3	27
Benzene	25.00	24.91	100	77-126	1	20
Trichloroethene	25.00	24.49	98	76-127	1	22
Toluene	25.00	24.01	96	76-124	0	26
Chlorobenzene	25.00	23.26	93	76-120	2	21

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-124
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	100	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700303	Batch#:	201321
Matrix:	Soil	Analyzed:	08/05/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700303	Batch#:	201321
Matrix:	Soil	Analyzed:	08/05/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-124
1,2-Dichloroethane-d4	98	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	101	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	201334
Units:	ug/Kg	Analyzed:	08/05/13
Diln Fac:	1.000		

Type: BS Lab ID: QC700353

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.82	95	67-132
Benzene	25.00	23.30	93	77-126
Trichloroethene	25.00	24.38	98	76-127
Toluene	25.00	22.20	89	76-124
Chlorobenzene	25.00	22.41	90	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-124
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	96	79-127

Type: BSD Lab ID: QC700354

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	21.79	87	67-132	9	27
Benzene	25.00	22.79	91	77-126	2	20
Trichloroethene	25.00	23.41	94	76-127	4	22
Toluene	25.00	22.07	88	76-124	1	26
Chlorobenzene	25.00	22.11	88	76-120	1	21

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-124
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	93	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700355	Batch#:	201334
Matrix:	Soil	Analyzed:	08/05/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700355	Batch#:	201334
Matrix:	Soil	Analyzed:	08/05/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-124
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	97	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700469	Batch#:	201361
Matrix:	Soil	Analyzed:	08/06/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700469	Batch#:	201361
Matrix:	Soil	Analyzed:	08/06/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	119	80-124
1,2-Dichloroethane-d4	98	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	103	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	201364
Units:	ug/Kg	Analyzed:	08/06/13
Diln Fac:	1.000		

Type: BS Lab ID: QC700476

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	26.24	105	67-132
Benzene	25.00	25.05	100	77-126
Trichloroethene	25.00	25.22	101	76-127
Toluene	25.00	23.21	93	76-124
Chlorobenzene	25.00	23.26	93	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-124
1,2-Dichloroethane-d4	121	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	96	79-127

Type: BSD Lab ID: QC700477

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	21.97	88	67-132	18	27
Benzene	25.00	22.02	88	77-126	13	20
Trichloroethene	25.00	22.61	90	76-127	11	22
Toluene	25.00	21.59	86	76-124	7	26
Chlorobenzene	25.00	21.24	85	76-120	9	21

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	98	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700478	Batch#:	201364
Matrix:	Soil	Analyzed:	08/06/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700478	Batch#:	201364
Matrix:	Soil	Analyzed:	08/06/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	94	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC700479	Batch#:	201361
Matrix:	Soil	Analyzed:	08/06/13
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.50	94	67-132
Benzene	25.00	24.56	98	77-126
Trichloroethene	25.00	23.34	93	76-127
Toluene	25.00	23.16	93	76-124
Chlorobenzene	25.00	22.30	89	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-124
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	102	79-127

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247539	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	201361
MSS Lab ID:	247603-001	Sampled:	08/05/13
Matrix:	Soil	Received:	08/05/13
Units:	ug/Kg	Analyzed:	08/06/13
Basis:	as received		

Type: MS Diln Fac: 0.9452
Lab ID: QC700504

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.5927	47.26	42.11	89	52-132
Benzene	<0.6906	47.26	38.67	82	54-121
Trichloroethene	<0.7193	47.26	36.41	77	46-138
Toluene	<0.7564	47.26	35.00	74	47-120
Chlorobenzene	<0.6201	47.26	31.50	67	41-120

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-124
1,2-Dichloroethane-d4	112	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	102	79-127

Type: MSD Diln Fac: 0.9470
Lab ID: QC700505

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	47.35	43.96	93	52-132	4	46
Benzene	47.35	39.40	83	54-121	2	43
Trichloroethene	47.35	37.49	79	46-138	3	50
Toluene	47.35	36.30	77	47-120	3	53
Chlorobenzene	47.35	31.89	67	41-120	1	50

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-124
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	103	79-127

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247565
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
IE-20-2.0	247565-001
IE-20-5.0	247565-002
DELETE	247565-003
IE-20-15.0	247565-004
IE-19-2.0	247565-005
IE-19-5.0	247565-006
IE-19-10.0	247565-007
IE-19-15.0	247565-008
IE-02-2.0	247565-009
IE-02-6.0	247565-010
IE-02-10.0	247565-011
IE-02-15.0	247565-012

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/13/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247565**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/02/13**
Samples Received:	**08/02/13**

This data package contains sample and QC results for six soil samples, requested for the above referenced project on 08/02/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):

Matrix spikes were not performed for this analysis in batch 201595 due to insufficient sample amount. High surrogate recoveries were observed for dibromofluoromethane in IE-20-15.0 (lab # 247565-004) and IE-19-5.0 (lab # 247565-006). No other analytical problems were encountered.

IRIS ENVIRONMENTAL — CHAIN-OF-CUSTODY

1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

247565

Date: 8/2/13 Page: 1 of 2 № 003589

Sampler Name(s): Bill Chen Signature(s):

	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260	TPH	Number of Containers
1	IE-20-2.0	8/1/13	1530	Soil	Y	X		3
2	IE-20-5.0	8/1/13	1540		Y	X		
3	IE-20-10.0		1550		Y	X		
4	IE-20-15.0		1600		N		X	
5	IE-19-2.0	8/1/13	1607		Y	X		
6	IE-19-5.0		1614		Y	X		
7	IE-19-10.0		1621		Y	X		
8	IE-19-15.0		1638		N		X	
9	IE-02-2.0	8/2/13	1329		N		X	
10	IE-02-6.0	8/2/13	1326		N		X	

PROJECT INFORMATION

Project Name: Park Avenue Cleaners
Project Number: 13-945A
Contact Person: Bill Chen
E-mail: chen@irisenv.com
Contact Telephone:
Report: Routine (Level 2) Level 3 Level 4 EDD
TAT: 10-day (5-day) 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Bill Chen	Printed Name: Ricky Grams
Signature:	Signature:
Company: Iris Env.	Company: C&T
Time/Date: 8/2/13 1635	Time/Date: 8/2/13 1635
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Grams	Printed Name: TINA RAIKAR
Signature:	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/2/13 1730	Time/Date: 8/2/13 1730

intact on ice cold RC

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

CHAIN-OF-CUSTODY

247565

Date: 8/2/13 Page: 2 of 2 **№** 003593

Sampler Name(s): Signature(s):

	Sample ID	Date	Time	Matrix	Pres.	Analyses Required: VOCs 8260	Analyses Required: TPHg	Number of Containers
11	IE-02-10.0	6/2/13	1342	soil	N		X	
12	IE-02-15.0	6/2/13	1347	↓	N		X	
	~~IE-02-TB~~							

PROJECT INFORMATION

Project Name: PARK AVE Cleaners
Project Number: 13-945 A
Contact Person: CRAIG PELLETIER
E-mail: CRAIG@TRIENV.COM
Contact Telephone: (510) 314-4747
Report: ~~Routine (Level 2)~~ Level 3 Level 4 EDD
TAT: 10-day ~~5-day~~ 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Bill Chen	Printed Name: Ricky Grams
Signature:	Signature:
Company: Iris Environmental	Company: C&T
Time/Date: 8/2/13 1635	Time/Date: 8/2/13 1635
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Grams	Printed Name: TINA RAIKAR
Signature:	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/2/13 1730	Time/Date: 8/2/13 1730

Subject: RE: 13-945A - C&T Login Summary (247565)
From: Craig Pelletier <craig@irisenv.com>
Date: 8/5/2013 9:55 AM
To: Tracy Babjar <tracy.babjar@ctberk.com>

Please run IE-20-15' sample for VOCs by 8260. Thanks!

From: Tracy Babjar [mailto:tracy.babjar@ctberk.com]
Sent: Friday, August 02, 2013 10:52 PM
To: Craig Pelletier
Cc: tracy.babjar@ctberk.com
Subject: 13-945A - C&T Login Summary (247565)

Did not receive containers for sample -003 "IE-20-10.0"

C&T Login Summary for 247565

Project: 13-945A
Site: Park Ave. Cleaners
Lab Login #: 247565
Report Level: II
Report Due: 08/09/13
PO#:
C&T Proj Mgr: Tracy Babjar

Report To: Iris Environmental
1438 Webster Street
Suite 302
Oakland, CA 94612
ATTN: Craig Pelletier
(510) 834-4747

Bill To: Iris Environmental
1438 Webster Street
Suite 302
Oakland, CA 94612
ATTN: Craig Pelletier
(510) 834-4747

Client ID	Lab ID	Sampled	Received	Matrix	Analyses	COC #	Comments
IE-20-2.0	001	08/01	08/02			003589	
				Soil	E8260		
IE-20-5.0	002	08/01	08/02			003589	
				Soil	E8260		
DELETE	003	08/01	08/02			003589	
IE-20-15.0	004	08/01	08/02			003589	
				Soil	HOLD		
IE-19-2.0	005	08/01	08/02			003589	
				Soil	E8260		
IE-19-5.0	006	08/01	08/02			003589	
				Soil	E8260		
IE-19-10.0	007	08/01	08/02			003589	
				Soil	E8260		
IE-19-15.0	008	08/01	08/02			003589	
				Soil	HOLD		
IE-02-2.0	009	08/02	08/02			003589	
				Soil	HOLD		
IE-02-6.0	010	08/02	08/02			003589	

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 247565 Date Received 8/2/13 Number of coolers 1
Client IRIS Project PARK AVENUE CLEANERS

Date Opened 8/2/13 By (print) TR (sign) Tina Raikar
Date Logged in 6 By (print) EB MS (sign) MS

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 3.0

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ (YES) (NO)
If YES, what time were they transferred to freezer? 1930
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ (YES) NO
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ (YES) NO N/A
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called? _____ By _____ Date: _____

COMMENTS Did not receive
#10.) Samp # - 003

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-20-2.0	Diln Fac:	0.9346
Lab ID:	247565-001	Batch#:	201305
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/04/13

Analyte	Result	RL
Freon 12	ND	9.3
Chloromethane	ND	9.3
Vinyl Chloride	ND	9.3
Bromomethane	ND	9.3
Chloroethane	ND	9.3
Trichlorofluoromethane	ND	4.7
Acetone	ND	19
Freon 113	ND	4.7
1,1-Dichloroethene	ND	4.7
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.7
MTBE	ND	4.7
trans-1,2-Dichloroethene	ND	4.7
Vinyl Acetate	ND	47
1,1-Dichloroethane	ND	4.7
2-Butanone	ND	9.3
cis-1,2-Dichloroethene	ND	4.7
2,2-Dichloropropane	ND	4.7
Chloroform	ND	4.7
Bromochloromethane	ND	4.7
1,1,1-Trichloroethane	ND	4.7
1,1-Dichloropropene	ND	4.7
Carbon Tetrachloride	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Trichloroethene	ND	4.7
1,2-Dichloropropane	ND	4.7
Bromodichloromethane	ND	4.7
Dibromomethane	ND	4.7
4-Methyl-2-Pentanone	ND	9.3
cis-1,3-Dichloropropene	ND	4.7
Toluene	ND	4.7
trans-1,3-Dichloropropene	ND	4.7
1,1,2-Trichloroethane	ND	4.7
2-Hexanone	ND	9.3
1,3-Dichloropropane	ND	4.7
Tetrachloroethene	ND	4.7

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-20-2.0	Diln Fac:	0.9346
Lab ID:	247565-001	Batch#:	201305
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/04/13

Analyte	Result	RL
Dibromochloromethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Chlorobenzene	ND	4.7
1,1,1,2-Tetrachloroethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
Styrene	ND	4.7
Bromoform	ND	4.7
Isopropylbenzene	ND	4.7
1,1,2,2-Tetrachloroethane	ND	4.7
1,2,3-Trichloropropane	ND	4.7
Propylbenzene	ND	4.7
Bromobenzene	ND	4.7
1,3,5-Trimethylbenzene	ND	4.7
2-Chlorotoluene	ND	4.7
4-Chlorotoluene	ND	4.7
tert-Butylbenzene	ND	4.7
1,2,4-Trimethylbenzene	ND	4.7
sec-Butylbenzene	ND	4.7
para-Isopropyl Toluene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
n-Butylbenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7
1,2-Dibromo-3-Chloropropane	ND	4.7
1,2,4-Trichlorobenzene	ND	4.7
Hexachlorobutadiene	ND	4.7
Naphthalene	ND	4.7
1,2,3-Trichlorobenzene	ND	4.7

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-124
1,2-Dichloroethane-d4	109	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	94	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-20-5.0	Diln Fac:	1.116
Lab ID:	247565-002	Batch#:	201305
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/04/13

Analyte	Result	RL
Freon 12	ND	11
Chloromethane	ND	11
Vinyl Chloride	ND	11
Bromomethane	ND	11
Chloroethane	ND	11
Trichlorofluoromethane	ND	5.6
Acetone	ND	22
Freon 113	ND	5.6
1,1-Dichloroethene	ND	5.6
Methylene Chloride	ND	22
Carbon Disulfide	ND	5.6
MTBE	ND	5.6
trans-1,2-Dichloroethene	ND	5.6
Vinyl Acetate	ND	56
1,1-Dichloroethane	ND	5.6
2-Butanone	ND	11
cis-1,2-Dichloroethene	ND	5.6
2,2-Dichloropropane	ND	5.6
Chloroform	ND	5.6
Bromochloromethane	ND	5.6
1,1,1-Trichloroethane	ND	5.6
1,1-Dichloropropene	ND	5.6
Carbon Tetrachloride	ND	5.6
1,2-Dichloroethane	ND	5.6
Benzene	ND	5.6
Trichloroethene	ND	5.6
1,2-Dichloropropane	ND	5.6
Bromodichloromethane	ND	5.6
Dibromomethane	ND	5.6
4-Methyl-2-Pentanone	ND	11
cis-1,3-Dichloropropene	ND	5.6
Toluene	ND	5.6
trans-1,3-Dichloropropene	ND	5.6
1,1,2-Trichloroethane	ND	5.6
2-Hexanone	ND	11
1,3-Dichloropropane	ND	5.6
Tetrachloroethene	6.6	5.6

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-20-5.0	Diln Fac:	1.116
Lab ID:	247565-002	Batch#:	201305
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/04/13

Analyte	Result	RL
Dibromochloromethane	ND	5.6
1,2-Dibromoethane	ND	5.6
Chlorobenzene	ND	5.6
1,1,1,2-Tetrachloroethane	ND	5.6
Ethylbenzene	ND	5.6
m,p-Xylenes	ND	5.6
o-Xylene	ND	5.6
Styrene	ND	5.6
Bromoform	ND	5.6
Isopropylbenzene	ND	5.6
1,1,2,2-Tetrachloroethane	ND	5.6
1,2,3-Trichloropropane	ND	5.6
Propylbenzene	ND	5.6
Bromobenzene	ND	5.6
1,3,5-Trimethylbenzene	ND	5.6
2-Chlorotoluene	ND	5.6
4-Chlorotoluene	ND	5.6
tert-Butylbenzene	ND	5.6
1,2,4-Trimethylbenzene	ND	5.6
sec-Butylbenzene	ND	5.6
para-Isopropyl Toluene	ND	5.6
1,3-Dichlorobenzene	ND	5.6
1,4-Dichlorobenzene	ND	5.6
n-Butylbenzene	ND	5.6
1,2-Dichlorobenzene	ND	5.6
1,2-Dibromo-3-Chloropropane	ND	5.6
1,2,4-Trichlorobenzene	ND	5.6
Hexachlorobutadiene	ND	5.6
Naphthalene	ND	5.6
1,2,3-Trichlorobenzene	ND	5.6

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	109	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	95	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-20-15.0	Diln Fac:	0.9921
Lab ID:	247565-004	Batch#:	201409
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-20-15.0	Dil'n Fac:	0.9921
Lab ID:	247565-004	Batch#:	201409
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	132 *	80-124
1,2-Dichloroethane-d4	112	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	101	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-19-2.0	Diln Fac:	0.8961
Lab ID:	247565-005	Batch#:	201305
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/04/13

Analyte	Result	RL
Freon 12	ND	9.0
Chloromethane	ND	9.0
Vinyl Chloride	ND	9.0
Bromomethane	ND	9.0
Chloroethane	ND	9.0
Trichlorofluoromethane	ND	4.5
Acetone	ND	18
Freon 113	ND	4.5
1,1-Dichloroethene	ND	4.5
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.5
MTBE	ND	4.5
trans-1,2-Dichloroethene	ND	4.5
Vinyl Acetate	ND	45
1,1-Dichloroethane	ND	4.5
2-Butanone	ND	9.0
cis-1,2-Dichloroethene	ND	4.5
2,2-Dichloropropane	ND	4.5
Chloroform	ND	4.5
Bromochloromethane	ND	4.5
1,1,1-Trichloroethane	ND	4.5
1,1-Dichloropropene	ND	4.5
Carbon Tetrachloride	ND	4.5
1,2-Dichloroethane	ND	4.5
Benzene	ND	4.5
Trichloroethene	ND	4.5
1,2-Dichloropropane	ND	4.5
Bromodichloromethane	ND	4.5
Dibromomethane	ND	4.5
4-Methyl-2-Pentanone	ND	9.0
cis-1,3-Dichloropropene	ND	4.5
Toluene	ND	4.5
trans-1,3-Dichloropropene	ND	4.5
1,1,2-Trichloroethane	ND	4.5
2-Hexanone	ND	9.0
1,3-Dichloropropane	ND	4.5
Tetrachloroethene	57	4.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-19-2.0	Diln Fac:	0.8961
Lab ID:	247565-005	Batch#:	201305
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/04/13

Analyte	Result	RL
Dibromochloromethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Chlorobenzene	ND	4.5
1,1,1,2-Tetrachloroethane	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
Styrene	ND	4.5
Bromoform	ND	4.5
Isopropylbenzene	ND	4.5
1,1,2,2-Tetrachloroethane	ND	4.5
1,2,3-Trichloropropane	ND	4.5
Propylbenzene	ND	4.5
Bromobenzene	ND	4.5
1,3,5-Trimethylbenzene	ND	4.5
2-Chlorotoluene	ND	4.5
4-Chlorotoluene	ND	4.5
tert-Butylbenzene	ND	4.5
1,2,4-Trimethylbenzene	ND	4.5
sec-Butylbenzene	ND	4.5
para-Isopropyl Toluene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
n-Butylbenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5
1,2-Dibromo-3-Chloropropane	ND	4.5
1,2,4-Trichlorobenzene	ND	4.5
Hexachlorobutadiene	ND	4.5
Naphthalene	ND	4.5
1,2,3-Trichlorobenzene	ND	4.5

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-124
1,2-Dichloroethane-d4	111	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	92	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-19-5.0	Diln Fac:	0.8389
Lab ID:	247565-006	Batch#:	201595
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/12/13

Analyte	Result	RL
Freon 12	ND	8.4
Chloromethane	ND	8.4
Vinyl Chloride	ND	8.4
Bromomethane	ND	8.4
Chloroethane	ND	8.4
Trichlorofluoromethane	ND	4.2
Acetone	ND	17
Freon 113	ND	4.2
1,1-Dichloroethene	ND	4.2
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.2
MTBE	ND	4.2
trans-1,2-Dichloroethene	ND	4.2
Vinyl Acetate	ND	42
1,1-Dichloroethane	ND	4.2
2-Butanone	ND	8.4
cis-1,2-Dichloroethene	ND	4.2
2,2-Dichloropropane	ND	4.2
Chloroform	ND	4.2
Bromochloromethane	ND	4.2
1,1,1-Trichloroethane	ND	4.2
1,1-Dichloropropene	ND	4.2
Carbon Tetrachloride	ND	4.2
1,2-Dichloroethane	ND	4.2
Benzene	ND	4.2
Trichloroethene	ND	4.2
1,2-Dichloropropane	ND	4.2
Bromodichloromethane	ND	4.2
Dibromomethane	ND	4.2
4-Methyl-2-Pentanone	ND	8.4
cis-1,3-Dichloropropene	ND	4.2
Toluene	ND	4.2
trans-1,3-Dichloropropene	ND	4.2
1,1,2-Trichloroethane	ND	4.2
2-Hexanone	ND	8.4
1,3-Dichloropropane	ND	4.2
Tetrachloroethene	120	4.2
Dibromochloromethane	ND	4.2
1,2-Dibromoethane	ND	4.2
Chlorobenzene	ND	4.2
1,1,1,2-Tetrachloroethane	ND	4.2
Ethylbenzene	ND	4.2
m,p-Xylenes	ND	4.2
o-Xylene	ND	4.2
Styrene	ND	4.2
Bromoform	ND	4.2
Isopropylbenzene	ND	4.2
1,1,2,2-Tetrachloroethane	ND	4.2
1,2,3-Trichloropropane	ND	4.2
Propylbenzene	ND	4.2
Bromobenzene	ND	4.2
1,3,5-Trimethylbenzene	ND	4.2
2-Chlorotoluene	ND	4.2

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-19-5.0	Dil'n Fac:	0.8389
Lab ID:	247565-006	Batch#:	201595
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/12/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.2
tert-Butylbenzene	ND	4.2
1,2,4-Trimethylbenzene	ND	4.2
sec-Butylbenzene	ND	4.2
para-Isopropyl Toluene	ND	4.2
1,3-Dichlorobenzene	ND	4.2
1,4-Dichlorobenzene	ND	4.2
n-Butylbenzene	ND	4.2
1,2-Dichlorobenzene	ND	4.2
1,2-Dibromo-3-Chloropropane	ND	4.2
1,2,4-Trichlorobenzene	ND	4.2
Hexachlorobutadiene	ND	4.2
Naphthalene	ND	4.2
1,2,3-Trichlorobenzene	ND	4.2

Surrogate	%REC	Limits
Dibromofluoromethane	126 *	80-124
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	105	80-120
Bromofluorobenzene	113	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-19-10.0	Diln Fac:	1.089
Lab ID:	247565-007	Batch#:	201305
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Freon 12	ND	11
Chloromethane	ND	11
Vinyl Chloride	ND	11
Bromomethane	ND	11
Chloroethane	ND	11
Trichlorofluoromethane	ND	5.4
Acetone	ND	22
Freon 113	ND	5.4
1,1-Dichloroethene	ND	5.4
Methylene Chloride	ND	22
Carbon Disulfide	ND	5.4
MTBE	ND	5.4
trans-1,2-Dichloroethene	ND	5.4
Vinyl Acetate	ND	54
1,1-Dichloroethane	ND	5.4
2-Butanone	ND	11
cis-1,2-Dichloroethene	ND	5.4
2,2-Dichloropropane	ND	5.4
Chloroform	ND	5.4
Bromochloromethane	ND	5.4
1,1,1-Trichloroethane	ND	5.4
1,1-Dichloropropene	ND	5.4
Carbon Tetrachloride	ND	5.4
1,2-Dichloroethane	ND	5.4
Benzene	ND	5.4
Trichloroethene	ND	5.4
1,2-Dichloropropane	ND	5.4
Bromodichloromethane	ND	5.4
Dibromomethane	ND	5.4
4-Methyl-2-Pentanone	ND	11
cis-1,3-Dichloropropene	ND	5.4
Toluene	ND	5.4
trans-1,3-Dichloropropene	ND	5.4
1,1,2-Trichloroethane	ND	5.4
2-Hexanone	ND	11
1,3-Dichloropropane	ND	5.4
Tetrachloroethene	12	5.4

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-19-10.0	Diln Fac:	1.089
Lab ID:	247565-007	Batch#:	201305
Matrix:	Soil	Sampled:	08/01/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/05/13

Analyte	Result	RL
Dibromochloromethane	ND	5.4
1,2-Dibromoethane	ND	5.4
Chlorobenzene	ND	5.4
1,1,1,2-Tetrachloroethane	ND	5.4
Ethylbenzene	ND	5.4
m,p-Xylenes	ND	5.4
o-Xylene	ND	5.4
Styrene	ND	5.4
Bromoform	ND	5.4
Isopropylbenzene	ND	5.4
1,1,2,2-Tetrachloroethane	ND	5.4
1,2,3-Trichloropropane	ND	5.4
Propylbenzene	ND	5.4
Bromobenzene	ND	5.4
1,3,5-Trimethylbenzene	ND	5.4
2-Chlorotoluene	ND	5.4
4-Chlorotoluene	ND	5.4
tert-Butylbenzene	ND	5.4
1,2,4-Trimethylbenzene	ND	5.4
sec-Butylbenzene	ND	5.4
para-Isopropyl Toluene	ND	5.4
1,3-Dichlorobenzene	ND	5.4
1,4-Dichlorobenzene	ND	5.4
n-Butylbenzene	ND	5.4
1,2-Dichlorobenzene	ND	5.4
1,2-Dibromo-3-Chloropropane	ND	5.4
1,2,4-Trichlorobenzene	ND	5.4
Hexachlorobutadiene	ND	5.4
Naphthalene	ND	5.4
1,2,3-Trichlorobenzene	ND	5.4

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-124
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	93	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700235	Batch#:	201305
Matrix:	Soil	Analyzed:	08/04/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700235	Batch#:	201305
Matrix:	Soil	Analyzed:	08/04/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	100	80-137
Toluene-d8	119	80-120
Bromofluorobenzene	99	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC700236	Batch#:	201305
Matrix:	Soil	Analyzed:	08/04/13
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	23.22	116	67-132
Benzene	20.00	23.41	117	77-126
Trichloroethene	20.00	20.17	101	76-127
Toluene	20.00	23.67	118	76-124
Chlorobenzene	20.00	21.37	107	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	114	80-120
Bromofluorobenzene	92	79-127

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	201305
MSS Lab ID:	247556-015	Sampled:	08/02/13
Matrix:	Soil	Received:	08/02/13
Units:	ug/Kg	Analyzed:	08/04/13
Basis:	as received		

Type: MS Diln Fac: 0.9747
Lab ID: QC700237

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.8898	48.73	43.69	90	52-132
Benzene	<0.8544	48.73	45.44	93	54-121
Trichloroethene	<0.7909	48.73	42.44	87	46-138
Toluene	<0.6736	48.73	38.86	80	47-120
Chlorobenzene	<0.6497	48.73	44.47	91	41-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	111	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	89	79-127

Type: MSD Diln Fac: 0.9823
Lab ID: QC700238

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	49.12	38.90	79	52-132	12	46
Benzene	49.12	39.11	80	54-121	16	43
Trichloroethene	49.12	34.81	71	46-138	21	50
Toluene	49.12	34.29	70	47-120	13	53
Chlorobenzene	49.12	35.74	73	41-120	23	50

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-124
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	110	80-120
Bromofluorobenzene	91	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC700658	Batch#:	201409
Matrix:	Soil	Analyzed:	08/07/13
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	24.10	96	67-132
Benzene	25.00	24.19	97	77-126
Trichloroethene	25.00	23.23	93	76-127
Toluene	25.00	22.68	91	76-124
Chlorobenzene	25.00	22.18	89	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	102	79-127

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700659	Batch#:	201409
Matrix:	Soil	Analyzed:	08/07/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700659	Batch#:	201409
Matrix:	Soil	Analyzed:	08/07/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	117	80-124
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	103	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.9597
MSS Lab ID:	247555-003	Batch#:	201409
Matrix:	Soil	Sampled:	08/02/13
Units:	ug/Kg	Received:	08/02/13
Basis:	as received	Analyzed:	08/07/13

Type: MS Lab ID: QC700726

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.5779	47.98	50.00	104	52-132
Benzene	<0.6732	47.98	48.93	102	54-121
Trichloroethene	<0.7012	47.98	46.08	96	46-138
Toluene	<0.7374	47.98	43.03	90	47-120
Chlorobenzene	<0.6046	47.98	39.27	82	41-120

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-124
1,2-Dichloroethane-d4	112	80-137
Toluene-d8	93	80-120
Bromofluorobenzene	101	79-127

Type: MSD Lab ID: QC700727

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	47.98	41.88	87	52-132	18	46
Benzene	47.98	43.20	90	54-121	12	43
Trichloroethene	47.98	41.53	87	46-138	10	50
Toluene	47.98	39.63	83	47-120	8	53
Chlorobenzene	47.98	35.54	74	41-120	10	50

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	103	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	201595
Units:	ug/Kg	Analyzed:	08/12/13
Diln Fac:	1.000		

Type: BS Lab ID: QC701403

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.71	95	67-132
Benzene	25.00	24.81	99	77-126
Trichloroethene	25.00	23.74	95	76-127
Toluene	25.00	23.22	93	76-124
Chlorobenzene	25.00	25.08	100	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	103	79-127

Type: BSD Lab ID: QC701404

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	22.74	91	67-132	4	27
Benzene	25.00	24.74	99	77-126	0	20
Trichloroethene	25.00	23.82	95	76-127	0	22
Toluene	25.00	23.00	92	76-124	1	26
Chlorobenzene	25.00	24.89	100	76-120	1	21

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-124
1,2-Dichloroethane-d4	103	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	102	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC701405	Batch#:	201595
Matrix:	Soil	Analyzed:	08/12/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247565	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC701405	Batch#:	201595
Matrix:	Soil	Analyzed:	08/12/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	119	80-124
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	103	79-127

ND= Not Detected
RL= Reporting Limit


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247610
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
IE-15-2.0	247610-001
IE-15-5.0	247610-002
IE-15-10.0	247610-003
IE-15-15.0	247610-004
IE-14-2.0	247610-005
IE-14-6.0	247610-006
IE-14-11.5	247610-007
IE-14-15.0	247610-008
IE-24-2.0	247610-009
IE-24-5.0	247610-010
IE-24-10.0	247610-011
IE-24-15.0	247610-012
IE-23-2.0	247610-013
IE-23-5.5	247610-014
IE-23-10.0	247610-015
IE-23-15.0	247610-016

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/12/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247610**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/05/13**
Samples Received:	**08/05/13**

This data package contains sample and QC results for twelve soil samples, requested for the above referenced project on 08/05/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):

High surrogate recovery was observed for 1,2-dichloroethane-d4 in IE-15-10.0 (lab # 247610-003); no target analytes were detected in the sample. High surrogate recoveries were observed for toluene-d8 in IE-24-10.0 (lab # 247610-011) and IE-23-2.0 (lab # 247610-013); no target analytes were detected in these samples. IE-15-10.0 (lab # 247610-003) was not diluted; the low sample weight is due to 5035 packaging. No other analytical problems were encountered.

247610

IRIS ENVIRONMENTAL — CHAIN-OF-CUSTODY

1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

Date: 8/5/13 Page: 1 of 2 № 003592

Sampler Name(s): Bill Chen Signature(s):

	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260	Hold	Number of Containers
1	IE-15-2.0	8/5/13	0805	Soil	Y	X		1
2	IE-15-5.0		0815		Y	X		1
3	IE-15-10.0		0820		Y	X		1
4	IE-15-15.0		0835		N		X	1
5	IE-14-2.0		0905		Y	X		1
6	IE-14-6.0		0907		Y	X		1
7	IE-14-11.5		0920		Y	X		1
8	IE-14-15.0		0930		N		X	1
9	IE-24-2.0		1105		Y	X		1
10	IE-24-5.0		1110		Y	X		1

PROJECT INFORMATION

Project Name: PARK AVE CLEANERS
Project Number: 13-045A
Contact Person: ~~Bill~~ CRAIG PELLETIER
E-mail: CRAIG@IRISENV.COM
Contact Telephone: (510) 834-4747
Report: ~~Routine (Level 2)~~ Level 3 Level 4 EDD
TAT: 10-day ~~5-day~~ 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: BILL CHEN	Printed Name: Ricky Cranes
Signature:	Signature:
Company: IRIS ENVIRONMENTAL	Company: CAT
Time/Date: 1650 / 8/5/13	Time/Date: 8/5/13 1650
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Cranes	Printed Name: Miguel Garcia
Signature:	Signature:
Company: CAT	Company: CAT
Time/Date: 8/5/13 1735	Time/Date: 8/5/13 1735

Must be on ice cold Rec

24760

IRIS ENVIRONMENTAL — CHAIN-OF-CUSTODY

1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

Date: 8/5/13 Page: 2 of 2 № 003594

Sampler Name(s): Bill Chen Signature(s):

	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260	Hold	Number of Containers
11	IE-24-10.0	8/5/13	1120	soil	Y	X		1
12	IE-24-15.0		1125		N		X	1
13	IE-23-2.0		1235		Y	X		1
14	IE-23-5.5		1250		Y	X		1
15	IE-23-10.0		1255		Y	X		1
16	IE-23-15.0		1305		N		X	1

Analyses Required

PROJECT INFORMATION

Project Name: PARK AVE CLEANERS
Project Number: 13-945A
Contact Person: CRAIG PELLETIER
E-mail: CRAIG@IRISENV.COM
Contact Telephone: (510) 834-4747
Report: ~~Routine (Level 2)~~ Level 3 Level 4 EDD
TAT: 10-day ~~5-day~~ 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: BILL CHEN	Printed Name: Ricky Grams
Signature:	Signature:
Company: IRISENVIRONMENTAL	Company: C&T
Time/Date: 1650 / 8/5/13	Time/Date: 8/5/13 1652
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Grams	Printed Name: Miguel Garcia
Signature:	Signature:
Company: C&T	Company: C&T
Time/Date: 8/5/13 1735	Time/Date: 8/5/13 1735

Intact on ice cold VC

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 247610 Date Received 8/5 Number of coolers 1
Client IRIS Project 13-7454

Date Opened 8/5/13 By (print) MB (sign) [signature]
Date Logged in 1 By (print) 1 (sign) 2

1. Did cooler come with a shipping slip (airbill, etc)_____ YES (NO)
Shipping info_____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name_____ Date_____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received?_____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form)___ (YES) NO
6. Indicate the packing in cooler: (if other, describe)_____

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C)_____

☒ Samples Received on ice & cold without a temperature blank; ~~temp. taken with IR gun~~

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present?_____ (YES) NO
If YES, what time were they transferred to freezer? 1800
9. Did all bottles arrive unbroken/unopened?_____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ (YES) NO N/A
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called?_____ By_____ Date:_____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-15-2.0	Diln Fac:	0.9881
Lab ID:	247610-001	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	4.9
Acetone	ND	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-15-2.0	Diln Fac:	0.9881
Lab ID:	247610-001	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-124
1,2-Dichloroethane-d4	134	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	97	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-15-5.0	Diln Fac:	0.6983
Lab ID:	247610-002	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	7.0
Chloromethane	ND	7.0
Vinyl Chloride	ND	7.0
Bromomethane	ND	7.0
Chloroethane	ND	7.0
Trichlorofluoromethane	ND	3.5
Acetone	ND	14
Freon 113	ND	3.5
1,1-Dichloroethene	ND	3.5
Methylene Chloride	ND	14
Carbon Disulfide	ND	3.5
MTBE	ND	3.5
trans-1,2-Dichloroethene	ND	3.5
Vinyl Acetate	ND	35
1,1-Dichloroethane	ND	3.5
2-Butanone	ND	7.0
cis-1,2-Dichloroethene	ND	3.5
2,2-Dichloropropane	ND	3.5
Chloroform	ND	3.5
Bromochloromethane	ND	3.5
1,1,1-Trichloroethane	ND	3.5
1,1-Dichloropropene	ND	3.5
Carbon Tetrachloride	ND	3.5
1,2-Dichloroethane	ND	3.5
Benzene	ND	3.5
Trichloroethene	ND	3.5
1,2-Dichloropropane	ND	3.5
Bromodichloromethane	ND	3.5
Dibromomethane	ND	3.5
4-Methyl-2-Pentanone	ND	7.0
cis-1,3-Dichloropropene	ND	3.5
Toluene	ND	3.5
trans-1,3-Dichloropropene	ND	3.5
1,1,2-Trichloroethane	ND	3.5
2-Hexanone	ND	7.0
1,3-Dichloropropane	ND	3.5
Tetrachloroethene	ND	3.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-15-5.0	Diln Fac:	0.6983
Lab ID:	247610-002	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Dibromochloromethane	ND	3.5
1,2-Dibromoethane	ND	3.5
Chlorobenzene	ND	3.5
1,1,1,2-Tetrachloroethane	ND	3.5
Ethylbenzene	ND	3.5
m,p-Xylenes	ND	3.5
o-Xylene	ND	3.5
Styrene	ND	3.5
Bromoform	ND	3.5
Isopropylbenzene	ND	3.5
1,1,2,2-Tetrachloroethane	ND	3.5
1,2,3-Trichloropropane	ND	3.5
Propylbenzene	ND	3.5
Bromobenzene	ND	3.5
1,3,5-Trimethylbenzene	ND	3.5
2-Chlorotoluene	ND	3.5
4-Chlorotoluene	ND	3.5
tert-Butylbenzene	ND	3.5
1,2,4-Trimethylbenzene	ND	3.5
sec-Butylbenzene	ND	3.5
para-Isopropyl Toluene	ND	3.5
1,3-Dichlorobenzene	ND	3.5
1,4-Dichlorobenzene	ND	3.5
n-Butylbenzene	ND	3.5
1,2-Dichlorobenzene	ND	3.5
1,2-Dibromo-3-Chloropropane	ND	3.5
1,2,4-Trichlorobenzene	ND	3.5
Hexachlorobutadiene	ND	3.5
Naphthalene	ND	3.5
1,2,3-Trichlorobenzene	ND	3.5

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-124
1,2-Dichloroethane-d4	134	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	98	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-15-10.0	Diln Fac:	1.289
Lab ID:	247610-003	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	13
Chloromethane	ND	13
Vinyl Chloride	ND	13
Bromomethane	ND	13
Chloroethane	ND	13
Trichlorofluoromethane	ND	6.4
Acetone	ND	26
Freon 113	ND	6.4
1,1-Dichloroethene	ND	6.4
Methylene Chloride	ND	26
Carbon Disulfide	ND	6.4
MTBE	ND	6.4
trans-1,2-Dichloroethene	ND	6.4
Vinyl Acetate	ND	64
1,1-Dichloroethane	ND	6.4
2-Butanone	ND	13
cis-1,2-Dichloroethene	ND	6.4
2,2-Dichloropropane	ND	6.4
Chloroform	ND	6.4
Bromochloromethane	ND	6.4
1,1,1-Trichloroethane	ND	6.4
1,1-Dichloropropene	ND	6.4
Carbon Tetrachloride	ND	6.4
1,2-Dichloroethane	ND	6.4
Benzene	ND	6.4
Trichloroethene	ND	6.4
1,2-Dichloropropane	ND	6.4
Bromodichloromethane	ND	6.4
Dibromomethane	ND	6.4
4-Methyl-2-Pentanone	ND	13
cis-1,3-Dichloropropene	ND	6.4
Toluene	ND	6.4
trans-1,3-Dichloropropene	ND	6.4
1,1,2-Trichloroethane	ND	6.4
2-Hexanone	ND	13
1,3-Dichloropropane	ND	6.4
Tetrachloroethene	ND	6.4
Dibromochloromethane	ND	6.4
1,2-Dibromoethane	ND	6.4
Chlorobenzene	ND	6.4
1,1,1,2-Tetrachloroethane	ND	6.4
Ethylbenzene	ND	6.4
m,p-Xylenes	ND	6.4
o-Xylene	ND	6.4
Styrene	ND	6.4
Bromoform	ND	6.4
Isopropylbenzene	ND	6.4
1,1,2,2-Tetrachloroethane	ND	6.4
1,2,3-Trichloropropane	ND	6.4
Propylbenzene	ND	6.4
Bromobenzene	ND	6.4
1,3,5-Trimethylbenzene	ND	6.4
2-Chlorotoluene	ND	6.4

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-15-10.0	Dil'n Fac:	1.289
Lab ID:	247610-003	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
4-Chlorotoluene	ND	6.4
tert-Butylbenzene	ND	6.4
1,2,4-Trimethylbenzene	ND	6.4
sec-Butylbenzene	ND	6.4
para-Isopropyl Toluene	ND	6.4
1,3-Dichlorobenzene	ND	6.4
1,4-Dichlorobenzene	ND	6.4
n-Butylbenzene	ND	6.4
1,2-Dichlorobenzene	ND	6.4
1,2-Dibromo-3-Chloropropane	ND	6.4
1,2,4-Trichlorobenzene	ND	6.4
Hexachlorobutadiene	ND	6.4
Naphthalene	ND	6.4
1,2,3-Trichlorobenzene	ND	6.4

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-124
1,2-Dichloroethane-d4	141 *	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	98	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-14-2.0	Diln Fac:	0.8130
Lab ID:	247610-005	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	8.1
Chloromethane	ND	8.1
Vinyl Chloride	ND	8.1
Bromomethane	ND	8.1
Chloroethane	ND	8.1
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.1
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.1
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.1
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	ND	4.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-14-2.0	Diln Fac:	0.8130
Lab ID:	247610-005	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-124
1,2-Dichloroethane-d4	124	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	104	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-14-6.0	Diln Fac:	0.8432
Lab ID:	247610-006	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	8.4
Chloromethane	ND	8.4
Vinyl Chloride	ND	8.4
Bromomethane	ND	8.4
Chloroethane	ND	8.4
Trichlorofluoromethane	ND	4.2
Acetone	ND	17
Freon 113	ND	4.2
1,1-Dichloroethene	ND	4.2
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.2
MTBE	ND	4.2
trans-1,2-Dichloroethene	ND	4.2
Vinyl Acetate	ND	42
1,1-Dichloroethane	ND	4.2
2-Butanone	ND	8.4
cis-1,2-Dichloroethene	ND	4.2
2,2-Dichloropropane	ND	4.2
Chloroform	ND	4.2
Bromochloromethane	ND	4.2
1,1,1-Trichloroethane	ND	4.2
1,1-Dichloropropene	ND	4.2
Carbon Tetrachloride	ND	4.2
1,2-Dichloroethane	ND	4.2
Benzene	ND	4.2
Trichloroethene	ND	4.2
1,2-Dichloropropane	ND	4.2
Bromodichloromethane	ND	4.2
Dibromomethane	ND	4.2
4-Methyl-2-Pentanone	ND	8.4
cis-1,3-Dichloropropene	ND	4.2
Toluene	ND	4.2
trans-1,3-Dichloropropene	ND	4.2
1,1,2-Trichloroethane	ND	4.2
2-Hexanone	ND	8.4
1,3-Dichloropropane	ND	4.2
Tetrachloroethene	ND	4.2

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-14-6.0	Diln Fac:	0.8432
Lab ID:	247610-006	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Dibromochloromethane	ND	4.2
1,2-Dibromoethane	ND	4.2
Chlorobenzene	ND	4.2
1,1,1,2-Tetrachloroethane	ND	4.2
Ethylbenzene	ND	4.2
m,p-Xylenes	ND	4.2
o-Xylene	ND	4.2
Styrene	ND	4.2
Bromoform	ND	4.2
Isopropylbenzene	ND	4.2
1,1,2,2-Tetrachloroethane	ND	4.2
1,2,3-Trichloropropane	ND	4.2
Propylbenzene	ND	4.2
Bromobenzene	ND	4.2
1,3,5-Trimethylbenzene	ND	4.2
2-Chlorotoluene	ND	4.2
4-Chlorotoluene	ND	4.2
tert-Butylbenzene	ND	4.2
1,2,4-Trimethylbenzene	ND	4.2
sec-Butylbenzene	ND	4.2
para-Isopropyl Toluene	ND	4.2
1,3-Dichlorobenzene	ND	4.2
1,4-Dichlorobenzene	ND	4.2
n-Butylbenzene	ND	4.2
1,2-Dichlorobenzene	ND	4.2
1,2-Dibromo-3-Chloropropane	ND	4.2
1,2,4-Trichlorobenzene	ND	4.2
Hexachlorobutadiene	ND	4.2
Naphthalene	ND	4.2
1,2,3-Trichlorobenzene	ND	4.2

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-124
1,2-Dichloroethane-d4	124	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	101	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-14-11.5	Diln Fac:	0.8547
Lab ID:	247610-007	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	8.5
Chloromethane	ND	8.5
Vinyl Chloride	ND	8.5
Bromomethane	ND	8.5
Chloroethane	ND	8.5
Trichlorofluoromethane	ND	4.3
Acetone	ND	17
Freon 113	ND	4.3
1,1-Dichloroethene	ND	4.3
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.3
MTBE	ND	4.3
trans-1,2-Dichloroethene	ND	4.3
Vinyl Acetate	ND	43
1,1-Dichloroethane	ND	4.3
2-Butanone	ND	8.5
cis-1,2-Dichloroethene	ND	4.3
2,2-Dichloropropane	ND	4.3
Chloroform	ND	4.3
Bromochloromethane	ND	4.3
1,1,1-Trichloroethane	ND	4.3
1,1-Dichloropropene	ND	4.3
Carbon Tetrachloride	ND	4.3
1,2-Dichloroethane	ND	4.3
Benzene	ND	4.3
Trichloroethene	ND	4.3
1,2-Dichloropropane	ND	4.3
Bromodichloromethane	ND	4.3
Dibromomethane	ND	4.3
4-Methyl-2-Pentanone	ND	8.5
cis-1,3-Dichloropropene	ND	4.3
Toluene	ND	4.3
trans-1,3-Dichloropropene	ND	4.3
1,1,2-Trichloroethane	ND	4.3
2-Hexanone	ND	8.5
1,3-Dichloropropane	ND	4.3
Tetrachloroethene	9.3	4.3

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-14-11.5	Diln Fac:	0.8547
Lab ID:	247610-007	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Dibromochloromethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Chlorobenzene	ND	4.3
1,1,1,2-Tetrachloroethane	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
Styrene	ND	4.3
Bromoform	ND	4.3
Isopropylbenzene	ND	4.3
1,1,2,2-Tetrachloroethane	ND	4.3
1,2,3-Trichloropropane	ND	4.3
Propylbenzene	ND	4.3
Bromobenzene	ND	4.3
1,3,5-Trimethylbenzene	ND	4.3
2-Chlorotoluene	ND	4.3
4-Chlorotoluene	ND	4.3
tert-Butylbenzene	ND	4.3
1,2,4-Trimethylbenzene	ND	4.3
sec-Butylbenzene	ND	4.3
para-Isopropyl Toluene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
n-Butylbenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3
1,2-Dibromo-3-Chloropropane	ND	4.3
1,2,4-Trichlorobenzene	ND	4.3
Hexachlorobutadiene	ND	4.3
Naphthalene	ND	4.3
1,2,3-Trichlorobenzene	ND	4.3

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	127	80-137
Toluene-d8	104	80-120
Bromofluorobenzene	98	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-24-2.0	Diln Fac:	0.7764
Lab ID:	247610-009	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	7.8
Chloromethane	ND	7.8
Vinyl Chloride	ND	7.8
Bromomethane	ND	7.8
Chloroethane	ND	7.8
Trichlorofluoromethane	ND	3.9
Acetone	ND	16
Freon 113	ND	3.9
1,1-Dichloroethene	ND	3.9
Methylene Chloride	ND	16
Carbon Disulfide	ND	3.9
MTBE	ND	3.9
trans-1,2-Dichloroethene	ND	3.9
Vinyl Acetate	ND	39
1,1-Dichloroethane	ND	3.9
2-Butanone	ND	7.8
cis-1,2-Dichloroethene	ND	3.9
2,2-Dichloropropane	ND	3.9
Chloroform	ND	3.9
Bromochloromethane	ND	3.9
1,1,1-Trichloroethane	ND	3.9
1,1-Dichloropropene	ND	3.9
Carbon Tetrachloride	ND	3.9
1,2-Dichloroethane	ND	3.9
Benzene	ND	3.9
Trichloroethene	ND	3.9
1,2-Dichloropropane	ND	3.9
Bromodichloromethane	ND	3.9
Dibromomethane	ND	3.9
4-Methyl-2-Pentanone	ND	7.8
cis-1,3-Dichloropropene	ND	3.9
Toluene	ND	3.9
trans-1,3-Dichloropropene	ND	3.9
1,1,2-Trichloroethane	ND	3.9
2-Hexanone	ND	7.8
1,3-Dichloropropane	ND	3.9
Tetrachloroethene	ND	3.9

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-24-2.0	Diln Fac:	0.7764
Lab ID:	247610-009	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Dibromochloromethane	ND	3.9
1,2-Dibromoethane	ND	3.9
Chlorobenzene	ND	3.9
1,1,1,2-Tetrachloroethane	ND	3.9
Ethylbenzene	ND	3.9
m,p-Xylenes	ND	3.9
o-Xylene	ND	3.9
Styrene	ND	3.9
Bromoform	ND	3.9
Isopropylbenzene	ND	3.9
1,1,2,2-Tetrachloroethane	ND	3.9
1,2,3-Trichloropropane	ND	3.9
Propylbenzene	ND	3.9
Bromobenzene	ND	3.9
1,3,5-Trimethylbenzene	ND	3.9
2-Chlorotoluene	ND	3.9
4-Chlorotoluene	ND	3.9
tert-Butylbenzene	ND	3.9
1,2,4-Trimethylbenzene	ND	3.9
sec-Butylbenzene	ND	3.9
para-Isopropyl Toluene	ND	3.9
1,3-Dichlorobenzene	ND	3.9
1,4-Dichlorobenzene	ND	3.9
n-Butylbenzene	ND	3.9
1,2-Dichlorobenzene	ND	3.9
1,2-Dibromo-3-Chloropropane	ND	3.9
1,2,4-Trichlorobenzene	ND	3.9
Hexachlorobutadiene	ND	3.9
Naphthalene	ND	3.9
1,2,3-Trichlorobenzene	ND	3.9

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-124
1,2-Dichloroethane-d4	129	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	99	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-24-5.0	Diln Fac:	0.7962
Lab ID:	247610-010	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	8.0
Chloromethane	ND	8.0
Vinyl Chloride	ND	8.0
Bromomethane	ND	8.0
Chloroethane	ND	8.0
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	8.0
cis-1,2-Dichloroethene	ND	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	8.0
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	8.0
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	ND	4.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-24-5.0	Diln Fac:	0.7962
Lab ID:	247610-010	Batch#:	201412
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-124
1,2-Dichloroethane-d4	134	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	102	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-24-10.0	Diln Fac:	0.8039
Lab ID:	247610-011	Batch#:	201423
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	8.0
Chloromethane	ND	8.0
Vinyl Chloride	ND	8.0
Bromomethane	ND	8.0
Chloroethane	ND	8.0
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	8.0
cis-1,2-Dichloroethene	ND	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	8.0
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	8.0
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	ND	4.0
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-24-10.0	Dil'n Fac:	0.8039
Lab ID:	247610-011	Batch#:	201423
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-124
1,2-Dichloroethane-d4	113	80-137
Toluene-d8	126 *	80-120
Bromofluorobenzene	92	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-23-2.0	Diln Fac:	0.9107
Lab ID:	247610-013	Batch#:	201423
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	9.1
Chloromethane	ND	9.1
Vinyl Chloride	ND	9.1
Bromomethane	ND	9.1
Chloroethane	ND	9.1
Trichlorofluoromethane	ND	4.6
Acetone	ND	18
Freon 113	ND	4.6
1,1-Dichloroethene	ND	4.6
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.6
MTBE	ND	4.6
trans-1,2-Dichloroethene	ND	4.6
Vinyl Acetate	ND	46
1,1-Dichloroethane	ND	4.6
2-Butanone	ND	9.1
cis-1,2-Dichloroethene	ND	4.6
2,2-Dichloropropane	ND	4.6
Chloroform	ND	4.6
Bromochloromethane	ND	4.6
1,1,1-Trichloroethane	ND	4.6
1,1-Dichloropropene	ND	4.6
Carbon Tetrachloride	ND	4.6
1,2-Dichloroethane	ND	4.6
Benzene	ND	4.6
Trichloroethene	ND	4.6
1,2-Dichloropropane	ND	4.6
Bromodichloromethane	ND	4.6
Dibromomethane	ND	4.6
4-Methyl-2-Pentanone	ND	9.1
cis-1,3-Dichloropropene	ND	4.6
Toluene	ND	4.6
trans-1,3-Dichloropropene	ND	4.6
1,1,2-Trichloroethane	ND	4.6
2-Hexanone	ND	9.1
1,3-Dichloropropane	ND	4.6
Tetrachloroethene	ND	4.6
Dibromochloromethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Chlorobenzene	ND	4.6
1,1,1,2-Tetrachloroethane	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	ND	4.6
Styrene	ND	4.6
Bromoform	ND	4.6
Isopropylbenzene	ND	4.6
1,1,2,2-Tetrachloroethane	ND	4.6
1,2,3-Trichloropropane	ND	4.6
Propylbenzene	ND	4.6
Bromobenzene	ND	4.6
1,3,5-Trimethylbenzene	ND	4.6
2-Chlorotoluene	ND	4.6

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-23-2.0	Diln Fac:	0.9107
Lab ID:	247610-013	Batch#:	201423
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
4-Chlorotoluene	ND	4.6
tert-Butylbenzene	ND	4.6
1,2,4-Trimethylbenzene	ND	4.6
sec-Butylbenzene	ND	4.6
para-Isopropyl Toluene	ND	4.6
1,3-Dichlorobenzene	ND	4.6
1,4-Dichlorobenzene	ND	4.6
n-Butylbenzene	ND	4.6
1,2-Dichlorobenzene	ND	4.6
1,2-Dibromo-3-Chloropropane	ND	4.6
1,2,4-Trichlorobenzene	ND	4.6
Hexachlorobutadiene	ND	4.6
Naphthalene	ND	4.6
1,2,3-Trichlorobenzene	ND	4.6

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-124
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	127 *	80-120
Bromofluorobenzene	93	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-23-5.5	Diln Fac:	0.7874
Lab ID:	247610-014	Batch#:	201423
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	7.9
Chloromethane	ND	7.9
Vinyl Chloride	ND	7.9
Bromomethane	ND	7.9
Chloroethane	ND	7.9
Trichlorofluoromethane	ND	3.9
Acetone	ND	16
Freon 113	ND	3.9
1,1-Dichloroethene	ND	3.9
Methylene Chloride	ND	16
Carbon Disulfide	ND	3.9
MTBE	ND	3.9
trans-1,2-Dichloroethene	ND	3.9
Vinyl Acetate	ND	39
1,1-Dichloroethane	ND	3.9
2-Butanone	ND	7.9
cis-1,2-Dichloroethene	ND	3.9
2,2-Dichloropropane	ND	3.9
Chloroform	ND	3.9
Bromochloromethane	ND	3.9
1,1,1-Trichloroethane	ND	3.9
1,1-Dichloropropene	ND	3.9
Carbon Tetrachloride	ND	3.9
1,2-Dichloroethane	ND	3.9
Benzene	ND	3.9
Trichloroethene	ND	3.9
1,2-Dichloropropane	ND	3.9
Bromodichloromethane	ND	3.9
Dibromomethane	ND	3.9
4-Methyl-2-Pentanone	ND	7.9
cis-1,3-Dichloropropene	ND	3.9
Toluene	ND	3.9
trans-1,3-Dichloropropene	ND	3.9
1,1,2-Trichloroethane	ND	3.9
2-Hexanone	ND	7.9
1,3-Dichloropropane	ND	3.9
Tetrachloroethene	4.0	3.9

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-23-5.5	Diln Fac:	0.7874
Lab ID:	247610-014	Batch#:	201423
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Dibromochloromethane	ND	3.9
1,2-Dibromoethane	ND	3.9
Chlorobenzene	ND	3.9
1,1,1,2-Tetrachloroethane	ND	3.9
Ethylbenzene	ND	3.9
m,p-Xylenes	ND	3.9
o-Xylene	ND	3.9
Styrene	ND	3.9
Bromoform	ND	3.9
Isopropylbenzene	ND	3.9
1,1,2,2-Tetrachloroethane	ND	3.9
1,2,3-Trichloropropane	ND	3.9
Propylbenzene	ND	3.9
Bromobenzene	ND	3.9
1,3,5-Trimethylbenzene	ND	3.9
2-Chlorotoluene	ND	3.9
4-Chlorotoluene	ND	3.9
tert-Butylbenzene	ND	3.9
1,2,4-Trimethylbenzene	ND	3.9
sec-Butylbenzene	ND	3.9
para-Isopropyl Toluene	ND	3.9
1,3-Dichlorobenzene	ND	3.9
1,4-Dichlorobenzene	ND	3.9
n-Butylbenzene	ND	3.9
1,2-Dichlorobenzene	ND	3.9
1,2-Dibromo-3-Chloropropane	ND	3.9
1,2,4-Trichlorobenzene	ND	3.9
Hexachlorobutadiene	ND	3.9
Naphthalene	ND	3.9
1,2,3-Trichlorobenzene	ND	3.9

Surrogate	%REC	Limits
Dibromofluoromethane	118	80-124
1,2-Dichloroethane-d4	114	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	93	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-23-10.0	Diln Fac:	0.9242
Lab ID:	247610-015	Batch#:	201423
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Freon 12	ND	9.2
Chloromethane	ND	9.2
Vinyl Chloride	ND	9.2
Bromomethane	ND	9.2
Chloroethane	ND	9.2
Trichlorofluoromethane	ND	4.6
Acetone	ND	18
Freon 113	ND	4.6
1,1-Dichloroethene	ND	4.6
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.6
MTBE	ND	4.6
trans-1,2-Dichloroethene	ND	4.6
Vinyl Acetate	ND	46
1,1-Dichloroethane	ND	4.6
2-Butanone	ND	9.2
cis-1,2-Dichloroethene	ND	4.6
2,2-Dichloropropane	ND	4.6
Chloroform	ND	4.6
Bromochloromethane	ND	4.6
1,1,1-Trichloroethane	ND	4.6
1,1-Dichloropropene	ND	4.6
Carbon Tetrachloride	ND	4.6
1,2-Dichloroethane	ND	4.6
Benzene	ND	4.6
Trichloroethene	ND	4.6
1,2-Dichloropropane	ND	4.6
Bromodichloromethane	ND	4.6
Dibromomethane	ND	4.6
4-Methyl-2-Pentanone	ND	9.2
cis-1,3-Dichloropropene	ND	4.6
Toluene	ND	4.6
trans-1,3-Dichloropropene	ND	4.6
1,1,2-Trichloroethane	ND	4.6
2-Hexanone	ND	9.2
1,3-Dichloropropane	ND	4.6
Tetrachloroethene	5.8	4.6

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-23-10.0	Diln Fac:	0.9242
Lab ID:	247610-015	Batch#:	201423
Matrix:	Soil	Sampled:	08/05/13
Units:	ug/Kg	Received:	08/05/13
Basis:	as received	Analyzed:	08/07/13

Analyte	Result	RL
Dibromochloromethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Chlorobenzene	ND	4.6
1,1,1,2-Tetrachloroethane	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	ND	4.6
Styrene	ND	4.6
Bromoform	ND	4.6
Isopropylbenzene	ND	4.6
1,1,2,2-Tetrachloroethane	ND	4.6
1,2,3-Trichloropropane	ND	4.6
Propylbenzene	ND	4.6
Bromobenzene	ND	4.6
1,3,5-Trimethylbenzene	ND	4.6
2-Chlorotoluene	ND	4.6
4-Chlorotoluene	ND	4.6
tert-Butylbenzene	ND	4.6
1,2,4-Trimethylbenzene	ND	4.6
sec-Butylbenzene	ND	4.6
para-Isopropyl Toluene	ND	4.6
1,3-Dichlorobenzene	ND	4.6
1,4-Dichlorobenzene	ND	4.6
n-Butylbenzene	ND	4.6
1,2-Dichlorobenzene	ND	4.6
1,2-Dibromo-3-Chloropropane	ND	4.6
1,2,4-Trichlorobenzene	ND	4.6
Hexachlorobutadiene	ND	4.6
Naphthalene	ND	4.6
1,2,3-Trichlorobenzene	ND	4.6

Surrogate	%REC	Limits
Dibromofluoromethane	115	80-124
1,2-Dichloroethane-d4	114	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	92	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC700666	Batch#:	201412
Matrix:	Soil	Analyzed:	08/07/13
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	26.64	107	67-132
Benzene	25.00	24.24	97	77-126
Trichloroethene	25.00	24.22	97	76-127
Toluene	25.00	23.41	94	76-124
Chlorobenzene	25.00	22.82	91	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-124
1,2-Dichloroethane-d4	120	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	95	79-127

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700667	Batch#:	201412
Matrix:	Soil	Analyzed:	08/07/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700667	Batch#:	201412
Matrix:	Soil	Analyzed:	08/07/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-124
1,2-Dichloroethane-d4	123	80-137
Toluene-d8	89	80-120
Bromofluorobenzene	98	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	201423
Units:	ug/Kg	Analyzed:	08/07/13
Diln Fac:	1.000		

Type: BS Lab ID: QC700705

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.31	93	67-132
Benzene	25.00	25.23	101	77-126
Trichloroethene	25.00	21.89	88	76-127
Toluene	25.00	22.46	90	76-124
Chlorobenzene	25.00	23.86	95	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	116	80-120
Bromofluorobenzene	95	79-127

Type: BSD Lab ID: QC700706

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	22.74	91	67-132	2	27
Benzene	25.00	24.24	97	77-126	4	20
Trichloroethene	25.00	21.02	84	76-127	4	22
Toluene	25.00	24.74	99	76-124	10	26
Chlorobenzene	25.00	23.45	94	76-120	2	21

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-124
1,2-Dichloroethane-d4	100	80-137
Toluene-d8	116	80-120
Bromofluorobenzene	91	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700707	Batch#:	201423
Matrix:	Soil	Analyzed:	08/07/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700707	Batch#:	201423
Matrix:	Soil	Analyzed:	08/07/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	92	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247610	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	201412
MSS Lab ID:	247609-004	Sampled:	08/05/13
Matrix:	Soil	Received:	08/05/13
Units:	ug/Kg	Analyzed:	08/07/13
Basis:	as received		

Type: MS Diln Fac: 0.9363
Lab ID: QC700748

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<1.198	46.82	35.87	77	52-132
Benzene	<0.6500	46.82	36.44	78	54-121
Trichloroethene	<0.7017	46.82	37.75	81	46-138
Toluene	<0.4374	46.82	33.93	72	47-120
Chlorobenzene	<0.3306	46.82	33.04	71	41-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-124
1,2-Dichloroethane-d4	123	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	96	79-127

Type: MSD Diln Fac: 0.9506
Lab ID: QC700749

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	47.53	38.22	80	52-132	5	46
Benzene	47.53	36.07	76	54-121	3	43
Trichloroethene	47.53	37.47	79	46-138	2	50
Toluene	47.53	35.62	75	47-120	3	53
Chlorobenzene	47.53	32.82	69	41-120	2	50

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	112	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	101	79-127

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247710
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
IE-26-5.0	247710-001
IE-25-2.0	247710-002
IE-25-3.0	247710-003
IE-27-2.0	247710-004
IE-27-5.0	247710-005
IE-27-10.0	247710-006
IE-27-15.0	247710-007

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/13/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247710**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/07/13**
Samples Received:	**08/07/13**

This data package contains sample and QC results for six soil samples, requested for the above referenced project on 08/07/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):

High recoveries were observed for 1,1-dichloroethene and trichloroethene in the MS/MSD for batch 201513; the parent sample was not a project sample, the BS/BSD were within limits, the associated RPDs were within limits, and these analytes were not detected at or above the RL in the associated samples. Low surrogate recoveries were observed for dibromofluoromethane in the MS/MSD for batch 201513; the parent sample was not a project sample. High surrogate recovery was observed for toluene-d8 in the method blank for batch 201534; no target analytes were detected in the sample. No other analytical problems were encountered.

24710

IRIS ENVIRONMENTAL — CHAIN-OF-CUSTODY

1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

Date: 8/7/13 Page: 1 of 1 **Nº** 003600

Sampler Name(s): Bill Chen

Signature(s):

Analyses Required

	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260	HJD	Number of Containers
1	IE-26-5.0	8/7/13	0830	soil	Y	X		3
2	IE-25-2.0	8/7/13	0845	soil	Y	X		3
3	IE-25-5.0	8/7/13	0845	soil	Y	X		3
4	IE-27-2.0	8/5/13	1620	soil	Y	X		
5	IE-27-5.0	8/5/13	1625	soil	Y	X		
6	IE-27-10.0	8/5/13	1634	soil	Y	X		
7	IE-27-15.0	8/5/13	1640	soil	NO		X	

PROJECT INFORMATION

Project Name: PARK AVE CLEANERS
Project Number: 13-945A
Contact Person: CRAIG PELLETIER
E-mail: CRAIG@IRISENV.com
Contact Telephone: (510) 834-4747
Report: ~~Routine (Level 2)~~ Level 3 Level 4 EDD
TAT: 10-day ~~5-day~~ 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Bill Chen	Printed Name: Tony Rojas
Signature:	Signature:
Company: IRIS ENVIRONMENTAL	Company: C&T
Time/Date: 1450 / 8/7/13	Time/Date: 1450 8/7/13
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Tony Rojas	Printed Name: TINA RAIKAR
Signature:	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/7/13 @ 1541	Time/Date: 8/7/13 @ 1541

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247710 Date Received 8/7/13 Number of coolers 1
Client IRIS Project PARK AVE CLEANERS (13-945A)

Date Opened 8/7/13 By (print) TR (sign) Tina Rankin
Date Logged in 6 By (print) MS (sign) MS

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
   Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) _____

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ (YES) NO
   If YES, what time were they transferred to freezer? 1655
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ (YES) NO N/A
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____

_____

_____

_____

_____

_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-26-5.0	Diln Fac:	0.9058
Lab ID:	247710-001	Batch#:	201513
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Freon 12	ND	9.1
Chloromethane	ND	9.1
Vinyl Chloride	ND	9.1
Bromomethane	ND	9.1
Chloroethane	ND	9.1
Trichlorofluoromethane	ND	4.5
Acetone	ND	18
Freon 113	ND	4.5
1,1-Dichloroethene	ND	4.5
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.5
MTBE	ND	4.5
trans-1,2-Dichloroethene	ND	4.5
Vinyl Acetate	ND	45
1,1-Dichloroethane	ND	4.5
2-Butanone	ND	9.1
cis-1,2-Dichloroethene	ND	4.5
2,2-Dichloropropane	ND	4.5
Chloroform	ND	4.5
Bromochloromethane	ND	4.5
1,1,1-Trichloroethane	ND	4.5
1,1-Dichloropropene	ND	4.5
Carbon Tetrachloride	ND	4.5
1,2-Dichloroethane	ND	4.5
Benzene	ND	4.5
Trichloroethene	ND	4.5
1,2-Dichloropropane	ND	4.5
Bromodichloromethane	ND	4.5
Dibromomethane	ND	4.5
4-Methyl-2-Pentanone	ND	9.1
cis-1,3-Dichloropropene	ND	4.5
Toluene	ND	4.5
trans-1,3-Dichloropropene	ND	4.5
1,1,2-Trichloroethane	ND	4.5
2-Hexanone	ND	9.1
1,3-Dichloropropane	ND	4.5
Tetrachloroethene	ND	4.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-26-5.0	Diln Fac:	0.9058
Lab ID:	247710-001	Batch#:	201513
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Dibromochloromethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Chlorobenzene	ND	4.5
1,1,1,2-Tetrachloroethane	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
Styrene	ND	4.5
Bromoform	ND	4.5
Isopropylbenzene	ND	4.5
1,1,2,2-Tetrachloroethane	ND	4.5
1,2,3-Trichloropropane	ND	4.5
Propylbenzene	ND	4.5
Bromobenzene	ND	4.5
1,3,5-Trimethylbenzene	ND	4.5
2-Chlorotoluene	ND	4.5
4-Chlorotoluene	ND	4.5
tert-Butylbenzene	ND	4.5
1,2,4-Trimethylbenzene	ND	4.5
sec-Butylbenzene	ND	4.5
para-Isopropyl Toluene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
n-Butylbenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5
1,2-Dibromo-3-Chloropropane	ND	4.5
1,2,4-Trichlorobenzene	ND	4.5
Hexachlorobutadiene	ND	4.5
Naphthalene	ND	4.5
1,2,3-Trichlorobenzene	ND	4.5

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-124
1,2-Dichloroethane-d4	129	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	99	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-25-2.0	Diln Fac:	1.018
Lab ID:	247710-002	Batch#:	201513
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.1
Acetone	ND	20
Freon 113	ND	5.1
1,1-Dichloroethene	ND	5.1
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.1
MTBE	ND	5.1
trans-1,2-Dichloroethene	ND	5.1
Vinyl Acetate	ND	51
1,1-Dichloroethane	ND	5.1
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.1
2,2-Dichloropropane	ND	5.1
Chloroform	ND	5.1
Bromochloromethane	ND	5.1
1,1,1-Trichloroethane	ND	5.1
1,1-Dichloropropene	ND	5.1
Carbon Tetrachloride	ND	5.1
1,2-Dichloroethane	ND	5.1
Benzene	ND	5.1
Trichloroethene	ND	5.1
1,2-Dichloropropane	ND	5.1
Bromodichloromethane	ND	5.1
Dibromomethane	ND	5.1
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.1
Toluene	ND	5.1
trans-1,3-Dichloropropene	ND	5.1
1,1,2-Trichloroethane	ND	5.1
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.1
Tetrachloroethene	31	5.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-25-2.0	Diln Fac:	1.018
Lab ID:	247710-002	Batch#:	201513
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Dibromochloromethane	ND	5.1
1,2-Dibromoethane	ND	5.1
Chlorobenzene	ND	5.1
1,1,1,2-Tetrachloroethane	ND	5.1
Ethylbenzene	ND	5.1
m,p-Xylenes	ND	5.1
o-Xylene	ND	5.1
Styrene	ND	5.1
Bromoform	ND	5.1
Isopropylbenzene	ND	5.1
1,1,2,2-Tetrachloroethane	ND	5.1
1,2,3-Trichloropropane	ND	5.1
Propylbenzene	ND	5.1
Bromobenzene	ND	5.1
1,3,5-Trimethylbenzene	ND	5.1
2-Chlorotoluene	ND	5.1
4-Chlorotoluene	ND	5.1
tert-Butylbenzene	ND	5.1
1,2,4-Trimethylbenzene	ND	5.1
sec-Butylbenzene	ND	5.1
para-Isopropyl Toluene	ND	5.1
1,3-Dichlorobenzene	ND	5.1
1,4-Dichlorobenzene	ND	5.1
n-Butylbenzene	ND	5.1
1,2-Dichlorobenzene	ND	5.1
1,2-Dibromo-3-Chloropropane	ND	5.1
1,2,4-Trichlorobenzene	ND	5.1
Hexachlorobutadiene	ND	5.1
Naphthalene	ND	5.1
1,2,3-Trichlorobenzene	ND	5.1

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	121	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	103	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-25-3.0	Diln Fac:	0.8977
Lab ID:	247710-003	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Freon 12	ND	9.0
Chloromethane	ND	9.0
Vinyl Chloride	ND	9.0
Bromomethane	ND	9.0
Chloroethane	ND	9.0
Trichlorofluoromethane	ND	4.5
Acetone	ND	18
Freon 113	ND	4.5
1,1-Dichloroethene	ND	4.5
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.5
MTBE	ND	4.5
trans-1,2-Dichloroethene	ND	4.5
Vinyl Acetate	ND	45
1,1-Dichloroethane	ND	4.5
2-Butanone	ND	9.0
cis-1,2-Dichloroethene	ND	4.5
2,2-Dichloropropane	ND	4.5
Chloroform	ND	4.5
Bromochloromethane	ND	4.5
1,1,1-Trichloroethane	ND	4.5
1,1-Dichloropropene	ND	4.5
Carbon Tetrachloride	ND	4.5
1,2-Dichloroethane	ND	4.5
Benzene	ND	4.5
Trichloroethene	ND	4.5
1,2-Dichloropropane	ND	4.5
Bromodichloromethane	ND	4.5
Dibromomethane	ND	4.5
4-Methyl-2-Pentanone	ND	9.0
cis-1,3-Dichloropropene	ND	4.5
Toluene	ND	4.5
trans-1,3-Dichloropropene	ND	4.5
1,1,2-Trichloroethane	ND	4.5
2-Hexanone	ND	9.0
1,3-Dichloropropane	ND	4.5
Tetrachloroethene	28	4.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-25-3.0	Diln Fac:	0.8977
Lab ID:	247710-003	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Dibromochloromethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Chlorobenzene	ND	4.5
1,1,1,2-Tetrachloroethane	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
Styrene	ND	4.5
Bromoform	ND	4.5
Isopropylbenzene	ND	4.5
1,1,2,2-Tetrachloroethane	ND	4.5
1,2,3-Trichloropropane	ND	4.5
Propylbenzene	ND	4.5
Bromobenzene	ND	4.5
1,3,5-Trimethylbenzene	ND	4.5
2-Chlorotoluene	ND	4.5
4-Chlorotoluene	ND	4.5
tert-Butylbenzene	ND	4.5
1,2,4-Trimethylbenzene	ND	4.5
sec-Butylbenzene	ND	4.5
para-Isopropyl Toluene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
n-Butylbenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5
1,2-Dibromo-3-Chloropropane	ND	4.5
1,2,4-Trichlorobenzene	ND	4.5
Hexachlorobutadiene	ND	4.5
Naphthalene	ND	4.5
1,2,3-Trichlorobenzene	ND	4.5

Surrogate	%REC	Limits
Dibromofluoromethane	115	80-124
1,2-Dichloroethane-d4	113	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	92	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-27-2.0	Diln Fac:	0.8117
Lab ID:	247710-004	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Freon 12	ND	8.1
Chloromethane	ND	8.1
Vinyl Chloride	ND	8.1
Bromomethane	ND	8.1
Chloroethane	ND	8.1
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.1
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.1
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.1
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	ND	4.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-27-2.0	Diln Fac:	0.8117
Lab ID:	247710-004	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-124
1,2-Dichloroethane-d4	113	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	93	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-27-5.0	Diln Fac:	0.8666
Lab ID:	247710-005	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Freon 12	ND	8.7
Chloromethane	ND	8.7
Vinyl Chloride	ND	8.7
Bromomethane	ND	8.7
Chloroethane	ND	8.7
Trichlorofluoromethane	ND	4.3
Acetone	ND	17
Freon 113	ND	4.3
1,1-Dichloroethene	ND	4.3
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.3
MTBE	ND	4.3
trans-1,2-Dichloroethene	ND	4.3
Vinyl Acetate	ND	43
1,1-Dichloroethane	ND	4.3
2-Butanone	ND	8.7
cis-1,2-Dichloroethene	ND	4.3
2,2-Dichloropropane	ND	4.3
Chloroform	ND	4.3
Bromochloromethane	ND	4.3
1,1,1-Trichloroethane	ND	4.3
1,1-Dichloropropene	ND	4.3
Carbon Tetrachloride	ND	4.3
1,2-Dichloroethane	ND	4.3
Benzene	ND	4.3
Trichloroethene	ND	4.3
1,2-Dichloropropane	ND	4.3
Bromodichloromethane	ND	4.3
Dibromomethane	ND	4.3
4-Methyl-2-Pentanone	ND	8.7
cis-1,3-Dichloropropene	ND	4.3
Toluene	ND	4.3
trans-1,3-Dichloropropene	ND	4.3
1,1,2-Trichloroethane	ND	4.3
2-Hexanone	ND	8.7
1,3-Dichloropropane	ND	4.3
Tetrachloroethene	25	4.3

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-27-5.0	Diln Fac:	0.8666
Lab ID:	247710-005	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Dibromochloromethane	ND	4.3
1,2-Dibromoethane	ND	4.3
Chlorobenzene	ND	4.3
1,1,1,2-Tetrachloroethane	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
Styrene	ND	4.3
Bromoform	ND	4.3
Isopropylbenzene	ND	4.3
1,1,2,2-Tetrachloroethane	ND	4.3
1,2,3-Trichloropropane	ND	4.3
Propylbenzene	ND	4.3
Bromobenzene	ND	4.3
1,3,5-Trimethylbenzene	ND	4.3
2-Chlorotoluene	ND	4.3
4-Chlorotoluene	ND	4.3
tert-Butylbenzene	ND	4.3
1,2,4-Trimethylbenzene	ND	4.3
sec-Butylbenzene	ND	4.3
para-Isopropyl Toluene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
n-Butylbenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3
1,2-Dibromo-3-Chloropropane	ND	4.3
1,2,4-Trichlorobenzene	ND	4.3
Hexachlorobutadiene	ND	4.3
Naphthalene	ND	4.3
1,2,3-Trichlorobenzene	ND	4.3

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-124
1,2-Dichloroethane-d4	119	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	95	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-27-10.0	Diln Fac:	0.8264
Lab ID:	247710-006	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Freon 12	ND	8.3
Chloromethane	ND	8.3
Vinyl Chloride	ND	8.3
Bromomethane	ND	8.3
Chloroethane	ND	8.3
Trichlorofluoromethane	ND	4.1
Acetone	ND	17
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	17
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.3
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.3
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.3
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	41	4.1

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-27-10.0	Diln Fac:	0.8264
Lab ID:	247710-006	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/07/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-124
1,2-Dichloroethane-d4	120	80-137
Toluene-d8	103	80-120
Bromofluorobenzene	91	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	201513
Units:	ug/Kg	Analyzed:	08/09/13
Diln Fac:	1.000		

Type: BS Lab ID: QC701067

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	25.75	103	67-132
Benzene	25.00	24.76	99	77-126
Trichloroethene	25.00	25.54	102	76-127
Toluene	25.00	23.94	96	76-124
Chlorobenzene	25.00	25.99	104	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-124
1,2-Dichloroethane-d4	128	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	90	79-127

Type: BSD Lab ID: QC701068

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	23.06	92	67-132	11	27
Benzene	25.00	22.05	88	77-126	12	20
Trichloroethene	25.00	24.65	99	76-127	4	22
Toluene	25.00	21.21	85	76-124	12	26
Chlorobenzene	25.00	24.13	97	76-120	7	21

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	112	80-137
Toluene-d8	92	80-120
Bromofluorobenzene	92	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC701069	Batch#:	201513
Matrix:	Soil	Analyzed:	08/09/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC701069	Batch#:	201513
Matrix:	Soil	Analyzed:	08/09/13
Units:	ug/Kg		

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-124
1,2-Dichloroethane-d4	120	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	96	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	247668-002	Batch#:	201513
Matrix:	Soil	Sampled:	08/06/13
Units:	ug/Kg	Received:	08/06/13
Basis:	as received	Analyzed:	08/09/13

Type: MS Lab ID: QC701161

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<1.133	50.00	63.19	126	52-132
Benzene	2.142	50.00	42.71	81	54-121
Trichloroethene	0.9811	50.00	78.01	154 *	46-138
Toluene	0.8129	50.00	40.24	79	47-120
Chlorobenzene	<0.3124	50.00	38.24	76	41-120

Surrogate	%REC	Limits
Dibromofluoromethane	25 *	80-124
1,2-Dichloroethane-d4	115	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	105	79-127

Type: MSD Lab ID: QC701162

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	50.00	66.93	134 *	52-132	6	46
Benzene	50.00	42.77	81	54-121	0	43
Trichloroethene	50.00	77.41	153 *	46-138	1	50
Toluene	50.00	34.62	68	47-120	15	53
Chlorobenzene	50.00	33.42	67	41-120	13	50

Surrogate	%REC	Limits
Dibromofluoromethane	16 *	80-124
1,2-Dichloroethane-d4	136	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	97	79-127

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC701164	Batch#:	201534
Matrix:	Soil	Analyzed:	08/09/13
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	20.41	102	67-132
Benzene	20.00	21.74	109	77-126
Trichloroethene	20.00	19.84	99	76-127
Toluene	20.00	23.16	116	76-124
Chlorobenzene	20.00	23.72	119	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	118	80-120
Bromofluorobenzene	92	79-127

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Dil'n Fac:	1.000
Lab ID:	QC701165	Batch#:	201534
Matrix:	Soil	Analyzed:	08/09/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC701165	Batch#:	201534
Matrix:	Soil	Analyzed:	08/09/13
Units:	ug/Kg		

Analyte	Result	RL
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	125 *	80-120
Bromofluorobenzene	94	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247710	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	201534
MSS Lab ID:	247804-001	Sampled:	08/09/13
Matrix:	Soil	Received:	08/09/13
Units:	ug/Kg	Analyzed:	08/09/13
Basis:	as received		

Type: MS Diln Fac: 0.9042
Lab ID: QC701199

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.9088	45.21	45.94	102	52-132
Benzene	<0.8726	45.21	45.41	100	54-121
Trichloroethene	<0.8077	45.21	42.46	94	46-138
Toluene	<0.6879	45.21	44.85	99	47-120
Chlorobenzene	<0.6635	45.21	45.96	102	41-120

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-124
1,2-Dichloroethane-d4	115	80-137
Toluene-d8	111	80-120
Bromofluorobenzene	90	79-127

Type: MSD Diln Fac: 0.9141
Lab ID: QC701200

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	45.70	50.48	110	52-132	8	46
Benzene	45.70	46.88	103	54-121	2	43
Trichloroethene	45.70	41.91	92	46-138	2	50
Toluene	45.70	48.37	106	47-120	6	53
Chlorobenzene	45.70	46.45	102	41-120	0	50

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	113	80-120
Bromofluorobenzene	91	79-127

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247783
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
IE-25-10.0	247783-001
IE-25-15.0	247783-002
IE-26-10.0	247783-003
IE-26-15.0	247783-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/13/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247783**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/08/13**
Samples Received:	**08/08/13**

This data package contains sample and QC results for four soil samples, requested for the above referenced project on 08/08/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):

High surrogate recovery was observed for toluene-d8 in the method blank for batch 201534; no target analytes were detected in the sample. High surrogate recovery was observed for dibromofluoromethane in the method blank for batch 201567; no target analytes were detected in the sample. No other analytical problems were encountered.

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

CHAIN-OF-CUSTODY

247783

Date: 8/8/13 Page: 1 of 1 **№** 003601

Sampler Name(s): Bill Chen

Signature(s):

Analyses Required

Sample ID	Date	Time	Matrix	Pres.	NOx 6260	Number of Containers
IE-25-10.0	8/7/13	1550	soil	Y	X	3
IE-25-15.0	8/7/13	1600	soil	Y	X	3
IE-26-10.0	8/7/13	1620	soil	Y	X	3
IE-26-15.0	8/7/13	1630	soil	Y	X	3

1 2 3 4

PROJECT INFORMATION

Project Name: PARK AVE CLEANERS
Project Number: 13-945A
Contact Person: CRAIG PELLETIER
E-mail: CRAIG@IRISENV.COM
Contact Telephone: (510) 834-4747
Report: ~~Routine (Level 2)~~ Level 3 Level 4 EDD
TAT: 10-day ~~5-day~~ 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

Thanks!

RELINQUISHED BY:

Printed Name: Bill Chen
Signature:
Company: IRIS ENVIRONMENTAL
Time/Date: 1200 8/8/13

RECEIVED BY:

Printed Name: Ian Amberson
Signature:
Company: Curtis + Tompkins
Time/Date: 8/8/13 @ 1200

RELINQUISHED BY:

Printed Name: Ian Amberson
Signature:
Company: C & T
Time/Date: 1720 8/8/13

RECEIVED BY:

Printed Name: Adnan Ahmad
Signature:
Company: C&T
Time/Date: 1720 8/8/13

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247783 Date Received 8/8/13 Number of coolers 1
Client Iris Project Park Ave Cleanups

Date Opened 8/8/13 By (print) [illegible] (sign) [illegible]
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
   Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☑ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) ___ (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☑ Bubble Wrap ☐ Foam blocks ☑ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

   Type of ice used: ☑ Wet ☐ Blue/Gel ☐ None Temp(°C) _____

   ☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

   ☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ (YES) NO
   If YES, what time were they transferred to freezer? 1900
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ (YES) NO N/A
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____

_____

_____

_____

_____

_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-25-10.0	Diln Fac:	0.9524
Lab ID:	247783-001	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/08/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Freon 12	ND	9.5
Chloromethane	ND	9.5
Vinyl Chloride	ND	9.5
Bromomethane	ND	9.5
Chloroethane	ND	9.5
Trichlorofluoromethane	ND	4.8
Acetone	ND	19
Freon 113	ND	4.8
1,1-Dichloroethene	ND	4.8
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.8
MTBE	ND	4.8
trans-1,2-Dichloroethene	ND	4.8
Vinyl Acetate	ND	48
1,1-Dichloroethane	ND	4.8
2-Butanone	ND	9.5
cis-1,2-Dichloroethene	ND	4.8
2,2-Dichloropropane	ND	4.8
Chloroform	ND	4.8
Bromochloromethane	ND	4.8
1,1,1-Trichloroethane	ND	4.8
1,1-Dichloropropene	ND	4.8
Carbon Tetrachloride	ND	4.8
1,2-Dichloroethane	ND	4.8
Benzene	ND	4.8
Trichloroethene	ND	4.8
1,2-Dichloropropane	ND	4.8
Bromodichloromethane	ND	4.8
Dibromomethane	ND	4.8
4-Methyl-2-Pentanone	ND	9.5
cis-1,3-Dichloropropene	ND	4.8
Toluene	ND	4.8
trans-1,3-Dichloropropene	ND	4.8
1,1,2-Trichloroethane	ND	4.8
2-Hexanone	ND	9.5
1,3-Dichloropropane	ND	4.8
Tetrachloroethene	ND	4.8

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-25-10.0	Diln Fac:	0.9524
Lab ID:	247783-001	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/08/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Dibromochloromethane	ND	4.8
1,2-Dibromoethane	ND	4.8
Chlorobenzene	ND	4.8
1,1,1,2-Tetrachloroethane	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8
Styrene	ND	4.8
Bromoform	ND	4.8
Isopropylbenzene	ND	4.8
1,1,2,2-Tetrachloroethane	ND	4.8
1,2,3-Trichloropropane	ND	4.8
Propylbenzene	ND	4.8
Bromobenzene	ND	4.8
1,3,5-Trimethylbenzene	ND	4.8
2-Chlorotoluene	ND	4.8
4-Chlorotoluene	ND	4.8
tert-Butylbenzene	ND	4.8
1,2,4-Trimethylbenzene	ND	4.8
sec-Butylbenzene	ND	4.8
para-Isopropyl Toluene	ND	4.8
1,3-Dichlorobenzene	ND	4.8
1,4-Dichlorobenzene	ND	4.8
n-Butylbenzene	ND	4.8
1,2-Dichlorobenzene	ND	4.8
1,2-Dibromo-3-Chloropropane	ND	4.8
1,2,4-Trichlorobenzene	ND	4.8
Hexachlorobutadiene	ND	4.8
Naphthalene	ND	4.8
1,2,3-Trichlorobenzene	ND	4.8

Surrogate	%REC	Limits
Dibromofluoromethane	116	80-124
1,2-Dichloroethane-d4	111	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	91	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-25-15.0	Diln Fac:	0.8078
Lab ID:	247783-002	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/08/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Freon 12	ND	8.1
Chloromethane	ND	8.1
Vinyl Chloride	ND	8.1
Bromomethane	ND	8.1
Chloroethane	ND	8.1
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	8.1
cis-1,2-Dichloroethene	18	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	8.7	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	8.1
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	8.1
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	ND	4.0

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-25-15.0	Diln Fac:	0.8078
Lab ID:	247783-002	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/08/13
Basis:	as received	Analyzed:	08/09/13

Analyte	Result	RL
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-124
1,2-Dichloroethane-d4	114	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	92	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-26-10.0	Diln Fac:	0.8929
Lab ID:	247783-003	Batch#:	201567
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/08/13
Basis:	as received	Analyzed:	08/11/13

Analyte	Result	RL
Freon 12	ND	8.9
Chloromethane	ND	8.9
Vinyl Chloride	ND	8.9
Bromomethane	ND	8.9
Chloroethane	ND	8.9
Trichlorofluoromethane	ND	4.5
Acetone	ND	18
Freon 113	ND	4.5
1,1-Dichloroethene	ND	4.5
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.5
MTBE	ND	4.5
trans-1,2-Dichloroethene	ND	4.5
Vinyl Acetate	ND	45
1,1-Dichloroethane	ND	4.5
2-Butanone	ND	8.9
cis-1,2-Dichloroethene	ND	4.5
2,2-Dichloropropane	ND	4.5
Chloroform	ND	4.5
Bromochloromethane	ND	4.5
1,1,1-Trichloroethane	ND	4.5
1,1-Dichloropropene	ND	4.5
Carbon Tetrachloride	ND	4.5
1,2-Dichloroethane	ND	4.5
Benzene	ND	4.5
Trichloroethene	ND	4.5
1,2-Dichloropropane	ND	4.5
Bromodichloromethane	ND	4.5
Dibromomethane	ND	4.5
4-Methyl-2-Pentanone	ND	8.9
cis-1,3-Dichloropropene	ND	4.5
Toluene	ND	4.5
trans-1,3-Dichloropropene	ND	4.5
1,1,2-Trichloroethane	ND	4.5
2-Hexanone	ND	8.9
1,3-Dichloropropane	ND	4.5
Tetrachloroethene	61	4.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-26-10.0	Diln Fac:	0.8929
Lab ID:	247783-003	Batch#:	201567
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/08/13
Basis:	as received	Analyzed:	08/11/13

Analyte	Result	RL
Dibromochloromethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Chlorobenzene	ND	4.5
1,1,1,2-Tetrachloroethane	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
Styrene	ND	4.5
Bromoform	ND	4.5
Isopropylbenzene	ND	4.5
1,1,2,2-Tetrachloroethane	ND	4.5
1,2,3-Trichloropropane	ND	4.5
Propylbenzene	ND	4.5
Bromobenzene	ND	4.5
1,3,5-Trimethylbenzene	ND	4.5
2-Chlorotoluene	ND	4.5
4-Chlorotoluene	ND	4.5
tert-Butylbenzene	ND	4.5
1,2,4-Trimethylbenzene	ND	4.5
sec-Butylbenzene	ND	4.5
para-Isopropyl Toluene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
n-Butylbenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5
1,2-Dibromo-3-Chloropropane	ND	4.5
1,2,4-Trichlorobenzene	ND	4.5
Hexachlorobutadiene	ND	4.5
Naphthalene	ND	4.5
1,2,3-Trichlorobenzene	ND	4.5

Surrogate	%REC	Limits
Dibromofluoromethane	121	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	105	80-120
Bromofluorobenzene	116	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-26-15.0	Diln Fac:	0.7143
Lab ID:	247783-004	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/08/13
Basis:	as received	Analyzed:	08/10/13

Analyte	Result	RL
Freon 12	ND	7.1
Chloromethane	ND	7.1
Vinyl Chloride	ND	7.1
Bromomethane	ND	7.1
Chloroethane	ND	7.1
Trichlorofluoromethane	ND	3.6
Acetone	ND	14
Freon 113	ND	3.6
1,1-Dichloroethene	ND	3.6
Methylene Chloride	ND	14
Carbon Disulfide	ND	3.6
MTBE	ND	3.6
trans-1,2-Dichloroethene	ND	3.6
Vinyl Acetate	ND	36
1,1-Dichloroethane	ND	3.6
2-Butanone	ND	7.1
cis-1,2-Dichloroethene	ND	3.6
2,2-Dichloropropane	ND	3.6
Chloroform	ND	3.6
Bromochloromethane	ND	3.6
1,1,1-Trichloroethane	ND	3.6
1,1-Dichloropropene	ND	3.6
Carbon Tetrachloride	ND	3.6
1,2-Dichloroethane	ND	3.6
Benzene	ND	3.6
Trichloroethene	ND	3.6
1,2-Dichloropropane	ND	3.6
Bromodichloromethane	ND	3.6
Dibromomethane	ND	3.6
4-Methyl-2-Pentanone	ND	7.1
cis-1,3-Dichloropropene	ND	3.6
Toluene	ND	3.6
trans-1,3-Dichloropropene	ND	3.6
1,1,2-Trichloroethane	ND	3.6
2-Hexanone	ND	7.1
1,3-Dichloropropane	ND	3.6
Tetrachloroethene	ND	3.6

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-26-15.0	Diln Fac:	0.7143
Lab ID:	247783-004	Batch#:	201534
Matrix:	Soil	Sampled:	08/07/13
Units:	ug/Kg	Received:	08/08/13
Basis:	as received	Analyzed:	08/10/13

Analyte	Result	RL
Dibromochloromethane	ND	3.6
1,2-Dibromoethane	ND	3.6
Chlorobenzene	ND	3.6
1,1,1,2-Tetrachloroethane	ND	3.6
Ethylbenzene	ND	3.6
m,p-Xylenes	ND	3.6
o-Xylene	ND	3.6
Styrene	ND	3.6
Bromoform	ND	3.6
Isopropylbenzene	ND	3.6
1,1,2,2-Tetrachloroethane	ND	3.6
1,2,3-Trichloropropane	ND	3.6
Propylbenzene	ND	3.6
Bromobenzene	ND	3.6
1,3,5-Trimethylbenzene	ND	3.6
2-Chlorotoluene	ND	3.6
4-Chlorotoluene	ND	3.6
tert-Butylbenzene	ND	3.6
1,2,4-Trimethylbenzene	ND	3.6
sec-Butylbenzene	ND	3.6
para-Isopropyl Toluene	ND	3.6
1,3-Dichlorobenzene	ND	3.6
1,4-Dichlorobenzene	ND	3.6
n-Butylbenzene	ND	3.6
1,2-Dichlorobenzene	ND	3.6
1,2-Dibromo-3-Chloropropane	ND	3.6
1,2,4-Trichlorobenzene	ND	3.6
Hexachlorobutadiene	ND	3.6
Naphthalene	ND	3.6
1,2,3-Trichlorobenzene	ND	3.6

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	92	79-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC701164	Batch#:	201534
Matrix:	Soil	Analyzed:	08/09/13
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	20.41	102	67-132
Benzene	20.00	21.74	109	77-126
Trichloroethene	20.00	19.84	99	76-127
Toluene	20.00	23.16	116	76-124
Chlorobenzene	20.00	23.72	119	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	118	80-120
Bromofluorobenzene	92	79-127

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Dil'n Fac:	1.000
Lab ID:	QC701165	Batch#:	201534
Matrix:	Soil	Analyzed:	08/09/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC701165	Batch#:	201534
Matrix:	Soil	Analyzed:	08/09/13
Units:	ug/Kg		

Analyte	Result	RL
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	125 *	80-120
Bromofluorobenzene	94	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	201534
MSS Lab ID:	247804-001	Sampled:	08/09/13
Matrix:	Soil	Received:	08/09/13
Units:	ug/Kg	Analyzed:	08/09/13
Basis:	as received		

Type: MS Diln Fac: 0.9042
Lab ID: QC701199

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.9088	45.21	45.94	102	52-132
Benzene	<0.8726	45.21	45.41	100	54-121
Trichloroethene	<0.8077	45.21	42.46	94	46-138
Toluene	<0.6879	45.21	44.85	99	47-120
Chlorobenzene	<0.6635	45.21	45.96	102	41-120

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-124
1,2-Dichloroethane-d4	115	80-137
Toluene-d8	111	80-120
Bromofluorobenzene	90	79-127

Type: MSD Diln Fac: 0.9141
Lab ID: QC701200

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	45.70	50.48	110	52-132	8	46
Benzene	45.70	46.88	103	54-121	2	43
Trichloroethene	45.70	41.91	92	46-138	2	50
Toluene	45.70	48.37	106	47-120	6	53
Chlorobenzene	45.70	46.45	102	41-120	0	50

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-124
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	113	80-120
Bromofluorobenzene	91	79-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Dil'n Fac:	1.000
Lab ID:	QC701284	Batch#:	201567
Matrix:	Soil	Analyzed:	08/11/13
Units:	ug/Kg		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC701284	Batch#:	201567
Matrix:	Soil	Analyzed:	08/11/13
Units:	ug/Kg		

Analyte	Result	RL
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	129 *	80-124
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	105	79-127

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247783	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5035
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	201567
Units:	ug/Kg	Analyzed:	08/11/13
Diln Fac:	1.000		

Type: BS Lab ID: QC701285

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	21.46	107	67-132
Benzene	20.00	20.47	102	77-126
Trichloroethene	20.00	19.55	98	76-127
Toluene	20.00	20.01	100	76-124
Chlorobenzene	20.00	20.75	104	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-124
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	101	79-127

Type: BSD Lab ID: QC701286

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	23.35	117	67-132	8	27
Benzene	20.00	21.08	105	77-126	3	20
Trichloroethene	20.00	20.69	103	76-127	6	22
Toluene	20.00	20.44	102	76-124	2	26
Chlorobenzene	20.00	21.17	106	76-120	2	21

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-124
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	103	79-127

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247505
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
IE-11	247505-001
IE-12	247505-002
IE-29	247505-003
TRIP BLANK	247505-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____ Date: 08/07/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247505**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/01/13**
Samples Received:	**08/01/13**

This data package contains sample and QC results for three water samples, requested for the above referenced project on 08/01/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

247505

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

CHAIN-OF-CUSTODY

Date: 8/1/13 Page: 1 of 1 Nº 003588

Sampler Name(s): Craig Pelletier Signature(s): [signature]

	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260B	Hold	Number of Containers
1	IE-11	8/1/13	1535	water	HCl	X		3
2	IE-12	↓	1510	water	HCl	X		1
3	IE-29	↓	1500	water	HCl	X		3
4	Trip Blank						X	2
	Temp Blank							1

Analyses Required

PROJECT INFORMATION

Project Name: Park Ave Cleaners
Project Number: 13-945A
Contact Person: Craig Pelletier
E-mail: craig@irisenv.com
Contact Telephone: 510 834.4747 x29
Report: Routine (Level 2) Level 3 Level 4 EDD
TAT: 10-day 5-day 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

1 VOA for IE-12

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Craig Pelletier	Printed Name: Ricky Grams
Signature: [signature]	Signature: [signature]
Company: IRIS ENV.	Company: C&T
Time/Date: 8/1/13 1645	Time/Date: 8/1/13 1645

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Ricky Grams	Printed Name: TINA RAIKAR
Signature: [signature]	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/1/13 1835	Time/Date: 8/1/13 1835

intact on ice cold RC

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247505 Date Received 8/1 Number of coolers 1
Client IRIS Project PARK AVENUE CLEANERS (13-945A)

Date Opened 8/1/13 By (print) TR (sign) Tina Rankin
Date Logged in _____ By (print) _____ (sign) _____

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☒ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 2.9

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-11	Batch#:	201324
Lab ID:	247505-001	Sampled:	08/01/13
Matrix:	Water	Received:	08/01/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-11	Batch#:	201324
Lab ID:	247505-001	Sampled:	08/01/13
Matrix:	Water	Received:	08/01/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	87	77-134
1,2-Dichloroethane-d4	101	72-140
Toluene-d8	95	80-120
Bromofluorobenzene	95	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-12	Batch#:	201333
Lab ID:	247505-002	Sampled:	08/01/13
Matrix:	Water	Received:	08/01/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	11	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	0.6	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-12	Batch#:	201333
Lab ID:	247505-002	Sampled:	08/01/13
Matrix:	Water	Received:	08/01/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	0.5	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	77-134
1,2-Dichloroethane-d4	115	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-29	Batch#:	201324
Lab ID:	247505-003	Sampled:	08/01/13
Matrix:	Water	Received:	08/01/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	31	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-29	Batch#:	201324
Lab ID:	247505-003	Sampled:	08/01/13
Matrix:	Water	Received:	08/01/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	88	77-134
1,2-Dichloroethane-d4	102	72-140
Toluene-d8	94	80-120
Bromofluorobenzene	89	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	201324
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Type: BS Lab ID: QC700312

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.53	94	61-137
Benzene	25.00	25.80	103	78-125
Trichloroethene	25.00	27.55	110	77-122
Toluene	25.00	27.25	109	79-123
Chlorobenzene	25.00	25.78	103	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	85	77-134
1,2-Dichloroethane-d4	96	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	92	80-120

Type: BSD Lab ID: QC700313

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	22.46	90	61-137	5	24
Benzene	25.00	23.67	95	78-125	9	20
Trichloroethene	25.00	25.99	104	77-122	6	20
Toluene	25.00	25.76	103	79-123	6	20
Chlorobenzene	25.00	24.18	97	80-120	6	20

Surrogate	%REC	Limits
Dibromofluoromethane	84	77-134
1,2-Dichloroethane-d4	96	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	94	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700314	Batch#:	201324
Matrix:	Water	Analyzed:	08/05/13
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700314	Batch#:	201324
Matrix:	Water	Analyzed:	08/05/13
Units:	ug/L		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	85	77-134
1,2-Dichloroethane-d4	103	72-140
Toluene-d8	99	80-120
Bromofluorobenzene	91	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	201333
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Type: BS Lab ID: QC700350

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	13.51	108	61-137
Benzene	12.50	13.49	108	78-125
Trichloroethene	12.50	12.87	103	77-122
Toluene	12.50	12.96	104	79-123
Chlorobenzene	12.50	11.64	93	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-134
1,2-Dichloroethane-d4	113	72-140
Toluene-d8	102	80-120
Bromofluorobenzene	107	80-120

Type: BSD Lab ID: QC700351

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	13.40	107	61-137	1	24
Benzene	12.50	13.43	107	78-125	0	20
Trichloroethene	12.50	12.90	103	77-122	0	20
Toluene	12.50	13.06	104	79-123	1	20
Chlorobenzene	12.50	11.79	94	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-134
1,2-Dichloroethane-d4	112	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	108	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700352	Batch#:	201333
Matrix:	Water	Analyzed:	08/05/13
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700352	Batch#:	201333
Matrix:	Water	Analyzed:	08/05/13
Units:	ug/L		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	105	77-134
1,2-Dichloroethane-d4	114	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	110	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247505	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	201324
MSS Lab ID:	247459-002	Sampled:	07/31/13
Matrix:	Water	Received:	07/31/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Type: MS Lab ID: QC700380

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1000	25.00	21.88	88	68-130
Benzene	<0.1000	25.00	24.85	99	80-125
Trichloroethene	<0.1000	25.00	25.33	101	72-123
Toluene	<0.1000	25.00	25.33	101	80-122
Chlorobenzene	<0.1136	25.00	24.13	97	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	87	77-134
1,2-Dichloroethane-d4	101	72-140
Toluene-d8	95	80-120
Bromofluorobenzene	90	80-120

Type: MSD Lab ID: QC700381

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	21.70	87	68-130	1	26
Benzene	25.00	24.69	99	80-125	1	21
Trichloroethene	25.00	25.02	100	72-123	1	20
Toluene	25.00	25.01	100	80-122	1	21
Chlorobenzene	25.00	23.97	96	80-120	1	21

Surrogate	%REC	Limits
Dibromofluoromethane	85	77-134
1,2-Dichloroethane-d4	97	72-140
Toluene-d8	95	80-120
Bromofluorobenzene	92	80-120

RPD= Relative Percent Difference


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247566
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
IE-01-30.5	247566-001
IE-28-52.0	247566-002
IE-05-15.5	247566-003
IE-06-11.3	247566-004
IE-07-19.9	247566-005

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/07/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247566**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/02/13**
Samples Received:	**08/02/13**

This data package contains sample and QC results for five water samples, requested for the above referenced project on 08/02/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

CHAIN-OF-CUSTODY

247566

Date: 8/2/2013 Page: 1 of 1 **№** 003591

Sampler Name(s): Bill Chen Signature(s):

Analyses Required

	Sample ID	Date	Time	Matrix	Pres.	VOCs 624.1	Number of Containers
	~~IE-28-48.5~~	8/2/13	1130	GW	HCl*	X	1
1	IE-01-30.5	8/2/13	1530	GW	HCl	X	3
2	IE-28-35.5	8/2/13	1600	GW	HCl	X	3
3	IE-05-15.5	8/2/13	1610	GW	HCl	X	3
4	IE-06-11.3	8/2/13	1615	GW	HCl	X	3
5	IE-07-19.9	8/2/13	1620	GW	HCl	X	3
							1
							1

B.C.

PROJECT INFORMATION

Project Name: Park Ave Cleanout
Project Number: 13-945A
Contact Person: Craig Pelletier
E-mail: craig@iriseny.com
Contact Telephone: (510) 834-4747

Report: ~~Routine (Level 2)~~ Level 3 Level 4 EDD

TAT: 10-day ~~5-day~~ 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

* Sample bubbled, so pureed out sample of HCl, & filled with more sample — only for IE-28-48.5

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Bill Chen	Printed Name: Ricky Grany
Signature:	Signature:
Company: Iris Environmental	Company: C&T
Time/Date: 8/2/13 / 1635	Time/Date: 8/2/13 1635
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Grany	Printed Name: TINA RAIKAR
Signature:	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/2/13 1730	Time/Date: 8/2/13 1730

Subject: Park Ave Cleaners - Sample Pick-up and Sample Change
From: Bill Chen <BChen@irisenv.com>
Date: 8/6/2013 3:39 PM
To: "Tracy Babjar (tracy.babjar@ctberk.com)" <tracy.babjar@ctberk.com>
CC: Craig Pelletier <craig@irisenv.com>

Hi Tracy,
I'd like to schedule a courier to pick-up samples from the Park Avenue Cleaners Site, in Dublin Ca. for Tomorrow (8/7/13). The address is 7100 Dublin Blvd, Dublin, Ca. A sample time of 4:00pm would be ideal.

Also, We'd like to change the name of one of the groundwater samples we submitted. Please change IE-28-35.5 to IE-28-52.0

Let me know what can be done. Thank you Tracy!

Bill Chen
IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, CA 94612
Phone: (510) 834-4747 ext. 24 | Mobile: (619) 200-8593 | Fax: (510) 834-4199
Website: www.irisenv.com | Email: bchen@irisenv.com

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247566 Date Received 8/2/13 Number of coolers 1
Client IRIS Project PARK AVENUE CLEANERS

Date Opened 8/2/13 By (print) TR (sign) Tina Raikar
Date Logged in 8/2 By (print) MS (sign) MS

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) ___ (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 3.0

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-01-30.5	Batch#:	201333
Lab ID:	247566-001	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-01-30.5	Batch#:	201333
Lab ID:	247566-001	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	109	77-134
1,2-Dichloroethane-d4	114	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	110	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-28-52.0	Batch#:	201333
Lab ID:	247566-002	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	14	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-28-52.0	Batch#:	201333
Lab ID:	247566-002	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	109	77-134
1,2-Dichloroethane-d4	115	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-05-15.5	Batch#:	201333
Lab ID:	247566-003	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	3.8	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-05-15.5	Batch#:	201333
Lab ID:	247566-003	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	110	77-134
1,2-Dichloroethane-d4	116	72-140
Toluene-d8	105	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-06-11.3	Batch#:	201333
Lab ID:	247566-004	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	1.4	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	0.6	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-06-11.3	Batch#:	201333
Lab ID:	247566-004	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-134
1,2-Dichloroethane-d4	117	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	112	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-07-19.9	Batch#:	201333
Lab ID:	247566-005	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	0.6	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-07-19.9	Batch#:	201333
Lab ID:	247566-005	Sampled:	08/02/13
Matrix:	Water	Received:	08/02/13
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	77-134
1,2-Dichloroethane-d4	112	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	201333
Units:	ug/L	Analyzed:	08/05/13
Diln Fac:	1.000		

Type: BS Lab ID: QC700350

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	13.51	108	61-137
Benzene	12.50	13.49	108	78-125
Trichloroethene	12.50	12.87	103	77-122
Toluene	12.50	12.96	104	79-123
Chlorobenzene	12.50	11.64	93	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-134
1,2-Dichloroethane-d4	113	72-140
Toluene-d8	102	80-120
Bromofluorobenzene	107	80-120

Type: BSD Lab ID: QC700351

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	13.40	107	61-137	1	24
Benzene	12.50	13.43	107	78-125	0	20
Trichloroethene	12.50	12.90	103	77-122	0	20
Toluene	12.50	13.06	104	79-123	1	20
Chlorobenzene	12.50	11.79	94	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-134
1,2-Dichloroethane-d4	112	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	108	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700352	Batch#:	201333
Matrix:	Water	Analyzed:	08/05/13
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247566	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700352	Batch#:	201333
Matrix:	Water	Analyzed:	08/05/13
Units:	ug/L		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	105	77-134
1,2-Dichloroethane-d4	114	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	110	80-120

ND= Not Detected
RL= Reporting Limit


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247611
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
IE-02-17.5	247611-001
IE-03-10.5	247611-002
IE-04-10.0	247611-003
IE-07-16.5	247611-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/12/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247611**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/05/13**
Samples Received:	**08/05/13**

This data package contains sample and QC results for three water samples, requested for the above referenced project on 08/05/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):

IE-03-10.5 (lab # 247611-002) and IE-04-10.0 (lab # 247611-003) had pH greater than 2. IE-03-10.5 (lab # 247611-002) had multiple vials combined due to sediment. No other analytical problems were encountered.

247611

IRIS ENVIRONMENTAL

1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

CHAIN-OF-CUSTODY

Date: 8/5/13 Page: 1 of 1 **№** 003595

Sampler Name(s): Bill Chen Signature(s):

Analyses Required

	Sample ID	Date	Time	Matrix	Pres.	VOC: 8260 HOLD	Number of Containers
1	IE-02-17.5	8/5/13	1510	GW	Y	X	3
2	IE-03-10.5	8/5/13	1530	GW	N	X	3
3	IE-04-10.0	8/5/13	1555	GW	N	X	3
4	IE-07-16.5	8/5/13	1635	GW	Y	X	3

PROJECT INFORMATION

Project Name: PARK AVE CLEANERS
Project Number: 13-945A
Contact Person: CRAIG PELLETIER
E-mail: CRAIG@IRISENV.COM
Contact Telephone: (510) 834-4717
Report: ~~Routine (Level 2)~~ Level 3 Level 4 EDD
TAT: 10-day ~~5-day~~ 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Bill Chen	Printed Name: Ricky Grams
Signature:	Signature:
Company: IRIS ENVIRONMENTAL	Company: CAT
Time/Date: 1650 / 8/5/13	Time/Date: 8/5/13 1650
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Grams	Printed Name: Miguel Garcia
Signature:	Signature:
Company: CAT	Company: CAT
Time/Date: 8/5/13 1735	Time/Date: 8/5/13 1735

MAT on ice cold RC

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247611 Date Received 8/5 Number of coolers 1
Client IRIS Project 13-9454

Date Opened 8/5/13 By (print) ML (sign) [signature]
Date Logged in 1 By (print) 1 (sign) 2

1. Did cooler come with a shipping slip (airbill, etc) _____ YES ~~NO~~
   Shipping info _____
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO ~~N/A~~
3. Were custody papers dry and intact when received? _____ ~~YES~~ NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ ~~YES~~ NO
5. Is the project identifiable from custody papers? (If so fill out top of form) ~~YES~~ NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☐ Foam blocks ☒ ~~Bags~~ ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) _____

☒ Samples Received on ice & cold without a temperature blank; ~~temp. taken with IR gun~~

☑ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES ~~NO~~
   If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ ~~YES~~ NO
10. Are there any missing / extra samples? _____ YES ~~NO~~
11. Are samples in the appropriate containers for indicated tests? _____ ~~YES~~ NO
12. Are sample labels present, in good condition and complete? _____ ~~YES~~ NO
13. Do the sample labels agree with custody papers? _____ ~~YES~~ NO
14. Was sufficient amount of sample sent for tests requested? _____ ~~YES~~ NO
15. Are the samples appropriately preserved? _____ ~~YES~~ NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO ~~N/A~~
17. Did you document your preservative check? _____ YES NO ~~N/A~~
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO ~~N/A~~
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO ~~N/A~~
20. Are bubbles > 6mm absent in VOA samples? _____ ~~YES~~ NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES ~~NO~~
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247611	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-02-17.5	Batch#:	201462
Lab ID:	247611-001	Sampled:	08/05/13
Matrix:	Water	Received:	08/05/13
Units:	ug/L	Analyzed:	08/08/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247611	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-02-17.5	Batch#:	201462
Lab ID:	247611-001	Sampled:	08/05/13
Matrix:	Water	Received:	08/05/13
Units:	ug/L	Analyzed:	08/08/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-134
1,2-Dichloroethane-d4	110	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247611	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-03-10.5	Batch#:	201462
Lab ID:	247611-002	Sampled:	08/05/13
Matrix:	Water	Received:	08/05/13
Units:	ug/L	Analyzed:	08/08/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247611	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-03-10.5	Batch#:	201462
Lab ID:	247611-002	Sampled:	08/05/13
Matrix:	Water	Received:	08/05/13
Units:	ug/L	Analyzed:	08/08/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	110	77-134
1,2-Dichloroethane-d4	111	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247611	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-04-10.0	Batch#:	201462
Lab ID:	247611-003	Sampled:	08/05/13
Matrix:	Water	Received:	08/05/13
Units:	ug/L	Analyzed:	08/08/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247611	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-04-10.0	Batch#:	201462
Lab ID:	247611-003	Sampled:	08/05/13
Matrix:	Water	Received:	08/05/13
Units:	ug/L	Analyzed:	08/08/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	108	77-134
1,2-Dichloroethane-d4	110	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247611	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	201462
Units:	ug/L	Analyzed:	08/08/13
Diln Fac:	1.000		

Type: BS Lab ID: QC700856

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	14.33	115	61-137
Benzene	12.50	13.88	111	78-125
Trichloroethene	12.50	13.52	108	77-122
Toluene	12.50	13.46	108	79-123
Chlorobenzene	12.50	14.03	112	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	108	77-134
1,2-Dichloroethane-d4	107	72-140
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC700857

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	14.17	113	61-137	1	24
Benzene	12.50	13.89	111	78-125	0	20
Trichloroethene	12.50	13.54	108	77-122	0	20
Toluene	12.50	13.58	109	79-123	1	20
Chlorobenzene	12.50	14.36	115	80-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	108	77-134
1,2-Dichloroethane-d4	108	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	101	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247611	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700858	Batch#:	201462
Matrix:	Water	Analyzed:	08/08/13
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247611	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC700858	Batch#:	201462
Matrix:	Water	Analyzed:	08/08/13
Units:	ug/L		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	108	77-134
1,2-Dichloroethane-d4	109	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247709
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
IE-11-12.0	247709-001
IE-14-21.5	247709-002
IE-24-12.0	247709-003
IE-21-14.5	247709-004
IE-18-17.5	247709-005
IE-18-17.5-DUP	247709-006
IE-09-17.0	247709-007
IE-23-9.0	247709-008
IE-12-19.0	247709-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/13/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247709**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/07/13**
Samples Received:	**08/07/13**

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 08/07/13. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

247709

IRIS ENVIRONMENTAL — CHAIN-OF-CUSTODY

1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

Date: 8/7/13 Page: 1 of 1 **Nº** 003599

Sampler Name(s): Bill Chen Signature(s):

	Sample ID	Date	Time	Matrix	Pres.	VOCs 8260	H2O	Number of Containers
1	IE-11-12.0	8/7/13	0805	GW	Y	⊗ PH	X	3
2	IE-14-21.5	8/7/13	0830	GW	Y	X		3
3	IE-24-12.0	8/7/13	0950	GW	Y	X		3
4	IE-21-14.5	8/7/13	1045	GW	Y	X		3
5	IE-18-17.5	8/7/13	1105	GW	Y	X		3
6	IE-18-17.5-DUP	8/7/13	1105	GW	Y	X		3
7	IE-09-17.0	8/7/13	1235	GW	Y	⊗ PH	X	3

PROJECT INFORMATION

Project Name: PARK AVE CLEANERS
Project Number: 13-945A
Contact Person: CRAIG ~~OF~~ PELLETIER
E-mail: CRAIG@IRISENV.COM
Contact Telephone: (510) 834-4747
Report: ~~Routine (Level 2)~~ Level 3 Level 4 EDD
TAT: 10-day ~~5-day~~ 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:
IE-11-12.0, put on hold.
IE-09-17.0, put on hold.

RELINQUISHED BY:	RECEIVED BY:
Printed Name: BILL CHEN	Printed Name: Tony Rojas
Signature:	Signature:
Company: IRIS ENVIRONMENTAL	Company: C&T
Time/Date: 1450 / 8/7/13	Time/Date: 1450 8/7/13
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Tony Rojas	Printed Name: TINA RAIKAR
Signature:	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/7/13 @ 1541	Time/Date: 8/7/13 @ 1541

Subject: RE: 13-945A - C&T Login Summary (247709)
From: Bill Chen <BChen@irisenv.com>
Date: 8/8/2013 11:26 AM
To: Tracy Babjar <tracy.babjar@ctberk.com>

Hi Tracy,
Sorry for going back and forth, but please ALSO analyze IE-09-17.0 for VOCs by 8260.
Thanks!

Bill Chen
IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, CA 94612
Phone: (510) 834-4747 ext. 24 | Mobile: (619) 200-8593 | Fax: (510) 834-4199
Website: www.irisenv.com | Email: bchen@irisenv.com

From: Tracy Babjar [mailto:tracy.babjar@ctberk.com]
Sent: Thursday, August 8, 2013 11:11 AM
To: Bill Chen; Craig Pelletier
Subject: 13-945A - C&T Login Summary (247709)

New improved login summary. Tracy :)

C&T Login Summary for 247709

Project: 13-945A
Site: Park Ave. Cleaners
Lab Login #: 247709
Report Level: II
Report Due: 08/14/13
PO#:
C&T Proj Mgr: Tracy Babjar

Report To: Iris Environmental
1438 Webster Street
Suite 302
Oakland, CA 94612
ATTN: Craig Pelletier
(510) 834-4747

Bill To: Iris Environmental
1438 Webster Street
Suite 302
Oakland, CA 94612
ATTN: Craig Pelletier
(510) 834-4747

Client ID	Lab ID	Sampled	Received	Matrix	Analyses	COC #	Comments
IE-11-12.0	001	08/07	08/07			003599	
				Water	HOLD		
IE-14-21.5	002	08/07	08/07			003599	
				Water	8260		
IE-24-12.0	003	08/07	08/07			003599	
				Water	8260		
IE-21-14.5	004	08/07	08/07			003599	
				Water	8260		
IE-18-17.5	005	08/07	08/07			003599	

Subject: RE: 13-945A - C&T Login Summary (247709)
From: Bill Chen <BChen@irisenv.com>
Date: 8/8/2013 10:49 AM
To: Tracy Babjar <tracy.babjar@ctberk.com>, Craig Pelletier <craig@irisenv.com>

Hi Tracy,
Please keep IE-12-19.0 on Hold, and analyze IE-23-9.0 for VOCs by 8260.
Let me know if I can clarify anything else. Thanks Tracy!

Bill Chen
IRIS ENVIRONMENTAL
1438 Webster Street, Suite 302
Oakland, CA 94612
Phone: (510) 834-4747 ext. 24 | Mobile: (619) 200-8593 | Fax: (510) 834-4199
Website: www.irisenv.com | Email: bchen@irisenv.com

From: Tracy Babjar [mailto:tracy.babjar@ctberk.com]
Sent: Wednesday, August 7, 2013 10:05 PM
To: Bill Chen; Craig Pelletier
Cc: tracy.babjar@ctberk.com
Subject: 13-945A - C&T Login Summary (247709)

Received 2 extra samples (3 VOAs each) labeled "IE-23-9.0" and "IE-12-19.0"

C&T Login Summary for 247709

Project: 13-945A
Site: Park Ave. Cleaners
Lab Login #: 247709
Report Level: II
Report Due: 08/14/13
PO#:
C&T Proj Mgr: Tracy Babjar

Report To: Iris Environmental
1438 Webster Street
Suite 302
Oakland, CA 94612
ATTN: Craig Pelletier
(510) 834-4747

Bill To: Iris Environmental
1438 Webster Street
Suite 302
Oakland, CA 94612
ATTN: Craig Pelletier
(510) 834-4747

Client ID	Lab ID	Sampled	Received	Matrix	Analyses	COC #	Comments
IE-11-12.0	001	08/07	08/07			003599	
				Water	HOLD		
IE-14-21.5	002	08/07	08/07			003599	
				Water	8260		
IE-24-12.0	003	08/07	08/07			003599	
				Water	8260		
IE-21-14.5	004	08/07	08/07			003599	
				Water	8260		

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247709 Date Received 8/7/13 Number of coolers 1
Client IRIS Project PARK AVE CLEANERS (13-945A)

Date Opened 8/7/13 By (print) JR (sign) JMaRankan
Date Logged in 8/7/13 By (print) MC (sign) MC

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
Shipping info _____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) _____

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☒ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ (YES) NO
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called? _____ By _____ Date: _____

COMMENTS
#10.) Received 3 VOAs w/ ID: IE-23-90 (samp #-0008) &
3 VOAs w/ ID: IE-12-190 (samp #-0009)

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-14-21.5	Batch#:	201508
Lab ID:	247709-002	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-14-21.5	Batch#:	201508
Lab ID:	247709-002	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-134
1,2-Dichloroethane-d4	113	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-24-12.0	Batch#:	201508
Lab ID:	247709-003	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-24-12.0	Batch#:	201508
Lab ID:	247709-003	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	110	77-134
1,2-Dichloroethane-d4	116	72-140
Toluene-d8	105	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-21-14.5	Batch#:	201508
Lab ID:	247709-004	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	1.2	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-21-14.5	Batch#:	201508
Lab ID:	247709-004	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-134
1,2-Dichloroethane-d4	114	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-17.5	Batch#:	201508
Lab ID:	247709-005	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-17.5	Batch#:	201508
Lab ID:	247709-005	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-134
1,2-Dichloroethane-d4	115	72-140
Toluene-d8	105	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-17.5-DUP	Batch#:	201508
Lab ID:	247709-006	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-18-17.5-DUP	Batch#:	201508
Lab ID:	247709-006	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	110	77-134
1,2-Dichloroethane-d4	114	72-140
Toluene-d8	105	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-09-17.0	Batch#:	201508
Lab ID:	247709-007	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-09-17.0	Batch#:	201508
Lab ID:	247709-007	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-134
1,2-Dichloroethane-d4	115	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-23-9.0	Batch#:	201508
Lab ID:	247709-008	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Field ID:	IE-23-9.0	Batch#:	201508
Lab ID:	247709-008	Sampled:	08/07/13
Matrix:	Water	Received:	08/07/13
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-134
1,2-Dichloroethane-d4	115	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	201508
Units:	ug/L	Analyzed:	08/09/13
Diln Fac:	1.000		

Type: BS Lab ID: QC701053

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	14.13	113	61-137
Benzene	12.50	14.23	114	78-125
Trichloroethene	12.50	13.81	110	77-122
Toluene	12.50	13.66	109	79-123
Chlorobenzene	12.50	14.06	113	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	112	77-134
1,2-Dichloroethane-d4	113	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	99	80-120

Type: BSD Lab ID: QC701054

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	15.57	125	61-137	10	24
Benzene	12.50	14.44	116	78-125	1	20
Trichloroethene	12.50	13.73	110	77-122	1	20
Toluene	12.50	13.82	111	79-123	1	20
Chlorobenzene	12.50	14.26	114	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	116	77-134
1,2-Dichloroethane-d4	115	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC701055	Batch#:	201508
Matrix:	Water	Analyzed:	08/09/13
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247709	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	EPA 5030B
Project#:	13-945A	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC701055	Batch#:	201508
Matrix:	Water	Analyzed:	08/09/13
Units:	ug/L		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-134
1,2-Dichloroethane-d4	113	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected
RL= Reporting Limit


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247568
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
SS-01	247568-001
SS-02	247568-002
SS-03	247568-003

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Isabelle Choy Date: 08/09/2013

Isabelle Choy
Project Manager
(510) 486-0900

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247568**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/02/13**
Samples Received:	**08/02/13**

This data package contains sample and QC results for three air samples, requested for the above referenced project on 08/02/13. The samples were received intact at ambient temperature.

Volatile Organics in Air by MS (EPA TO-15):
No analytical problems were encountered.

IRIS ENVIRONMENTAL

1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

CHAIN-OF-CUSTODY

247528

Date: 8/1/13 Page: 1 of 1 № 003587

Sampler Name(s): Bill Chen / Craig Pelletier Signature(s):

Sample ID	Date	Time	Matrix	Cont ID	VOCs 10-day Hold	Vacuum - End	Number of Containers
1 SS-01	8/2/13	1542	Vapor	106	X	-2"	
2 SS-02	↓	1605	↓	83	X	-1"	
3 SS-03	↓	1500	↓	64	X	-3"	

Analyses Required

PROJECT INFORMATION

Project Name: Park Ave Cleaners
Project Number: 13-945A
Contact Person: Bill Chen / Craig Pelletier
E-mail: Craig@irisenv.com
Contact Telephone: 510.834.4747

Report: Routine (Level 2) Level 3 Level 4 EDD

TAT: 10-day (5-day) 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Bill Chen / Craig Pelletier	Printed Name: Ricky Grams
Signature:	Signature:
Company: IRIS ENV.	Company: C&T
Time/Date: 8/2/13 1612	Time/Date: 8/2/13 1612
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name: Ricky Grams	Printed Name: TINA RAIKAR
Signature:	Signature: Tina Raikar
Company: C&T	Company: C&T
Time/Date: 8/2/13 1730	Time/Date: 8/2/13 1730

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247568 Date Received 8/2/13 Number of coolers 1
Client IRIS Project PARK AVENUE CLEANERS

Date Opened 8/2/13 By (print) TR (sign) Tina Ranker
Date Logged in 6 By (print) MG (sign) MG

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
   Shipping info _____
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☐ Foam blocks ☐ Bags ☒ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☐ Wet ☐ Blue/Gel ☒ None Temp(°C) _____

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
   If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
   If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SS-01	Diln Fac:	1.780
Lab ID:	247568-001	Batch#:	201428
Matrix:	Air	Sampled:	08/02/13
Units (V):	ppbv	Received:	08/02/13
Units (M):	ug/m3	Analyzed:	08/07/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.89	ND	4.4
Freon 114	ND	0.89	ND	6.2
Chloromethane	ND	0.89	ND	1.8
Vinyl Chloride	ND	0.89	ND	2.3
1,3-Butadiene	ND	0.89	ND	2.0
Bromomethane	ND	0.89	ND	3.5
Chloroethane	ND	0.89	ND	2.3
Trichlorofluoromethane	ND	0.89	ND	5.0
Acrolein	ND	3.6	ND	8.2
1,1-Dichloroethene	ND	0.89	ND	3.5
Freon 113	ND	0.89	ND	6.8
Acetone	12	3.6	27	8.5
Carbon Disulfide	ND	0.89	ND	2.8
Methylene Chloride	ND	0.89	ND	3.1
trans-1,2-Dichloroethene	ND	0.89	ND	3.5
MTBE	ND	0.89	ND	3.2
n-Hexane	ND	0.89	ND	3.1
1,1-Dichloroethane	ND	0.89	ND	3.6
Vinyl Acetate	ND	0.89	ND	3.1
cis-1,2-Dichloroethene	ND	0.89	ND	3.5
2-Butanone	1.3	0.89	3.9	2.6
Ethyl Acetate	ND	0.89	ND	3.2
Tetrahydrofuran	ND	0.89	ND	2.6
Chloroform	ND	0.89	ND	4.3
1,1,1-Trichloroethane	ND	0.89	ND	4.9
Cyclohexane	ND	0.89	ND	3.1
Carbon Tetrachloride	ND	0.89	ND	5.6
Benzene	2.0	0.89	6.5	2.8
1,2-Dichloroethane	ND	0.89	ND	3.6
n-Heptane	ND	0.89	ND	3.6
Trichloroethene	ND	0.89	ND	4.8
1,2-Dichloropropane	ND	0.89	ND	4.1
Bromodichloromethane	ND	0.89	ND	6.0
cis-1,3-Dichloropropene	ND	0.89	ND	4.0
4-Methyl-2-Pentanone	ND	0.89	ND	3.6

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SS-01	Diln Fac:	1.780
Lab ID:	247568-001	Batch#:	201428
Matrix:	Air	Sampled:	08/02/13
Units (V):	ppbv	Received:	08/02/13
Units (M):	ug/m3	Analyzed:	08/07/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	1.2	0.89	4.6	3.4
trans-1,3-Dichloropropene	ND	0.89	ND	4.0
1,1,2-Trichloroethane	ND	0.89	ND	4.9
Tetrachloroethene	1.3	0.89	8.6	6.0
2-Hexanone	ND	0.89	ND	3.6
Dibromochloromethane	ND	0.89	ND	7.6
1,2-Dibromoethane	ND	0.89	ND	6.8
Chlorobenzene	ND	0.89	ND	4.1
Ethylbenzene	ND	0.89	ND	3.9
m,p-Xylenes	ND	0.89	ND	3.9
o-Xylene	ND	0.89	ND	3.9
Styrene	ND	0.89	ND	3.8
Bromoform	ND	0.89	ND	9.2
1,1,2,2-Tetrachloroethane	ND	0.89	ND	6.1
4-Ethyltoluene	ND	0.89	ND	4.4
1,3,5-Trimethylbenzene	ND	0.89	ND	4.4
1,2,4-Trimethylbenzene	ND	0.89	ND	4.4
1,3-Dichlorobenzene	ND	0.89	ND	5.4
1,4-Dichlorobenzene	ND	0.89	ND	5.4
Benzyl chloride	ND	0.89	ND	4.6
1,2-Dichlorobenzene	ND	0.89	ND	5.4
1,2,4-Trichlorobenzene	ND	0.89	ND	6.6
Hexachlorobutadiene	ND	0.89	ND	9.5
Naphthalene	ND	3.6	ND	19

Surrogate	%REC	Limits
Bromofluorobenzene	97	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SS-02	Diln Fac:	72.80
Lab ID:	247568-002	Batch#:	201428
Matrix:	Air	Sampled:	08/02/13
Units (V):	ppbv	Received:	08/02/13
Units (M):	ug/m3	Analyzed:	08/08/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	36	ND	180
Freon 114	ND	36	ND	250
Chloromethane	ND	36	ND	75
Vinyl Chloride	ND	36	ND	93
1,3-Butadiene	120	36	260	81
Bromomethane	ND	36	ND	140
Chloroethane	ND	36	ND	96
Trichlorofluoromethane	ND	36	ND	200
Acrolein	ND	150	ND	330
1,1-Dichloroethene	ND	36	ND	140
Freon 113	ND	36	ND	280
Acetone	ND	150	ND	350
Carbon Disulfide	ND	36	ND	110
Methylene Chloride	ND	36	ND	130
trans-1,2-Dichloroethene	ND	36	ND	140
MTBE	ND	36	ND	130
n-Hexane	ND	36	ND	130
1,1-Dichloroethane	ND	36	ND	150
Vinyl Acetate	ND	36	ND	130
cis-1,2-Dichloroethene	ND	36	ND	140
2-Butanone	ND	36	ND	110
Ethyl Acetate	ND	36	ND	130
Tetrahydrofuran	ND	36	ND	110
Chloroform	ND	36	ND	180
1,1,1-Trichloroethane	ND	36	ND	200
Cyclohexane	ND	36	ND	130
Carbon Tetrachloride	ND	36	ND	230
Benzene	110	36	340	120
1,2-Dichloroethane	ND	36	ND	150
n-Heptane	ND	36	ND	150
Trichloroethene	ND	36	ND	200
1,2-Dichloropropane	ND	36	ND	170
Bromodichloromethane	ND	36	ND	240
cis-1,3-Dichloropropene	ND	36	ND	170
4-Methyl-2-Pentanone	ND	36	ND	150

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SS-02	Diln Fac:	72.80
Lab ID:	247568-002	Batch#:	201428
Matrix:	Air	Sampled:	08/02/13
Units (V):	ppbv	Received:	08/02/13
Units (M):	ug/m3	Analyzed:	08/08/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	36	ND	140
trans-1,3-Dichloropropene	ND	36	ND	170
1,1,2-Trichloroethane	ND	36	ND	200
Tetrachloroethene	3,500	36	24,000	250
2-Hexanone	ND	36	ND	150
Dibromochloromethane	ND	36	ND	310
1,2-Dibromoethane	ND	36	ND	280
Chlorobenzene	ND	36	ND	170
Ethylbenzene	ND	36	ND	160
m,p-Xylenes	ND	36	ND	160
o-Xylene	ND	36	ND	160
Styrene	ND	36	ND	160
Bromoform	ND	36	ND	380
1,1,2,2-Tetrachloroethane	ND	36	ND	250
4-Ethyltoluene	ND	36	ND	180
1,3,5-Trimethylbenzene	ND	36	ND	180
1,2,4-Trimethylbenzene	ND	36	ND	180
1,3-Dichlorobenzene	ND	36	ND	220
1,4-Dichlorobenzene	ND	36	ND	220
Benzyl chloride	ND	36	ND	190
1,2-Dichlorobenzene	ND	36	ND	220
1,2,4-Trichlorobenzene	ND	36	ND	270
Hexachlorobutadiene	ND	36	ND	390
Naphthalene	ND	150	ND	760

Surrogate	%REC	Limits
Bromofluorobenzene	93	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SS-03	Diln Fac:	1.860
Lab ID:	247568-003	Batch#:	201428
Matrix:	Air	Sampled:	08/02/13
Units (V):	ppbv	Received:	08/02/13
Units (M):	ug/m3	Analyzed:	08/08/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.93	ND	4.6
Freon 114	ND	0.93	ND	6.5
Chloromethane	ND	0.93	ND	1.9
Vinyl Chloride	ND	0.93	ND	2.4
1,3-Butadiene	ND	0.93	ND	2.1
Bromomethane	ND	0.93	ND	3.6
Chloroethane	ND	0.93	ND	2.5
Trichlorofluoromethane	ND	0.93	ND	5.2
Acrolein	ND	3.7	ND	8.5
1,1-Dichloroethene	ND	0.93	ND	3.7
Freon 113	ND	0.93	ND	7.1
Acetone	8.7	3.7	21	8.8
Carbon Disulfide	ND	0.93	ND	2.9
Methylene Chloride	ND	0.93	ND	3.2
trans-1,2-Dichloroethene	ND	0.93	ND	3.7
MTBE	ND	0.93	ND	3.4
n-Hexane	ND	0.93	ND	3.3
1,1-Dichloroethane	ND	0.93	ND	3.8
Vinyl Acetate	ND	0.93	ND	3.3
cis-1,2-Dichloroethene	ND	0.93	ND	3.7
2-Butanone	ND	0.93	ND	2.7
Ethyl Acetate	ND	0.93	ND	3.4
Tetrahydrofuran	ND	0.93	ND	2.7
Chloroform	ND	0.93	ND	4.5
1,1,1-Trichloroethane	ND	0.93	ND	5.1
Cyclohexane	ND	0.93	ND	3.2
Carbon Tetrachloride	ND	0.93	ND	5.9
Benzene	1.6	0.93	5.3	3.0
1,2-Dichloroethane	ND	0.93	ND	3.8
n-Heptane	ND	0.93	ND	3.8
Trichloroethene	ND	0.93	ND	5.0
1,2-Dichloropropane	ND	0.93	ND	4.3
Bromodichloromethane	ND	0.93	ND	6.2
cis-1,3-Dichloropropene	ND	0.93	ND	4.2
4-Methyl-2-Pentanone	ND	0.93	ND	3.8

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SS-03	Diln Fac:	1.860
Lab ID:	247568-003	Batch#:	201428
Matrix:	Air	Sampled:	08/02/13
Units (V):	ppbv	Received:	08/02/13
Units (M):	ug/m3	Analyzed:	08/08/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	0.93	ND	3.5
trans-1,3-Dichloropropene	ND	0.93	ND	4.2
1,1,2-Trichloroethane	ND	0.93	ND	5.1
Tetrachloroethene	2.5	0.93	17	6.3
2-Hexanone	ND	0.93	ND	3.8
Dibromochloromethane	ND	0.93	ND	7.9
1,2-Dibromoethane	ND	0.93	ND	7.1
Chlorobenzene	ND	0.93	ND	4.3
Ethylbenzene	ND	0.93	ND	4.0
m,p-Xylenes	ND	0.93	ND	4.0
o-Xylene	ND	0.93	ND	4.0
Styrene	ND	0.93	ND	4.0
Bromoform	ND	0.93	ND	9.6
1,1,2,2-Tetrachloroethane	ND	0.93	ND	6.4
4-Ethyltoluene	ND	0.93	ND	4.6
1,3,5-Trimethylbenzene	ND	0.93	ND	4.6
1,2,4-Trimethylbenzene	ND	0.93	ND	4.6
1,3-Dichlorobenzene	ND	0.93	ND	5.6
1,4-Dichlorobenzene	ND	0.93	ND	5.6
Benzyl chloride	ND	0.93	ND	4.8
1,2-Dichlorobenzene	ND	0.93	ND	5.6
1,2,4-Trichlorobenzene	ND	0.93	ND	6.9
Hexachlorobutadiene	ND	0.93	ND	9.9
Naphthalene	ND	3.7	ND	20

Surrogate	%REC	Limits
Bromofluorobenzene	110	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201428
Units (V):	ppbv	Analyzed:	08/07/13
Diln Fac:	1.000		

Type: BS Lab ID: QC700723

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	11.35	114	70-130
Freon 114	10.00	11.29	113	70-130
Chloromethane	10.00	12.14	121	70-130
Vinyl Chloride	10.00	10.09	101	70-130
1,3-Butadiene	10.00	9.820	98	70-130
Bromomethane	10.00	10.89	109	70-130
Chloroethane	10.00	10.00	100	70-130
Trichlorofluoromethane	10.00	11.47	115	70-130
Acrolein	10.00	9.934	99	61-130
1,1-Dichloroethene	10.00	9.640	96	70-130
Freon 113	10.00	10.36	104	70-130
Acetone	10.00	9.115	91	70-130
Carbon Disulfide	10.00	9.074	91	70-130
Methylene Chloride	10.00	9.438	94	70-130
trans-1,2-Dichloroethene	10.00	10.24	102	70-130
MTBE	10.00	10.71	107	70-130
n-Hexane	10.00	9.312	93	70-130
1,1-Dichloroethane	10.00	10.29	103	70-130
Vinyl Acetate	10.00	10.96	110	70-130
cis-1,2-Dichloroethene	10.00	9.727	97	70-130
2-Butanone	10.00	10.33	103	70-130
Ethyl Acetate	10.00	9.905	99	70-130
Tetrahydrofuran	10.00	10.37	104	70-130
Chloroform	10.00	10.16	102	70-130
1,1,1-Trichloroethane	10.00	11.03	110	70-130
Cyclohexane	10.00	10.77	108	70-130
Carbon Tetrachloride	10.00	9.789	98	70-130
Benzene	10.00	10.37	104	70-130
1,2-Dichloroethane	10.00	10.10	101	70-130
n-Heptane	10.00	10.27	103	70-130
Trichloroethene	10.00	10.99	110	70-130
1,2-Dichloropropane	10.00	10.82	108	70-130
Bromodichloromethane	10.00	10.40	104	70-130
cis-1,3-Dichloropropene	10.00	10.71	107	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201428
Units (V):	ppbv	Analyzed:	08/07/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
4-Methyl-2-Pentanone	10.00	12.28	123	70-130
Toluene	10.00	9.826	98	70-130
trans-1,3-Dichloropropene	10.00	10.64	106	70-130
1,1,2-Trichloroethane	10.00	10.65	106	70-130
Tetrachloroethene	10.00	10.02	100	70-130
2-Hexanone	10.00	11.25	113	70-130
Dibromochloromethane	10.00	9.581	96	70-130
1,2-Dibromoethane	10.00	10.21	102	70-130
Chlorobenzene	10.00	9.242	92	70-130
Ethylbenzene	10.00	9.722	97	70-130
m,p-Xylenes	20.00	20.23	101	70-130
o-Xylene	10.00	10.57	106	70-130
Styrene	10.00	10.20	102	70-130
Bromoform	10.00	8.481	85	70-130
1,1,2,2-Tetrachloroethane	10.00	10.27	103	70-130
4-Ethyltoluene	10.00	10.90	109	70-130
1,3,5-Trimethylbenzene	10.00	10.56	106	70-130
1,2,4-Trimethylbenzene	10.00	10.60	106	70-130
1,3-Dichlorobenzene	10.00	10.24	102	70-130
1,4-Dichlorobenzene	10.00	10.02	100	70-130
Benzyl chloride	10.00	9.668	97	70-130
1,2-Dichlorobenzene	10.00	9.950	100	70-130
1,2,4-Trichlorobenzene	10.00	8.597	86	70-130
Hexachlorobutadiene	10.00	9.258	93	70-130
Naphthalene	10.00	9.675	97	67-130

Surrogate	%REC	Limits
Bromofluorobenzene	103	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201428
Units (V):	ppbv	Analyzed:	08/07/13
Diln Fac:	1.000		

Type: BSD Lab ID: QC700724

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	11.95	119	70-130	5	20
Freon 114	10.00	11.47	115	70-130	2	20
Chloromethane	10.00	12.89	129	70-130	6	24
Vinyl Chloride	10.00	10.39	104	70-130	3	24
1,3-Butadiene	10.00	9.979	100	70-130	2	22
Bromomethane	10.00	11.28	113	70-130	4	20
Chloroethane	10.00	10.05	100	70-130	0	20
Trichlorofluoromethane	10.00	11.60	116	70-130	1	21
Acrolein	10.00	9.610	96	61-130	3	36
1,1-Dichloroethene	10.00	9.852	99	70-130	2	20
Freon 113	10.00	10.51	105	70-130	1	24
Acetone	10.00	9.227	92	70-130	1	21
Carbon Disulfide	10.00	9.183	92	70-130	1	21
Methylene Chloride	10.00	9.599	96	70-130	2	24
trans-1,2-Dichloroethene	10.00	10.44	104	70-130	2	20
MTBE	10.00	11.03	110	70-130	3	20
n-Hexane	10.00	9.536	95	70-130	2	20
1,1-Dichloroethane	10.00	10.52	105	70-130	2	20
Vinyl Acetate	10.00	10.90	109	70-130	1	21
cis-1,2-Dichloroethene	10.00	9.718	97	70-130	0	20
2-Butanone	10.00	10.27	103	70-130	1	20
Ethyl Acetate	10.00	10.11	101	70-130	2	22
Tetrahydrofuran	10.00	10.18	102	70-130	2	20
Chloroform	10.00	10.17	102	70-130	0	21
1,1,1-Trichloroethane	10.00	10.76	108	70-130	2	21
Cyclohexane	10.00	10.80	108	70-130	0	20
Carbon Tetrachloride	10.00	9.749	97	70-130	0	20
Benzene	10.00	10.26	103	70-130	1	20
1,2-Dichloroethane	10.00	9.994	100	70-130	1	20
n-Heptane	10.00	10.00	100	70-130	3	20
Trichloroethene	10.00	10.79	108	70-130	2	20
1,2-Dichloropropane	10.00	10.61	106	70-130	2	20
Bromodichloromethane	10.00	10.25	102	70-130	1	20
cis-1,3-Dichloropropene	10.00	10.38	104	70-130	3	20

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201428
Units (V):	ppbv	Analyzed:	08/07/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
4-Methyl-2-Pentanone	10.00	12.02	120	70-130	2	20
Toluene	10.00	9.653	97	70-130	2	23
trans-1,3-Dichloropropene	10.00	10.54	105	70-130	1	20
1,1,2-Trichloroethane	10.00	10.20	102	70-130	4	20
Tetrachloroethene	10.00	9.568	96	70-130	5	20
2-Hexanone	10.00	10.88	109	70-130	3	20
Dibromochloromethane	10.00	9.550	96	70-130	0	20
1,2-Dibromoethane	10.00	9.951	100	70-130	3	20
Chlorobenzene	10.00	9.181	92	70-130	1	21
Ethylbenzene	10.00	9.521	95	70-130	2	20
m,p-Xylenes	20.00	20.40	102	70-130	1	20
o-Xylene	10.00	10.44	104	70-130	1	20
Styrene	10.00	10.04	100	70-130	2	22
Bromoform	10.00	8.453	85	70-130	0	20
1,1,2,2-Tetrachloroethane	10.00	9.879	99	70-130	4	24
4-Ethyltoluene	10.00	10.86	109	70-130	0	22
1,3,5-Trimethylbenzene	10.00	10.03	100	70-130	5	22
1,2,4-Trimethylbenzene	10.00	10.03	100	70-130	6	23
1,3-Dichlorobenzene	10.00	9.932	99	70-130	3	21
1,4-Dichlorobenzene	10.00	9.813	98	70-130	2	22
Benzyl chloride	10.00	9.669	97	70-130	0	21
1,2-Dichlorobenzene	10.00	10.03	100	70-130	1	22
1,2,4-Trichlorobenzene	10.00	8.000	80	70-130	7	24
Hexachlorobutadiene	10.00	8.825	88	70-130	5	25
Naphthalene	10.00	9.133	91	67-130	6	24

Surrogate	%REC	Limits
Bromofluorobenzene	97	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC700725	Diln Fac:	1.000
Matrix:	Air	Batch#:	201428
Units (V):	ppbv	Analyzed:	08/07/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	0.50	ND	1.5
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3
4-Methyl-2-Pentanone	ND	0.50	ND	2.0

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247568	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC700725	Diln Fac:	1.000
Matrix:	Air	Batch#:	201428
Units (V):	ppbv	Analyzed:	08/07/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	99	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 247755
ANALYTICAL REPORT

Iris Environmental	Project : 13-945A
1438 Webster Street	Location : Park Ave. Cleaners
Oakland, CA 94612	Level : II

Sample ID	Lab ID
SV-01	247755-001
SV-02	247755-002
SV-03	247755-003
SV-04	247755-004
SV-05	247755-005
SV-06	247755-006
SV-07	247755-007
SV-08	247755-008
X-DUP	247755-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar Date: 08/15/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247755**
Client:	**Iris Environmental**
Project:	**13-945A**
Location:	**Park Ave. Cleaners**
Request Date:	**08/08/13**
Samples Received:	**08/08/13**

This data package contains sample and QC results for nine air samples, requested for the above referenced project on 08/08/13. The samples were received intact.

Volatile Organics in Air by MS (EPA TO-15):
No analytical problems were encountered.

247755

IRIS ENVIRONMENTAL — CHAIN-OF-CUSTODY

1438 Webster Street, Suite 302
Oakland, California 94612
(510) 834-4747 tel
(510) 834-4199 fax

Date: 8/7/13 Page: 1 of 1 **Nº** 003598

Sampler Name(s): Craig Pelletier Signature(s):

	Sample ID	Date	Time	Matrix	Pres.	TO-15 VOCs	CAN ID	CAN PRESSURE (in Hg)	Number of Containers
1	SV-01	8/7/13	1105	Air	N	X	132	-5.5	1
2	SV-02		1136			X	71	-2.5	1
3	SV-03		1532			X	331	-5.0	1
4	SV-04		1225			X	289	-6.5	1
5	SV-05		1307			X	97	-4.0	1
6	SV-06		1335			X	243	-5.0	1
7	SV-07		1417			X	272	-5.0	1
8	SV-08		1502			X	393	-3.0	1
9	~~X~~-DUP		—			X	139	-3.0	1

Analyses Required

PROJECT INFORMATION

Project Name: ~~13-945A~~ PARKAVE CLEANERS
Project Number: 13-945A
Contact Person: CRAIG PELLETIER
E-mail: CRAIG@IRISENV.COM
Contact Telephone: (510) 834-4747
Report: ~~Routine (Level 2)~~ Level 3 Level 4 EDD
TAT: 10-day ~~5-day~~ 72-hr 48-hr 24-hr Other:

Special Instructions/Comments:

intact

RELINQUISHED BY:	RECEIVED BY:
Printed Name: Craig Pelletier	Printed Name: Tracy Babjar
Signature:	Signature:
Company: IRIS ENVIRONMENTAL	Company:
Time/Date: 8/8/13 0852	Time/Date: 8/8/13 8:55A
RELINQUISHED BY:	**RECEIVED BY:**
Printed Name:	Printed Name:
Signature:	Signature:
Company:	Company:
Time/Date:	Time/Date:

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247755 Date Received 8/9/13 Number of coolers 0
Client IRIS Project 13-945A

Date Opened 8/9/13 By (print) MS (sign)
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc)_____ YES (NO)
Shipping info_____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name_____ Date_____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received?_____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form)___ (YES) NO
6. Indicate the packing in cooler: (if other, describe)_____

☐ Bubble Wrap ☐ Foam blocks ☐ Bags ☒ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☐ Wet ☐ Blue/Gel ☒ None Temp(°C)_____

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present?_____ YES (NO)
If YES, what time were they transferred to freezer?_____
9. Did all bottles arrive unbroken/unopened?_____ (YES) NO
10. Are there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ YES NO (N/A)
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO (N/A)
21. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called?_____ By_____ Date:_____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-01	Diln Fac:	2.030
Lab ID:	247755-001	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/09/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.0	ND	5.0
Freon 114	ND	1.0	ND	7.1
Chloromethane	ND	1.0	ND	2.1
Vinyl Chloride	ND	1.0	ND	2.6
1,3-Butadiene	ND	1.0	ND	2.2
Bromomethane	ND	1.0	ND	3.9
Chloroethane	ND	1.0	ND	2.7
Trichlorofluoromethane	ND	1.0	ND	5.7
Acrolein	ND	4.1	ND	9.3
1,1-Dichloroethene	ND	1.0	ND	4.0
Freon 113	ND	1.0	ND	7.8
Acetone	4.2	4.1	9.9	9.6
Carbon Disulfide	ND	1.0	ND	3.2
Methylene Chloride	ND	1.0	ND	3.5
trans-1,2-Dichloroethene	ND	1.0	ND	4.0
MTBE	ND	1.0	ND	3.7
n-Hexane	ND	1.0	ND	3.6
1,1-Dichloroethane	ND	1.0	ND	4.1
Vinyl Acetate	ND	1.0	ND	3.6
cis-1,2-Dichloroethene	ND	1.0	ND	4.0
2-Butanone	ND	1.0	ND	3.0
Ethyl Acetate	ND	1.0	ND	3.7
Tetrahydrofuran	1.1	1.0	3.3	3.0
Chloroform	ND	1.0	ND	5.0
1,1,1-Trichloroethane	ND	1.0	ND	5.5
Cyclohexane	1.0	1.0	3.6	3.5
Carbon Tetrachloride	ND	1.0	ND	6.4
Benzene	ND	1.0	ND	3.2
1,2-Dichloroethane	ND	1.0	ND	4.1
n-Heptane	ND	1.0	ND	4.2
Trichloroethene	ND	1.0	ND	5.5
1,2-Dichloropropane	ND	1.0	ND	4.7
Bromodichloromethane	ND	1.0	ND	6.8
cis-1,3-Dichloropropene	ND	1.0	ND	4.6
4-Methyl-2-Pentanone	ND	1.0	ND	4.2

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-01	Diln Fac:	2.030
Lab ID:	247755-001	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/09/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	1.1	1.0	4.3	3.8
trans-1,3-Dichloropropene	ND	1.0	ND	4.6
1,1,2-Trichloroethane	ND	1.0	ND	5.5
Tetrachloroethene	43	1.0	290	6.9
2-Hexanone	ND	1.0	ND	4.2
Dibromochloromethane	ND	1.0	ND	8.6
1,2-Dibromoethane	ND	1.0	ND	7.8
Chlorobenzene	ND	1.0	ND	4.7
Ethylbenzene	ND	1.0	ND	4.4
m,p-Xylenes	1.1	1.0	4.7	4.4
o-Xylene	ND	1.0	ND	4.4
Styrene	ND	1.0	ND	4.3
Bromoform	ND	1.0	ND	10
1,1,2,2-Tetrachloroethane	ND	1.0	ND	7.0
4-Ethyltoluene	ND	1.0	ND	5.0
1,3,5-Trimethylbenzene	ND	1.0	ND	5.0
1,2,4-Trimethylbenzene	ND	1.0	ND	5.0
1,3-Dichlorobenzene	ND	1.0	ND	6.1
1,4-Dichlorobenzene	ND	1.0	ND	6.1
Benzyl chloride	ND	1.0	ND	5.3
1,2-Dichlorobenzene	ND	1.0	ND	6.1
1,2,4-Trichlorobenzene	ND	1.0	ND	7.5
Hexachlorobutadiene	ND	1.0	ND	11
Naphthalene	ND	4.1	ND	21

Surrogate	%REC	Limits
Bromofluorobenzene	111	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-02	Diln Fac:	1,104
Lab ID:	247755-002	Batch#:	201661
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/14/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	550	ND	2,700
Freon 114	ND	550	ND	3,900
Chloromethane	ND	550	ND	1,100
Vinyl Chloride	ND	550	ND	1,400
1,3-Butadiene	ND	550	ND	1,200
Bromomethane	ND	550	ND	2,100
Chloroethane	ND	550	ND	1,500
Trichlorofluoromethane	ND	550	ND	3,100
Acrolein	ND	2,200	ND	5,100
1,1-Dichloroethene	ND	550	ND	2,200
Freon 113	ND	550	ND	4,200
Acetone	ND	2,200	ND	5,200
Carbon Disulfide	ND	550	ND	1,700
Methylene Chloride	ND	550	ND	1,900
trans-1,2-Dichloroethene	ND	550	ND	2,200
MTBE	ND	550	ND	2,000
n-Hexane	ND	550	ND	1,900
1,1-Dichloroethane	ND	550	ND	2,200
Vinyl Acetate	ND	550	ND	1,900
cis-1,2-Dichloroethene	ND	550	ND	2,200
2-Butanone	ND	550	ND	1,600
Ethyl Acetate	ND	550	ND	2,000
Tetrahydrofuran	ND	550	ND	1,600
Chloroform	ND	550	ND	2,700
1,1,1-Trichloroethane	ND	550	ND	3,000
Cyclohexane	ND	550	ND	1,900
Carbon Tetrachloride	ND	550	ND	3,500
Benzene	ND	550	ND	1,800
1,2-Dichloroethane	ND	550	ND	2,200
n-Heptane	ND	550	ND	2,300
Trichloroethene	ND	550	ND	3,000
1,2-Dichloropropane	ND	550	ND	2,600
Bromodichloromethane	ND	550	ND	3,700
cis-1,3-Dichloropropene	ND	550	ND	2,500
4-Methyl-2-Pentanone	ND	550	ND	2,300

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-02	Diln Fac:	1,104
Lab ID:	247755-002	Batch#:	201661
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/14/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	550	ND	2,100
trans-1,3-Dichloropropene	ND	550	ND	2,500
1,1,2-Trichloroethane	ND	550	ND	3,000
Tetrachloroethene	90,000	550	610,000	3,700
2-Hexanone	ND	550	ND	2,300
Dibromochloromethane	ND	550	ND	4,700
1,2-Dibromoethane	ND	550	ND	4,200
Chlorobenzene	ND	550	ND	2,500
Ethylbenzene	ND	550	ND	2,400
m,p-Xylenes	ND	550	ND	2,400
o-Xylene	ND	550	ND	2,400
Styrene	ND	550	ND	2,400
Bromoform	ND	550	ND	5,700
1,1,2,2-Tetrachloroethane	ND	550	ND	3,800
4-Ethyltoluene	ND	550	ND	2,700
1,3,5-Trimethylbenzene	ND	550	ND	2,700
1,2,4-Trimethylbenzene	ND	550	ND	2,700
1,3-Dichlorobenzene	ND	550	ND	3,300
1,4-Dichlorobenzene	ND	550	ND	3,300
Benzyl chloride	ND	550	ND	2,900
1,2-Dichlorobenzene	ND	550	ND	3,300
1,2,4-Trichlorobenzene	ND	550	ND	4,100
Hexachlorobutadiene	ND	550	ND	5,900
Naphthalene	ND	2,200	ND	12,000

Surrogate	%REC	Limits
Bromofluorobenzene	94	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-03	Diln Fac:	2.020
Lab ID:	247755-003	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/09/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.0	ND	5.0
Freon 114	ND	1.0	ND	7.1
Chloromethane	ND	1.0	ND	2.1
Vinyl Chloride	ND	1.0	ND	2.6
1,3-Butadiene	3.1	1.0	6.8	2.2
Bromomethane	ND	1.0	ND	3.9
Chloroethane	ND	1.0	ND	2.7
Trichlorofluoromethane	ND	1.0	ND	5.7
Acrolein	ND	4.0	ND	9.3
1,1-Dichloroethene	ND	1.0	ND	4.0
Freon 113	ND	1.0	ND	7.7
Acetone	55	4.0	130	9.6
Carbon Disulfide	2.2	1.0	7.0	3.1
Methylene Chloride	ND	1.0	ND	3.5
trans-1,2-Dichloroethene	ND	1.0	ND	4.0
MTBE	ND	1.0	ND	3.6
n-Hexane	8.2	1.0	29	3.6
1,1-Dichloroethane	ND	1.0	ND	4.1
Vinyl Acetate	ND	1.0	ND	3.6
cis-1,2-Dichloroethene	ND	1.0	ND	4.0
2-Butanone	23	1.0	69	3.0
Ethyl Acetate	ND	1.0	ND	3.6
Tetrahydrofuran	ND	1.0	ND	3.0
Chloroform	1.9	1.0	9.4	4.9
1,1,1-Trichloroethane	ND	1.0	ND	5.5
Cyclohexane	26	1.0	91	3.5
Carbon Tetrachloride	ND	1.0	ND	6.4
Benzene	16	1.0	52	3.2
1,2-Dichloroethane	ND	1.0	ND	4.1
n-Heptane	13	1.0	54	4.1
Trichloroethene	ND	1.0	ND	5.4
1,2-Dichloropropane	ND	1.0	ND	4.7
Bromodichloromethane	ND	1.0	ND	6.8
cis-1,3-Dichloropropene	ND	1.0	ND	4.6
4-Methyl-2-Pentanone	9.0	1.0	37	4.1

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-03	Diln Fac:	2.020
Lab ID:	247755-003	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/09/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	38	1.0	140	3.8
trans-1,3-Dichloropropene	ND	1.0	ND	4.6
1,1,2-Trichloroethane	ND	1.0	ND	5.5
Tetrachloroethene	4.5	1.0	31	6.9
2-Hexanone	ND	1.0	ND	4.1
Dibromochloromethane	ND	1.0	ND	8.6
1,2-Dibromoethane	ND	1.0	ND	7.8
Chlorobenzene	ND	1.0	ND	4.6
Ethylbenzene	3.1	1.0	14	4.4
m,p-Xylenes	12	1.0	53	4.4
o-Xylene	3.9	1.0	17	4.4
Styrene	ND	1.0	ND	4.3
Bromoform	ND	1.0	ND	10
1,1,2,2-Tetrachloroethane	ND	1.0	ND	6.9
4-Ethyltoluene	1.3	1.0	6.5	5.0
1,3,5-Trimethylbenzene	1.0	1.0	5.0	5.0
1,2,4-Trimethylbenzene	4.5	1.0	22	5.0
1,3-Dichlorobenzene	ND	1.0	ND	6.1
1,4-Dichlorobenzene	ND	1.0	ND	6.1
Benzyl chloride	ND	1.0	ND	5.2
1,2-Dichlorobenzene	ND	1.0	ND	6.1
1,2,4-Trichlorobenzene	ND	1.0	ND	7.5
Hexachlorobutadiene	ND	1.0	ND	11
Naphthalene	ND	4.0	ND	21

Surrogate	%REC	Limits
Bromofluorobenzene	116	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-04	Diln Fac:	2.100
Lab ID:	247755-004	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/10/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	1.1	ND	5.2
Freon 114	ND	1.1	ND	7.3
Chloromethane	ND	1.1	ND	2.2
Vinyl Chloride	ND	1.1	ND	2.7
1,3-Butadiene	ND	1.1	ND	2.3
Bromomethane	ND	1.1	ND	4.1
Chloroethane	ND	1.1	ND	2.8
Trichlorofluoromethane	ND	1.1	ND	5.9
Acrolein	ND	4.2	ND	9.6
1,1-Dichloroethene	ND	1.1	ND	4.2
Freon 113	ND	1.1	ND	8.0
Acetone	16	4.2	39	10
Carbon Disulfide	3.9	1.1	12	3.3
Methylene Chloride	ND	1.1	ND	3.6
trans-1,2-Dichloroethene	ND	1.1	ND	4.2
MTBE	ND	1.1	ND	3.8
n-Hexane	29	1.1	100	3.7
1,1-Dichloroethane	ND	1.1	ND	4.2
Vinyl Acetate	ND	1.1	ND	3.7
cis-1,2-Dichloroethene	ND	1.1	ND	4.2
2-Butanone	13	1.1	39	3.1
Ethyl Acetate	ND	1.1	ND	3.8
Tetrahydrofuran	1.5	1.1	4.3	3.1
Chloroform	ND	1.1	ND	5.1
1,1,1-Trichloroethane	ND	1.1	ND	5.7
Cyclohexane	30	1.1	100	3.6
Carbon Tetrachloride	ND	1.1	ND	6.6
Benzene	26	1.1	84	3.4
1,2-Dichloroethane	ND	1.1	ND	4.2
n-Heptane	21	1.1	87	4.3
Trichloroethene	1.9	1.1	10	5.6
1,2-Dichloropropane	ND	1.1	ND	4.9
Bromodichloromethane	ND	1.1	ND	7.0
cis-1,3-Dichloropropene	ND	1.1	ND	4.8
4-Methyl-2-Pentanone	10	1.1	41	4.3

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-04	Diln Fac:	2.100
Lab ID:	247755-004	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/10/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	45	1.1	170	4.0
trans-1,3-Dichloropropene	ND	1.1	ND	4.8
1,1,2-Trichloroethane	ND	1.1	ND	5.7
Tetrachloroethene	180	1.1	1,200	7.1
2-Hexanone	ND	1.1	ND	4.3
Dibromochloromethane	ND	1.1	ND	8.9
1,2-Dibromoethane	ND	1.1	ND	8.1
Chlorobenzene	ND	1.1	ND	4.8
Ethylbenzene	4.1	1.1	18	4.6
m,p-Xylenes	16	1.1	69	4.6
o-Xylene	4.9	1.1	21	4.6
Styrene	ND	1.1	ND	4.5
Bromoform	ND	1.1	ND	11
1,1,2,2-Tetrachloroethane	ND	1.1	ND	7.2
4-Ethyltoluene	1.6	1.1	8.0	5.2
1,3,5-Trimethylbenzene	1.4	1.1	6.8	5.2
1,2,4-Trimethylbenzene	4.7	1.1	23	5.2
1,3-Dichlorobenzene	ND	1.1	ND	6.3
1,4-Dichlorobenzene	ND	1.1	ND	6.3
Benzyl chloride	ND	1.1	ND	5.4
1,2-Dichlorobenzene	ND	1.1	ND	6.3
1,2,4-Trichlorobenzene	ND	1.1	ND	7.8
Hexachlorobutadiene	ND	1.1	ND	11
Naphthalene	ND	4.2	ND	22

Surrogate	%REC	Limits
Bromofluorobenzene	108	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-05	Diln Fac:	12.36
Lab ID:	247755-005	Batch#:	201616
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/13/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	6.2	ND	31
Freon 114	ND	6.2	ND	43
Chloromethane	ND	6.2	ND	13
Vinyl Chloride	ND	6.2	ND	16
1,3-Butadiene	ND	6.2	ND	14
Bromomethane	ND	6.2	ND	24
Chloroethane	ND	6.2	ND	16
Trichlorofluoromethane	ND	6.2	ND	35
Acrolein	ND	25	ND	57
1,1-Dichloroethene	ND	6.2	ND	25
Freon 113	ND	6.2	ND	47
Acetone	130	25	320	59
Carbon Disulfide	ND	6.2	ND	19
Methylene Chloride	ND	6.2	ND	21
trans-1,2-Dichloroethene	ND	6.2	ND	25
MTBE	ND	6.2	ND	22
n-Hexane	8.2	6.2	29	22
1,1-Dichloroethane	ND	6.2	ND	25
Vinyl Acetate	ND	6.2	ND	22
cis-1,2-Dichloroethene	ND	6.2	ND	25
2-Butanone	9.8	6.2	29	18
Ethyl Acetate	ND	6.2	ND	22
Tetrahydrofuran	190	6.2	560	18
Chloroform	ND	6.2	ND	30
1,1,1-Trichloroethane	ND	6.2	ND	34
Cyclohexane	35	6.2	120	21
Carbon Tetrachloride	ND	6.2	ND	39
Benzene	15	6.2	48	20
1,2-Dichloroethane	ND	6.2	ND	25
n-Heptane	16	6.2	66	25
Trichloroethene	ND	6.2	ND	33
1,2-Dichloropropane	ND	6.2	ND	29
Bromodichloromethane	ND	6.2	ND	41
cis-1,3-Dichloropropene	ND	6.2	ND	28
4-Methyl-2-Pentanone	ND	6.2	ND	25

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-05	Diln Fac:	12.36
Lab ID:	247755-005	Batch#:	201616
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/13/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	77	6.2	290	23
trans-1,3-Dichloropropene	ND	6.2	ND	28
1,1,2-Trichloroethane	ND	6.2	ND	34
Tetrachloroethene	1,100	6.2	7,300	42
2-Hexanone	ND	6.2	ND	25
Dibromochloromethane	ND	6.2	ND	53
1,2-Dibromoethane	ND	6.2	ND	47
Chlorobenzene	ND	6.2	ND	28
Ethylbenzene	ND	6.2	ND	27
m,p-Xylenes	22	6.2	95	27
o-Xylene	6.2	6.2	27	27
Styrene	ND	6.2	ND	26
Bromoform	ND	6.2	ND	64
1,1,2,2-Tetrachloroethane	ND	6.2	ND	42
4-Ethyltoluene	ND	6.2	ND	30
1,3,5-Trimethylbenzene	ND	6.2	ND	30
1,2,4-Trimethylbenzene	ND	6.2	ND	30
1,3-Dichlorobenzene	ND	6.2	ND	37
1,4-Dichlorobenzene	ND	6.2	ND	37
Benzyl chloride	ND	6.2	ND	32
1,2-Dichlorobenzene	ND	6.2	ND	37
1,2,4-Trichlorobenzene	ND	6.2	ND	46
Hexachlorobutadiene	ND	6.2	ND	66
Naphthalene	ND	25	ND	130

Surrogate	%REC	Limits
Bromofluorobenzene	103	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-06	Diln Fac:	121.8
Lab ID:	247755-006	Batch#:	201661
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/14/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	61	ND	300
Freon 114	ND	61	ND	430
Chloromethane	ND	61	ND	130
Vinyl Chloride	ND	61	ND	160
1,3-Butadiene	ND	61	ND	130
Bromomethane	ND	61	ND	240
Chloroethane	ND	61	ND	160
Trichlorofluoromethane	ND	61	ND	340
Acrolein	ND	240	ND	560
1,1-Dichloroethene	ND	61	ND	240
Freon 113	ND	61	ND	470
Acetone	ND	240	ND	580
Carbon Disulfide	ND	61	ND	190
Methylene Chloride	ND	61	ND	210
trans-1,2-Dichloroethene	ND	61	ND	240
MTBE	ND	61	ND	220
n-Hexane	ND	61	ND	210
1,1-Dichloroethane	ND	61	ND	250
Vinyl Acetate	ND	61	ND	210
cis-1,2-Dichloroethene	ND	61	ND	240
2-Butanone	ND	61	ND	180
Ethyl Acetate	ND	61	ND	220
Tetrahydrofuran	ND	61	ND	180
Chloroform	ND	61	ND	300
1,1,1-Trichloroethane	ND	61	ND	330
Cyclohexane	ND	61	ND	210
Carbon Tetrachloride	ND	61	ND	380
Benzene	ND	61	ND	190
1,2-Dichloroethane	ND	61	ND	250
n-Heptane	ND	61	ND	250
Trichloroethene	180	61	980	330
1,2-Dichloropropane	ND	61	ND	280
Bromodichloromethane	ND	61	ND	410
cis-1,3-Dichloropropene	ND	61	ND	280
4-Methyl-2-Pentanone	ND	61	ND	250

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-06	Diln Fac:	121.8
Lab ID:	247755-006	Batch#:	201661
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/14/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	61	ND	230
trans-1,3-Dichloropropene	ND	61	ND	280
1,1,2-Trichloroethane	ND	61	ND	330
Tetrachloroethene	7,600	61	51,000	410
2-Hexanone	ND	61	ND	250
Dibromochloromethane	ND	61	ND	520
1,2-Dibromoethane	ND	61	ND	470
Chlorobenzene	ND	61	ND	280
Ethylbenzene	ND	61	ND	260
m,p-Xylenes	ND	61	ND	260
o-Xylene	ND	61	ND	260
Styrene	ND	61	ND	260
Bromoform	ND	61	ND	630
1,1,2,2-Tetrachloroethane	ND	61	ND	420
4-Ethyltoluene	ND	61	ND	300
1,3,5-Trimethylbenzene	ND	61	ND	300
1,2,4-Trimethylbenzene	ND	61	ND	300
1,3-Dichlorobenzene	ND	61	ND	370
1,4-Dichlorobenzene	ND	61	ND	370
Benzyl chloride	ND	61	ND	320
1,2-Dichlorobenzene	ND	61	ND	370
1,2,4-Trichlorobenzene	ND	61	ND	450
Hexachlorobutadiene	ND	61	ND	650
Naphthalene	ND	240	ND	1,300

Surrogate	%REC	Limits
Bromofluorobenzene	92	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-07	Units (M):	ug/m3
Lab ID:	247755-007	Sampled:	08/07/13
Matrix:	Air	Received:	08/08/13
Units (V):	ppbv		

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	1.0	ND	5.0	2.030	201516	08/10/13
Freon 114	ND	1.0	ND	7.1	2.030	201516	08/10/13
Chloromethane	ND	1.0	ND	2.1	2.030	201516	08/10/13
Vinyl Chloride	ND	1.0	ND	2.6	2.030	201516	08/10/13
1,3-Butadiene	ND	1.0	ND	2.2	2.030	201516	08/10/13
Bromomethane	ND	1.0	ND	3.9	2.030	201516	08/10/13
Chloroethane	ND	1.0	ND	2.7	2.030	201516	08/10/13
Trichlorofluoromethane	ND	1.0	ND	5.7	2.030	201516	08/10/13
Acrolein	ND	4.1	ND	9.3	2.030	201516	08/10/13
1,1-Dichloroethene	ND	1.0	ND	4.0	2.030	201516	08/10/13
Freon 113	ND	1.0	ND	7.8	2.030	201516	08/10/13
Acetone	190	12	460	29	6.090	201661	08/14/13
Carbon Disulfide	1.8	1.0	5.6	3.2	2.030	201516	08/10/13
Methylene Chloride	ND	1.0	ND	3.5	2.030	201516	08/10/13
trans-1,2-Dichloroethene	ND	1.0	ND	4.0	2.030	201516	08/10/13
MTBE	ND	1.0	ND	3.7	2.030	201516	08/10/13
n-Hexane	12	1.0	43	3.6	2.030	201516	08/10/13
1,1-Dichloroethane	ND	1.0	ND	4.1	2.030	201516	08/10/13
Vinyl Acetate	ND	1.0	ND	3.6	2.030	201516	08/10/13
cis-1,2-Dichloroethene	ND	1.0	ND	4.0	2.030	201516	08/10/13
2-Butanone	16	1.0	46	3.0	2.030	201516	08/10/13
Ethyl Acetate	ND	1.0	ND	3.7	2.030	201516	08/10/13
Tetrahydrofuran	ND	1.0	ND	3.0	2.030	201516	08/10/13
Chloroform	ND	1.0	ND	5.0	2.030	201516	08/10/13
1,1,1-Trichloroethane	ND	1.0	ND	5.5	2.030	201516	08/10/13
Cyclohexane	18	1.0	63	3.5	2.030	201516	08/10/13
Carbon Tetrachloride	ND	1.0	ND	6.4	2.030	201516	08/10/13
Benzene	21	1.0	68	3.2	2.030	201516	08/10/13
1,2-Dichloroethane	ND	1.0	ND	4.1	2.030	201516	08/10/13
n-Heptane	17	1.0	69	4.2	2.030	201516	08/10/13
Trichloroethene	ND	1.0	ND	5.5	2.030	201516	08/10/13
1,2-Dichloropropane	ND	1.0	ND	4.7	2.030	201516	08/10/13
Bromodichloromethane	ND	1.0	ND	6.8	2.030	201516	08/10/13
cis-1,3-Dichloropropene	ND	1.0	ND	4.6	2.030	201516	08/10/13
4-Methyl-2-Pentanone	3.0	1.0	12	4.2	2.030	201516	08/10/13
Toluene	46	1.0	170	3.8	2.030	201516	08/10/13

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-07	Units (M):	ug/m3
Lab ID:	247755-007	Sampled:	08/07/13
Matrix:	Air	Received:	08/08/13
Units (V):	ppbv		

Analyte	Result (V)	RL	Result (M)	RL	Diln Fac	Batch#	Analyzed
trans-1,3-Dichloropropene	ND	1.0	ND	4.6	2.030	201516	08/10/13
1,1,2-Trichloroethane	ND	1.0	ND	5.5	2.030	201516	08/10/13
Tetrachloroethene	50	1.0	340	6.9	2.030	201516	08/10/13
2-Hexanone	ND	1.0	ND	4.2	2.030	201516	08/10/13
Dibromochloromethane	ND	1.0	ND	8.6	2.030	201516	08/10/13
1,2-Dibromoethane	ND	1.0	ND	7.8	2.030	201516	08/10/13
Chlorobenzene	ND	1.0	ND	4.7	2.030	201516	08/10/13
Ethylbenzene	3.4	1.0	15	4.4	2.030	201516	08/10/13
m,p-Xylenes	14	1.0	59	4.4	2.030	201516	08/10/13
o-Xylene	4.3	1.0	19	4.4	2.030	201516	08/10/13
Styrene	ND	1.0	ND	4.3	2.030	201516	08/10/13
Bromoform	ND	1.0	ND	10	2.030	201516	08/10/13
1,1,2,2-Tetrachloroethane	ND	1.0	ND	7.0	2.030	201516	08/10/13
4-Ethyltoluene	1.4	1.0	7.0	5.0	2.030	201516	08/10/13
1,3,5-Trimethylbenzene	1.1	1.0	5.4	5.0	2.030	201516	08/10/13
1,2,4-Trimethylbenzene	4.7	1.0	23	5.0	2.030	201516	08/10/13
1,3-Dichlorobenzene	ND	1.0	ND	6.1	2.030	201516	08/10/13
1,4-Dichlorobenzene	ND	1.0	ND	6.1	2.030	201516	08/10/13
Benzyl chloride	ND	1.0	ND	5.3	2.030	201516	08/10/13
1,2-Dichlorobenzene	ND	1.0	ND	6.1	2.030	201516	08/10/13
1,2,4-Trichlorobenzene	ND	1.0	ND	7.5	2.030	201516	08/10/13
Hexachlorobutadiene	ND	1.0	ND	11	2.030	201516	08/10/13
Naphthalene	ND	4.1	ND	21	2.030	201516	08/10/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Bromofluorobenzene	112	70-130	2.030	201516	08/10/13

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-08	Diln Fac:	11.64
Lab ID:	247755-008	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/10/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	5.8	ND	29
Freon 114	ND	5.8	ND	41
Chloromethane	ND	5.8	ND	12
Vinyl Chloride	ND	5.8	ND	15
1,3-Butadiene	ND	5.8	ND	13
Bromomethane	ND	5.8	ND	23
Chloroethane	ND	5.8	ND	15
Trichlorofluoromethane	ND	5.8	ND	33
Acrolein	ND	23	ND	53
1,1-Dichloroethene	ND	5.8	ND	23
Freon 113	ND	5.8	ND	45
Acetone	ND	23	ND	55
Carbon Disulfide	62	5.8	190	18
Methylene Chloride	ND	5.8	ND	20
trans-1,2-Dichloroethene	ND	5.8	ND	23
MTBE	ND	5.8	ND	21
n-Hexane	ND	5.8	ND	21
1,1-Dichloroethane	ND	5.8	ND	24
Vinyl Acetate	ND	5.8	ND	20
cis-1,2-Dichloroethene	ND	5.8	ND	23
2-Butanone	ND	5.8	ND	17
Ethyl Acetate	ND	5.8	ND	21
Tetrahydrofuran	ND	5.8	ND	17
Chloroform	ND	5.8	ND	28
1,1,1-Trichloroethane	ND	5.8	ND	32
Cyclohexane	160	5.8	550	20
Carbon Tetrachloride	ND	5.8	ND	37
Benzene	15	5.8	48	19
1,2-Dichloroethane	ND	5.8	ND	24
n-Heptane	6.0	5.8	25	24
Trichloroethene	ND	5.8	ND	31
1,2-Dichloropropane	ND	5.8	ND	27
Bromodichloromethane	ND	5.8	ND	39
cis-1,3-Dichloropropene	ND	5.8	ND	26
4-Methyl-2-Pentanone	ND	5.8	ND	24

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	SV-08	Diln Fac:	11.64
Lab ID:	247755-008	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/10/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	150	5.8	570	22
trans-1,3-Dichloropropene	ND	5.8	ND	26
1,1,2-Trichloroethane	ND	5.8	ND	32
Tetrachloroethene	850	5.8	5,800	39
2-Hexanone	ND	5.8	ND	24
Dibromochloromethane	ND	5.8	ND	50
1,2-Dibromoethane	ND	5.8	ND	45
Chlorobenzene	ND	5.8	ND	27
Ethylbenzene	28	5.8	120	25
m,p-Xylenes	110	5.8	460	25
o-Xylene	31	5.8	130	25
Styrene	ND	5.8	ND	25
Bromoform	ND	5.8	ND	60
1,1,2,2-Tetrachloroethane	ND	5.8	ND	40
4-Ethyltoluene	10	5.8	50	29
1,3,5-Trimethylbenzene	ND	5.8	ND	29
1,2,4-Trimethylbenzene	25	5.8	120	29
1,3-Dichlorobenzene	ND	5.8	ND	35
1,4-Dichlorobenzene	ND	5.8	ND	35
Benzyl chloride	ND	5.8	ND	30
1,2-Dichlorobenzene	ND	5.8	ND	35
1,2,4-Trichlorobenzene	ND	5.8	ND	43
Hexachlorobutadiene	ND	5.8	ND	62
Naphthalene	ND	23	ND	120

Surrogate	%REC	Limits
Bromofluorobenzene	124	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	X-DUP	Diln Fac:	10.80
Lab ID:	247755-009	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/10/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	5.4	ND	27
Freon 114	ND	5.4	ND	38
Chloromethane	ND	5.4	ND	11
Vinyl Chloride	ND	5.4	ND	14
1,3-Butadiene	ND	5.4	ND	12
Bromomethane	ND	5.4	ND	21
Chloroethane	ND	5.4	ND	14
Trichlorofluoromethane	ND	5.4	ND	30
Acrolein	ND	22	ND	50
1,1-Dichloroethene	ND	5.4	ND	21
Freon 113	ND	5.4	ND	41
Acetone	ND	22	ND	51
Carbon Disulfide	56	5.4	170	17
Methylene Chloride	ND	5.4	ND	19
trans-1,2-Dichloroethene	ND	5.4	ND	21
MTBE	ND	5.4	ND	19
n-Hexane	ND	5.4	ND	19
1,1-Dichloroethane	ND	5.4	ND	22
Vinyl Acetate	ND	5.4	ND	19
cis-1,2-Dichloroethene	ND	5.4	ND	21
2-Butanone	ND	5.4	ND	16
Ethyl Acetate	ND	5.4	ND	19
Tetrahydrofuran	ND	5.4	ND	16
Chloroform	ND	5.4	ND	26
1,1,1-Trichloroethane	ND	5.4	ND	29
Cyclohexane	150	5.4	510	19
Carbon Tetrachloride	ND	5.4	ND	34
Benzene	14	5.4	45	17
1,2-Dichloroethane	ND	5.4	ND	22
n-Heptane	6.1	5.4	25	22
Trichloroethene	ND	5.4	ND	29
1,2-Dichloropropane	ND	5.4	ND	25
Bromodichloromethane	ND	5.4	ND	36
cis-1,3-Dichloropropene	ND	5.4	ND	25
4-Methyl-2-Pentanone	ND	5.4	ND	22

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Field ID:	X-DUP	Diln Fac:	10.80
Lab ID:	247755-009	Batch#:	201516
Matrix:	Air	Sampled:	08/07/13
Units (V):	ppbv	Received:	08/08/13
Units (M):	ug/m3	Analyzed:	08/10/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	140	5.4	530	20
trans-1,3-Dichloropropene	ND	5.4	ND	25
1,1,2-Trichloroethane	ND	5.4	ND	29
Tetrachloroethene	780	5.4	5,300	37
2-Hexanone	ND	5.4	ND	22
Dibromochloromethane	ND	5.4	ND	46
1,2-Dibromoethane	ND	5.4	ND	41
Chlorobenzene	ND	5.4	ND	25
Ethylbenzene	25	5.4	110	23
m,p-Xylenes	93	5.4	400	23
o-Xylene	28	5.4	120	23
Styrene	ND	5.4	ND	23
Bromoform	ND	5.4	ND	56
1,1,2,2-Tetrachloroethane	ND	5.4	ND	37
4-Ethyltoluene	8.3	5.4	41	27
1,3,5-Trimethylbenzene	ND	5.4	ND	27
1,2,4-Trimethylbenzene	21	5.4	110	27
1,3-Dichlorobenzene	ND	5.4	ND	32
1,4-Dichlorobenzene	ND	5.4	ND	32
Benzyl chloride	ND	5.4	ND	28
1,2-Dichlorobenzene	ND	5.4	ND	32
1,2,4-Trichlorobenzene	ND	5.4	ND	40
Hexachlorobutadiene	ND	5.4	ND	58
Naphthalene	ND	22	ND	110

Surrogate	%REC	Limits
Bromofluorobenzene	124	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201516
Units (V):	ppbv	Analyzed:	08/09/13
Diln Fac:	1.000		

Type: BS Lab ID: QC701082

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	10.21	102	70-130
Freon 114	10.00	10.22	102	70-130
Chloromethane	10.00	10.93	109	70-130
Vinyl Chloride	10.00	9.751	98	70-130
1,3-Butadiene	10.00	9.236	92	70-130
Bromomethane	10.00	10.12	101	70-130
Chloroethane	10.00	9.171	92	70-130
Trichlorofluoromethane	10.00	10.95	109	70-130
Acrolein	10.00	8.963	90	61-130
1,1-Dichloroethene	10.00	9.343	93	70-130
Freon 113	10.00	9.928	99	70-130
Acetone	10.00	8.957	90	70-130
Carbon Disulfide	10.00	8.327	83	70-130
Methylene Chloride	10.00	9.449	94	70-130
trans-1,2-Dichloroethene	10.00	9.530	95	70-130
MTBE	10.00	9.876	99	70-130
n-Hexane	10.00	8.344	83	70-130
1,1-Dichloroethane	10.00	9.721	97	70-130
Vinyl Acetate	10.00	9.930	99	70-130
cis-1,2-Dichloroethene	10.00	8.773	88	70-130
2-Butanone	10.00	9.320	93	70-130
Ethyl Acetate	10.00	9.040	90	70-130
Tetrahydrofuran	10.00	10.73	107	70-130
Chloroform	10.00	9.425	94	70-130
1,1,1-Trichloroethane	10.00	11.14	111	70-130
Cyclohexane	10.00	10.85	108	70-130
Carbon Tetrachloride	10.00	9.386	94	70-130
Benzene	10.00	9.715	97	70-130
1,2-Dichloroethane	10.00	10.03	100	70-130
n-Heptane	10.00	10.13	101	70-130
Trichloroethene	10.00	10.52	105	70-130
1,2-Dichloropropane	10.00	10.61	106	70-130
Bromodichloromethane	10.00	10.41	104	70-130
cis-1,3-Dichloropropene	10.00	10.03	100	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201516
Units (V):	ppbv	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
4-Methyl-2-Pentanone	10.00	11.86	119	70-130
Toluene	10.00	9.059	91	70-130
trans-1,3-Dichloropropene	10.00	9.883	99	70-130
1,1,2-Trichloroethane	10.00	9.957	100	70-130
Tetrachloroethene	10.00	8.987	90	70-130
2-Hexanone	10.00	10.39	104	70-130
Dibromochloromethane	10.00	8.936	89	70-130
1,2-Dibromoethane	10.00	9.329	93	70-130
Chlorobenzene	10.00	8.956	90	70-130
Ethylbenzene	10.00	9.517	95	70-130
m,p-Xylenes	20.00	18.65	93	70-130
o-Xylene	10.00	9.444	94	70-130
Styrene	10.00	9.432	94	70-130
Bromoform	10.00	7.704	77	70-130
1,1,2,2-Tetrachloroethane	10.00	9.086	91	70-130
4-Ethyltoluene	10.00	10.20	102	70-130
1,3,5-Trimethylbenzene	10.00	9.637	96	70-130
1,2,4-Trimethylbenzene	10.00	9.648	96	70-130
1,3-Dichlorobenzene	10.00	9.315	93	70-130
1,4-Dichlorobenzene	10.00	9.213	92	70-130
Benzyl chloride	10.00	9.041	90	70-130
1,2-Dichlorobenzene	10.00	9.289	93	70-130
1,2,4-Trichlorobenzene	10.00	8.380	84	70-130
Hexachlorobutadiene	10.00	8.617	86	70-130
Naphthalene	10.00	9.242	92	67-130

Surrogate	%REC	Limits
Bromofluorobenzene	98	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201516
Units (V):	ppbv	Analyzed:	08/09/13
Diln Fac:	1.000		

Type: BSD Lab ID: QC701083

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	11.00	110	70-130	7	20
Freon 114	10.00	10.73	107	70-130	5	20
Chloromethane	10.00	11.67	117	70-130	7	24
Vinyl Chloride	10.00	9.859	99	70-130	1	24
1,3-Butadiene	10.00	9.360	94	70-130	1	22
Bromomethane	10.00	10.37	104	70-130	2	20
Chloroethane	10.00	9.402	94	70-130	2	20
Trichlorofluoromethane	10.00	11.18	112	70-130	2	21
Acrolein	10.00	9.274	93	61-130	3	36
1,1-Dichloroethene	10.00	9.382	94	70-130	0	20
Freon 113	10.00	10.24	102	70-130	3	24
Acetone	10.00	9.115	91	70-130	2	21
Carbon Disulfide	10.00	8.573	86	70-130	3	21
Methylene Chloride	10.00	9.385	94	70-130	1	24
trans-1,2-Dichloroethene	10.00	9.243	92	70-130	3	20
MTBE	10.00	10.05	100	70-130	2	20
n-Hexane	10.00	8.348	83	70-130	0	20
1,1-Dichloroethane	10.00	9.969	100	70-130	3	20
Vinyl Acetate	10.00	9.785	98	70-130	1	21
cis-1,2-Dichloroethene	10.00	8.938	89	70-130	2	20
2-Butanone	10.00	9.678	97	70-130	4	20
Ethyl Acetate	10.00	9.192	92	70-130	2	22
Tetrahydrofuran	10.00	10.78	108	70-130	0	20
Chloroform	10.00	9.541	95	70-130	1	21
1,1,1-Trichloroethane	10.00	11.42	114	70-130	2	21
Cyclohexane	10.00	10.98	110	70-130	1	20
Carbon Tetrachloride	10.00	9.459	95	70-130	1	20
Benzene	10.00	10.01	100	70-130	3	20
1,2-Dichloroethane	10.00	10.11	101	70-130	1	20
n-Heptane	10.00	10.28	103	70-130	1	20
Trichloroethene	10.00	10.45	104	70-130	1	20
1,2-Dichloropropane	10.00	10.81	108	70-130	2	20
Bromodichloromethane	10.00	10.49	105	70-130	1	20
cis-1,3-Dichloropropene	10.00	9.881	99	70-130	1	20

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201516
Units (V):	ppbv	Analyzed:	08/09/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
4-Methyl-2-Pentanone	10.00	11.78	118	70-130	1	20
Toluene	10.00	8.924	89	70-130	2	23
trans-1,3-Dichloropropene	10.00	9.318	93	70-130	6	20
1,1,2-Trichloroethane	10.00	9.518	95	70-130	5	20
Tetrachloroethene	10.00	8.821	88	70-130	2	20
2-Hexanone	10.00	9.838	98	70-130	5	20
Dibromochloromethane	10.00	8.781	88	70-130	2	20
1,2-Dibromoethane	10.00	8.991	90	70-130	4	20
Chlorobenzene	10.00	8.728	87	70-130	3	21
Ethylbenzene	10.00	9.360	94	70-130	2	20
m,p-Xylenes	20.00	19.43	97	70-130	4	20
o-Xylene	10.00	9.575	96	70-130	1	20
Styrene	10.00	9.654	97	70-130	2	22
Bromoform	10.00	7.548	75	70-130	2	20
1,1,2,2-Tetrachloroethane	10.00	8.609	86	70-130	5	24
4-Ethyltoluene	10.00	10.34	103	70-130	1	22
1,3,5-Trimethylbenzene	10.00	9.461	95	70-130	2	22
1,2,4-Trimethylbenzene	10.00	9.333	93	70-130	3	23
1,3-Dichlorobenzene	10.00	9.553	96	70-130	3	21
1,4-Dichlorobenzene	10.00	9.502	95	70-130	3	22
Benzyl chloride	10.00	9.125	91	70-130	1	21
1,2-Dichlorobenzene	10.00	8.969	90	70-130	4	22
1,2,4-Trichlorobenzene	10.00	7.079	71	70-130	17	24
Hexachlorobutadiene	10.00	7.854	79	70-130	9	25
Naphthalene	10.00	7.531	75	67-130	20	24

Surrogate	%REC	Limits
Bromofluorobenzene	100	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC701084	Diln Fac:	1.000
Matrix:	Air	Batch#:	201516
Units (V):	ppbv	Analyzed:	08/09/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	0.50	ND	1.5
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3
4-Methyl-2-Pentanone	ND	0.50	ND	2.0

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC701084	Diln Fac:	1.000
Matrix:	Air	Batch#:	201516
Units (V):	ppbv	Analyzed:	08/09/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	96	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201616
Units (V):	ppbv	Analyzed:	08/12/13
Diln Fac:	1.000		

Type: BS Lab ID: QC701503

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	10.57	106	70-130
Freon 114	10.00	10.21	102	70-130
Chloromethane	10.00	10.98	110	70-130
Vinyl Chloride	10.00	9.090	91	70-130
1,3-Butadiene	10.00	9.545	95	70-130
Bromomethane	10.00	9.980	100	70-130
Chloroethane	10.00	10.26	103	70-130
Trichlorofluoromethane	10.00	10.55	106	70-130
Acrolein	10.00	8.908	89	61-130
1,1-Dichloroethene	10.00	9.239	92	70-130
Freon 113	10.00	10.26	103	70-130
Acetone	10.00	8.848	88	70-130
Carbon Disulfide	10.00	8.746	87	70-130
Methylene Chloride	10.00	8.744	87	70-130
trans-1,2-Dichloroethene	10.00	9.821	98	70-130
MTBE	10.00	10.58	106	70-130
n-Hexane	10.00	8.979	90	70-130
1,1-Dichloroethane	10.00	9.632	96	70-130
Vinyl Acetate	10.00	10.72	107	70-130
cis-1,2-Dichloroethene	10.00	9.252	93	70-130
2-Butanone	10.00	10.14	101	70-130
Ethyl Acetate	10.00	9.666	97	70-130
Tetrahydrofuran	10.00	10.44	104	70-130
Chloroform	10.00	9.746	97	70-130
1,1,1-Trichloroethane	10.00	11.25	112	70-130
Cyclohexane	10.00	11.24	112	70-130
Carbon Tetrachloride	10.00	8.699	87	70-130
Benzene	10.00	10.17	102	70-130
1,2-Dichloroethane	10.00	10.16	102	70-130
n-Heptane	10.00	9.984	100	70-130
Trichloroethene	10.00	10.83	108	70-130
1,2-Dichloropropane	10.00	11.02	110	70-130
Bromodichloromethane	10.00	10.69	107	70-130
cis-1,3-Dichloropropene	10.00	10.40	104	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201616
Units (V):	ppbv	Analyzed:	08/12/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
4-Methyl-2-Pentanone	10.00	12.28	123	70-130
Toluene	10.00	9.525	95	70-130
trans-1,3-Dichloropropene	10.00	9.720	97	70-130
1,1,2-Trichloroethane	10.00	10.89	109	70-130
Tetrachloroethene	10.00	9.965	100	70-130
2-Hexanone	10.00	10.91	109	70-130
Dibromochloromethane	10.00	9.777	98	70-130
1,2-Dibromoethane	10.00	10.34	103	70-130
Chlorobenzene	10.00	8.913	89	70-130
Ethylbenzene	10.00	9.280	93	70-130
m,p-Xylenes	20.00	19.45	97	70-130
o-Xylene	10.00	9.902	99	70-130
Styrene	10.00	9.772	98	70-130
Bromoform	10.00	8.308	83	70-130
1,1,2,2-Tetrachloroethane	10.00	9.814	98	70-130
4-Ethyltoluene	10.00	10.35	104	70-130
1,3,5-Trimethylbenzene	10.00	9.853	99	70-130
1,2,4-Trimethylbenzene	10.00	9.781	98	70-130
1,3-Dichlorobenzene	10.00	9.920	99	70-130
1,4-Dichlorobenzene	10.00	9.469	95	70-130
Benzyl chloride	10.00	9.233	92	70-130
1,2-Dichlorobenzene	10.00	9.446	94	70-130
1,2,4-Trichlorobenzene	10.00	7.755	78	70-130
Hexachlorobutadiene	10.00	8.426	84	70-130
Naphthalene	10.00	8.697	87	67-130

Surrogate	%REC	Limits
Bromofluorobenzene	98	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201616
Units (V):	ppbv	Analyzed:	08/12/13
Diln Fac:	1.000		

Type: BSD Lab ID: QC701504

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	10.12	101	70-130	4	20
Freon 114	10.00	9.835	98	70-130	4	20
Chloromethane	10.00	10.80	108	70-130	2	24
Vinyl Chloride	10.00	8.771	88	70-130	4	24
1,3-Butadiene	10.00	9.140	91	70-130	4	22
Bromomethane	10.00	9.645	96	70-130	3	20
Chloroethane	10.00	9.275	93	70-130	10	20
Trichlorofluoromethane	10.00	10.13	101	70-130	4	21
Acrolein	10.00	8.692	87	61-130	2	36
1,1-Dichloroethene	10.00	8.883	89	70-130	4	20
Freon 113	10.00	9.936	99	70-130	3	24
Acetone	10.00	8.640	86	70-130	2	21
Carbon Disulfide	10.00	8.554	86	70-130	2	21
Methylene Chloride	10.00	8.279	83	70-130	5	24
trans-1,2-Dichloroethene	10.00	9.437	94	70-130	4	20
MTBE	10.00	10.18	102	70-130	4	20
n-Hexane	10.00	8.401	84	70-130	7	20
1,1-Dichloroethane	10.00	9.440	94	70-130	2	20
Vinyl Acetate	10.00	10.12	101	70-130	6	21
cis-1,2-Dichloroethene	10.00	8.937	89	70-130	3	20
2-Butanone	10.00	9.800	98	70-130	3	20
Ethyl Acetate	10.00	9.277	93	70-130	4	22
Tetrahydrofuran	10.00	10.32	103	70-130	1	20
Chloroform	10.00	9.392	94	70-130	4	21
1,1,1-Trichloroethane	10.00	11.08	111	70-130	2	21
Cyclohexane	10.00	11.11	111	70-130	1	20
Carbon Tetrachloride	10.00	8.577	86	70-130	1	20
Benzene	10.00	9.798	98	70-130	4	20
1,2-Dichloroethane	10.00	10.03	100	70-130	1	20
n-Heptane	10.00	9.564	96	70-130	4	20
Trichloroethene	10.00	10.57	106	70-130	2	20
1,2-Dichloropropane	10.00	10.78	108	70-130	2	20
Bromodichloromethane	10.00	10.49	105	70-130	2	20
cis-1,3-Dichloropropene	10.00	9.864	99	70-130	5	20

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201616
Units (V):	ppbv	Analyzed:	08/12/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
4-Methyl-2-Pentanone	10.00	11.76	118	70-130	4	20
Toluene	10.00	9.056	91	70-130	5	23
trans-1,3-Dichloropropene	10.00	9.782	98	70-130	1	20
1,1,2-Trichloroethane	10.00	10.22	102	70-130	6	20
Tetrachloroethene	10.00	9.415	94	70-130	6	20
2-Hexanone	10.00	10.32	103	70-130	6	20
Dibromochloromethane	10.00	9.467	95	70-130	3	20
1,2-Dibromoethane	10.00	9.847	98	70-130	5	20
Chlorobenzene	10.00	8.945	89	70-130	0	21
Ethylbenzene	10.00	8.975	90	70-130	3	20
m,p-Xylenes	20.00	18.73	94	70-130	4	20
o-Xylene	10.00	9.453	95	70-130	5	20
Styrene	10.00	9.631	96	70-130	1	22
Bromoform	10.00	7.880	79	70-130	5	20
1,1,2,2-Tetrachloroethane	10.00	9.177	92	70-130	7	24
4-Ethyltoluene	10.00	9.962	100	70-130	4	22
1,3,5-Trimethylbenzene	10.00	9.437	94	70-130	4	22
1,2,4-Trimethylbenzene	10.00	9.277	93	70-130	5	23
1,3-Dichlorobenzene	10.00	9.256	93	70-130	7	21
1,4-Dichlorobenzene	10.00	9.248	92	70-130	2	22
Benzyl chloride	10.00	8.821	88	70-130	5	21
1,2-Dichlorobenzene	10.00	9.066	91	70-130	4	22
1,2,4-Trichlorobenzene	10.00	7.197	72	70-130	7	24
Hexachlorobutadiene	10.00	8.294	83	70-130	2	25
Naphthalene	10.00	7.967	80	67-130	9	24

Surrogate	%REC	Limits
Bromofluorobenzene	97	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC701505	Diln Fac:	1.000
Matrix:	Air	Batch#:	201616
Units (V):	ppbv	Analyzed:	08/12/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	0.50	ND	1.5
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3
4-Methyl-2-Pentanone	ND	0.50	ND	2.0

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC701505	Diln Fac:	1.000
Matrix:	Air	Batch#:	201616
Units (V):	ppbv	Analyzed:	08/12/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	92	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201661
Units (V):	ppbv	Analyzed:	08/13/13
Diln Fac:	1.000		

Type: BS Lab ID: QC701683

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	11.06	111	70-130
Freon 114	10.00	10.69	107	70-130
Chloromethane	10.00	10.31	103	70-130
Vinyl Chloride	10.00	9.430	94	70-130
1,3-Butadiene	10.00	9.557	96	70-130
Bromomethane	10.00	10.46	105	70-130
Chloroethane	10.00	9.232	92	70-130
Trichlorofluoromethane	10.00	11.26	113	70-130
Acrolein	10.00	9.221	92	61-130
1,1-Dichloroethene	10.00	9.216	92	70-130
Freon 113	10.00	10.72	107	70-130
Acetone	10.00	9.172	92	70-130
Carbon Disulfide	10.00	8.771	88	70-130
Methylene Chloride	10.00	9.248	92	70-130
trans-1,2-Dichloroethene	10.00	9.621	96	70-130
MTBE	10.00	10.53	105	70-130
n-Hexane	10.00	8.962	90	70-130
1,1-Dichloroethane	10.00	9.838	98	70-130
Vinyl Acetate	10.00	10.14	101	70-130
cis-1,2-Dichloroethene	10.00	9.235	92	70-130
2-Butanone	10.00	9.801	98	70-130
Ethyl Acetate	10.00	9.514	95	70-130
Tetrahydrofuran	10.00	10.48	105	70-130
Chloroform	10.00	9.813	98	70-130
1,1,1-Trichloroethane	10.00	11.43	114	70-130
Cyclohexane	10.00	10.95	110	70-130
Carbon Tetrachloride	10.00	8.333	83	70-130
Benzene	10.00	9.750	98	70-130
1,2-Dichloroethane	10.00	9.534	95	70-130
n-Heptane	10.00	10.39	104	70-130
Trichloroethene	10.00	10.48	105	70-130
1,2-Dichloropropane	10.00	10.35	104	70-130
Bromodichloromethane	10.00	10.12	101	70-130
cis-1,3-Dichloropropene	10.00	9.620	96	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201661
Units (V):	ppbv	Analyzed:	08/13/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
4-Methyl-2-Pentanone	10.00	12.05	121	70-130
Toluene	10.00	9.815	98	70-130
trans-1,3-Dichloropropene	10.00	9.563	96	70-130
1,1,2-Trichloroethane	10.00	10.52	105	70-130
Tetrachloroethene	10.00	9.863	99	70-130
2-Hexanone	10.00	10.85	108	70-130
Dibromochloromethane	10.00	9.400	94	70-130
1,2-Dibromoethane	10.00	9.801	98	70-130
Chlorobenzene	10.00	9.501	95	70-130
Ethylbenzene	10.00	9.660	97	70-130
m,p-Xylenes	20.00	20.12	101	70-130
o-Xylene	10.00	10.42	104	70-130
Styrene	10.00	10.25	102	70-130
Bromoform	10.00	7.709	77	70-130
1,1,2,2-Tetrachloroethane	10.00	9.508	95	70-130
4-Ethyltoluene	10.00	10.68	107	70-130
1,3,5-Trimethylbenzene	10.00	10.38	104	70-130
1,2,4-Trimethylbenzene	10.00	10.55	106	70-130
1,3-Dichlorobenzene	10.00	10.17	102	70-130
1,4-Dichlorobenzene	10.00	10.09	101	70-130
Benzyl chloride	10.00	9.510	95	70-130
1,2-Dichlorobenzene	10.00	9.958	100	70-130
1,2,4-Trichlorobenzene	10.00	8.629	86	70-130
Hexachlorobutadiene	10.00	8.982	90	70-130
Naphthalene	10.00	10.25	102	67-130

Surrogate	%REC	Limits
Bromofluorobenzene	103	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201661
Units (V):	ppbv	Analyzed:	08/13/13
Diln Fac:	1.000		

Type: BSD Lab ID: QC701684

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	11.12	111	70-130	1	20
Freon 114	10.00	10.71	107	70-130	0	20
Chloromethane	10.00	8.712	87	70-130	17	24
Vinyl Chloride	10.00	8.969	90	70-130	5	24
1,3-Butadiene	10.00	9.374	94	70-130	2	22
Bromomethane	10.00	10.24	102	70-130	2	20
Chloroethane	10.00	9.179	92	70-130	1	20
Trichlorofluoromethane	10.00	11.14	111	70-130	1	21
Acrolein	10.00	8.390	84	61-130	9	36
1,1-Dichloroethene	10.00	9.337	93	70-130	1	20
Freon 113	10.00	10.70	107	70-130	0	24
Acetone	10.00	9.155	92	70-130	0	21
Carbon Disulfide	10.00	8.492	85	70-130	3	21
Methylene Chloride	10.00	8.949	89	70-130	3	24
trans-1,2-Dichloroethene	10.00	9.761	98	70-130	1	20
MTBE	10.00	10.39	104	70-130	1	20
n-Hexane	10.00	9.237	92	70-130	3	20
1,1-Dichloroethane	10.00	9.845	98	70-130	0	20
Vinyl Acetate	10.00	10.26	103	70-130	1	21
cis-1,2-Dichloroethene	10.00	9.172	92	70-130	1	20
2-Butanone	10.00	9.809	98	70-130	0	20
Ethyl Acetate	10.00	9.735	97	70-130	2	22
Tetrahydrofuran	10.00	10.19	102	70-130	3	20
Chloroform	10.00	9.741	97	70-130	1	21
1,1,1-Trichloroethane	10.00	11.20	112	70-130	2	21
Cyclohexane	10.00	10.77	108	70-130	2	20
Carbon Tetrachloride	10.00	8.160	82	70-130	2	20
Benzene	10.00	9.976	100	70-130	2	20
1,2-Dichloroethane	10.00	9.561	96	70-130	0	20
n-Heptane	10.00	10.48	105	70-130	1	20
Trichloroethene	10.00	10.40	104	70-130	1	20
1,2-Dichloropropane	10.00	10.40	104	70-130	0	20
Bromodichloromethane	10.00	10.03	100	70-130	1	20
cis-1,3-Dichloropropene	10.00	9.809	98	70-130	2	20

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	201661
Units (V):	ppbv	Analyzed:	08/13/13
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
4-Methyl-2-Pentanone	10.00	12.08	121	70-130	0	20
Toluene	10.00	9.869	99	70-130	1	23
trans-1,3-Dichloropropene	10.00	9.546	95	70-130	0	20
1,1,2-Trichloroethane	10.00	10.51	105	70-130	0	20
Tetrachloroethene	10.00	9.932	99	70-130	1	20
2-Hexanone	10.00	10.96	110	70-130	1	20
Dibromochloromethane	10.00	9.299	93	70-130	1	20
1,2-Dibromoethane	10.00	9.810	98	70-130	0	20
Chlorobenzene	10.00	9.493	95	70-130	0	21
Ethylbenzene	10.00	9.695	97	70-130	0	20
m,p-Xylenes	20.00	19.90	100	70-130	1	20
o-Xylene	10.00	10.00	100	70-130	4	20
Styrene	10.00	10.10	101	70-130	1	22
Bromoform	10.00	7.840	78	70-130	2	20
1,1,2,2-Tetrachloroethane	10.00	9.252	93	70-130	3	24
4-Ethyltoluene	10.00	10.92	109	70-130	2	22
1,3,5-Trimethylbenzene	10.00	10.46	105	70-130	1	22
1,2,4-Trimethylbenzene	10.00	10.46	105	70-130	1	23
1,3-Dichlorobenzene	10.00	10.03	100	70-130	1	21
1,4-Dichlorobenzene	10.00	10.03	100	70-130	1	22
Benzyl chloride	10.00	9.497	95	70-130	0	21
1,2-Dichlorobenzene	10.00	9.784	98	70-130	2	22
1,2,4-Trichlorobenzene	10.00	8.438	84	70-130	2	24
Hexachlorobutadiene	10.00	8.979	90	70-130	0	25
Naphthalene	10.00	9.920	99	67-130	3	24

Surrogate	%REC	Limits
Bromofluorobenzene	101	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC701685	Diln Fac:	1.000
Matrix:	Air	Batch#:	201661
Units (V):	ppbv	Analyzed:	08/13/13

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	0.50	ND	1.5
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3
4-Methyl-2-Pentanone	ND	0.50	ND	2.0

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	247755	Location:	Park Ave. Cleaners
Client:	Iris Environmental	Prep:	METHOD
Project#:	13-945A	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC701685	Diln Fac:	1.000
Matrix:	Air	Batch#:	201661
Units (V):	ppbv	Analyzed:	08/13/13

Analyte	Result (V)	RL	Result (M)	RL
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	95	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Appendix F
Updated Site Conceptual Model

Appendix E

Former Park Avenue Cleaners
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CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
Geology and Hydrogeology	Regional	The lithology encountered in the subsurface beneath the Site during drilling activities consisted predominantly of dark brown to grayish brown silty clay to within intermittent silty sand or clayey sand layers to approximately 40 feet bgs. Groundwater was encountered in two direct-push boreholes at depths of 11.5 and 20.5 feet bgs. These groundwater depths are not considered a stabilized groundwater depth, because it was not measured from appropriately constructed monitoring wells.	N/A	N/A
Geology and Hydrogeology	Site	Boring logs indicate soil types generally consisting of interbedded and unconsolidated sediments with one or more of the following soil types: silty sand, silty clay, clayey sand, sandy clay, silty sand with gravel, sandy gravel, sandy silt, clayey silt, and clay. The Site is underlain by silt and clay sediments to an approximate depth of 5-6 feet bgs, where a laterally continuous and more permeable sand/silty sand/clayey sand unit ranging in thickness between 1-3 feet thick is encountered. Unconsolidated silty clay is found below the more permeable unit. Groundwater was encountered beneath the Site at depths ranging between 11 and 36 feet and rose to depths between 9 and 30.5 feet bgs. Groundwater presumably flows south to southeasterly direction in the shallow aquifer zones, with an approximately 0.1 ft/ft vertical gradient (7240 Dublin Boulevard).	1. There are no monitoring wells on site so that the local groundwater flow direction and gradient is not known.	Groundwater wells are to be installed at the site in the future.
Surface Water Bodies	Regional	The closest surface water body is the nearby creek/flood channel, which is 400 feet south of the site.	N/A	N/A
Nearby Wells	Regional	The State Water Resource Quality Control Board (RWQCB) Geotracker GAMA website provides the locations of water supply wells proximal to the site. The nearest supply well is located approximately 4,000 feet northwest (presumed upgradient) of the	N/A	N/A

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CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		site. The nearest presumed downgradient supply well is located approximately 7,500 feet southeast. There are multiple monitoring wells in the vicinity of the site including those at the Chevron service station at 7240 Dublin Boulevard in Dublin, California.		
Release Source and Volume	Site	A suspect release appears to have occurred in the vicinity of the former dry cleaning machine in the 7104 tenant space and is considered the main source of the release of tetrachloroethene (PCE) that has been detected in soil, soil vapor and groundwater beneath the Site. The highest concentrations of PCE were detected in the soil, grab-groundwater, soil vapor and sub-slab soil vapor samples from beneath the former PCE dry cleaning unit. The volume of the release is not known. The sanitary line to the rear of the building has been investigated and does not appear to be a potential source location.	N/A	N/A
LNAPL	Site	There are no groundwater monitoring wells located at the Site. Although light non-aqueous phase liquids were not observed during grab groundwater sampling activities, PCE was either not detected in the analyzed grab-groundwater samples or at concentrations that suggest concentrations of LNAPL to be present. Given the low-level concentrations of PCE and associated breakdown products (TCE and DCE) detected in groundwater and absence of PCE in the presumed down-gradient direction, the vertical extent of contamination beneath the Site and potential for LNAPL is limited. Concentrations of PCE and other VOCs were not detected in the analyzed grab-groundwater from deeper groundwater at IE-28 from an approximate depth of 48.5 to 52 feet bgs. This boring was advanced adjacent to B4 where DCE was detected in the shallow	1. Need to install shallow monitoring wells at the site.	Monitoring wells within shallow first-encountered groundwater to be installed after investigation.

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CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		groundwater at a concentration of 220 µg/L. Given the lack of VOCs I deeper groundwater, the vertical extent of contamination beneath the Site is limited to shallow groundwater.		
Source Removal Activities	Site	There has been no source removal activities conducted at the Site. Interim soil removal is planned to occur in the vacant tenant spaces based on the soil analytical results within the building. The estimated area of PCE-impacted soils within the vadose zone in the source area measures approximately 20 feet by 40 feet in the vicinity of the former dry cleaning machine (southern-most machine). The low-level concentrations of PCE and breakdown compounds in groundwater do not suggest there is a significant source of PCE that is within groundwater. The maximum concentration of PCE in groundwater is 31 µg/L. DCE and TCE have been detected in groundwater in the samples collected from the presumed down-gradient borings. These compounds will likely continue to naturally attenuate with time. Therefore, active remediation of groundwater does not appear warranted at this time.	2. Soil impacts beneath the Site near potential source locations are well characterized.	Excavate PCE-impacted soil within the vadose soil in the vicinity of the southern-most former dry cleaning machine that used PCE to reduce the potential for vapor intrusion and the potential source material so that there is not an ongoing threat to groundwater impacts.
Contaminants of Potential Concern (COPCs)	Site	Based on the previous limited investigation conducted at the Site, PCE, TCE and DCE were detected in soil, groundwater and soil vapor. Only DCE was detected in groundwater above the MCL and/or ESL. The lateral extent of VOC impacts to groundwater above the ESL/MCL are known and appear to be limited to the site property boundaries. There are no deep impacts to groundwater associated with VOCs.	N/A	N/A
COPCs in Soil	Site	Concentrations of PCE were detected in the two of the three soil samples analyzed at concentrations of 0.011 milligrams per	N/A	Excavate vadose zone soils in the

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CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		kilogram (mg/kg) (B2 @4.5 ft) and 0.12 mg/kg (B3 @ 4.5 ft). Concentrations of TPH as Stoddard solvent (TPH-ss) and gasoline (TPH-g) were not detected in the analyzed soil samples. In addition, the low-levels of diesel (TPH-d) and kerosene (TPH-k) at 1.1 mg/kg to 2.1 mg/kg detected in soil (below the ESL of 83 mg/kg) were also not prepared using a silica gel clean-up method (SGCM). No evidence of TPH contamination was detected with the former use of the Kragen Auto Parts store or other non-dry cleaning operation uses (Basics, 2012). The lateral and vertical extent of PCE impacts in soil beneath the Site is not well understood.		vicinity of the former dry cleaning machine in the 7104 tenant space to reduce vapor concentrations in this general location and the potential ongoing threat to groundwater impacts.
COPCs in Groundwater	Site	Only two grab-groundwater samples were collected and analyzed for TPH and VOCs. PCE was not detected in the analyzed grab-groundwater samples; DCE was detected in one grab-groundwater sample (B5) at a concentration of 220 µg/L, above the MCL and ESL. Given the low-level concentrations of DCE detected in groundwater and absence of PCE in the presumed down-gradient direction, the vertical extent of contamination beneath the Site is likely limited to shallow groundwater. TPH-ss and TPH-g were not detected in the analyzed grab-groundwater samples. Only low-level concentrations of bunker oil (TPH-bo) and motor oil (TPH-mo) were detected in the two analyzed grab-groundwater samples (270 to 310 µg/L) above the ESL; however, the grab-groundwater samples analyzed for extractable TPH were not prepared using a SGCM to remove polar non-petroleum hydrocarbons. *The low-level concentrations of heavy-end TPH detected in the analyzed grab-groundwater samples*	1. There are no monitoring wells on site.	Shallow groundwater monitoring wells are planned to be installed based on the grab-groundwater information. Samples for analysis of TPH to be potentially completed upon installation of wells.

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CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		are likely not indicative of whether a petroleum release occurred because the samples were not prepared using an SGCM prior to analysis. In addition, the heavy-end TPH detected in the grab-groundwater samples may also be associated with sediment interference commonly associated with unfiltered, grab-groundwater samples collected from open boreholes and not from properly developed groundwater monitoring wells.		
COPCs in Soil Vapor	Site	Soil vapor samples were collected at 13 locations (SG1 to SG5, SV-01 to SV-08) at concentrations between of 31 µg/m^3 and 610,000 µg/m^3 (SV-02). The commercial use ESL for PCE established at 2,100 µg/m^3 was exceeded at SG3, SG4, SV-02, SV-05, SV-06 and SV-08. A preliminary risk assessment performed by Basics (2012) for the highest detected soil gas indicated a cumulative carcinogenic risk of 4.7E-05. PCE was detected in the sub-slab vapor sample (SS-02) in the vicinity of the former dry cleaner machine in the 7104 tenant space at a concentration of 24,000 µg/m^3 and above the commercial use ESL of 42 µg/m^3 (based on DTSC attenuation factor of 0.05) indicating there is a vapor intrusion concern for this portion of the building. The sub-slab vapor samples in the northern portions of the building were below the ESL indicating there is not a potential for vapor intrusion in the northern portions of the building.	2. There is potential for vapor intrusion where elevated PCE was detected in excess of the ESL in the vicinity of SS-02 and SV-02.	Excavate vadose zone soils in the vicinity of the former dry cleaning machine in the 7104 tenant space to reduce vapor concentrations in this general location.
Risk Evaluation	Site	The Site is a former Kragen Auto Parts store and dry cleaning facility. The former dry cleaning tenant space at 7102B Dublin Boulevard is currently vacant and the existing dry cleaning tenant	1. 2.	Excavate vadose zone soils in the

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CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		space at 7104 Dublin Boulevard will become vacant in the short term. The Site is covered with the existing building, asphalt or concrete. The Site is zoned for commercial use and the current plans are continued commercial use on the ground level. The CSM identifies the primary source; impacted media; release mechanism(s); secondary source(s); exposure route; potential receptors (residential, commercial/industrial worker, and construction worker), and an assessment of whether the exposure route/pathway is potentially complete, incomplete, or insignificant. Potential exposure routes that have been evaluated include incidental ingestion, dermal contact, dust inhalation, and vapor inhalation. For direct contact with contaminated soil, the exposure route for incidental ingestion, dermal contact, and dust inhalation for a commercial/industrial worker are considered incomplete. The exposure routes for the construction worker are potentially complete. Further evaluation of soil impacts do not appear warranted. For direct contact with contaminated soil, the exposure route for incidental ingestion, dermal contact, and dust inhalation for a construction worker is potentially complete. Interim excavation of vadose zone soils may eliminate this pathway. For volatilization of soil and/or groundwater to indoor air, this exposure pathway is considered complete. PCE was detected in analyzed sub-slab soil vapor samples up to 24,000 meter µg/m^3 above the theoretical calculated ESL of 42 µg/m^3 for commercial use (assuming a default attenuation factor of 0.05). Based on this preliminary information, interim excavation of soils containing PCE in the vadose zone appears warranted. For leaching of contaminants from soil to groundwater, the		vicinity of the former dry cleaning machine in the 7104 tenant space. Collect confirmation soil and sub-slab vapor samples to further evaluate whether: a. primary sources of soil in the vicinity of the former dry cleaning machine have been removed; b. the potential for vapor intrusion. c. groundwater conditions over time.

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CSM Element	CSM Sub-Element	Description	Data Gap Item #	Resolution
		ingestion and dermal pathways for groundwater are unknown. This pathway is considered incomplete. For volatilization from soil and/or groundwater to outdoor air, the exposure pathway is considered insignificant due to dilution effects that take place outdoors. This pathway is considered incomplete. Further evaluation to outdoor air does not appear warranted.		

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Table 1
Data Gaps Summary and Proposed Investigation

Item	Data Gap Item #	Proposed Action	Rationale	Analyses
1	Groundwater flow direction and gradient is unknown. There are no monitoring wells on site.	Install groundwater monitoring wells within first-encountered groundwater.	Wells are proposed to be installed based on the outcome of the recent investigation and upon ACEH concurrence. Wells will then be installed at a later date to obtain water level data, groundwater flow direction and gradient information.	Groundwater: VOCs by Method 5035.
2	There is potential for vapor intrusion in the vicinity of the former dry cleaning machine at the 7104 tenant space.	Excavate vadose zone soils that contain elevated concentrations of PCE. The elevated concentrations of PCE in soil appear to be the cause of the vapor intrusion concern beneath the building in the vicinity of the former dry cleaning unit in the 7104 tenant space. Install two sub-slab soil vapor probes to further evaluate the potential for vapor intrusion before, during and after interim excavation has been completed. Collect confirmation soil samples from the excavation sidewalls	Install two additional sub-slab soil vapor probes. One probe is planned to install in the vacant unit to the west (7106); the other in the vicinity of the southern proposed excavation limit. Monitor additional soil vapor and sub-slab data before, during and after interim excavation activities have been completed to further evaluate the potential for vapor intrusion. Collect soil sidewall and floor samples from the excavation to evaluate source remove of vadose zone soil was effective.	Soil Vapor: VOCs by TO-15 Sub-Slab: VOCs by TO-15 Soil: VOCs by EPA 8260 using 5035 preservation methods