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SHELTER BAY
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Via Email

September 8, 2013

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

Re: Interim Removal Action Plan for Former 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

Sharlene A. Hassler FMA, RPA
Property Manager

INTERIM REMOVAL ACTION PLAN

Former Park Avenue Cleaners

7100-7120 Dublin Boulevard
Dublin, California

September 9, 2013

Prepared for:

Ready Family Partnership

Prepared by:

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1.0 INTRODUCTION

On behalf of Ready Family Partnership, Iris Environmental has prepared this *Interim Removal Action Plan* (IRAP) for the former Park Avenue Cleaners facility located at 7104 Dublin Boulevard in Dublin, California (the Site). The Site is currently enrolled in a voluntary cleanup program with Alameda County Environmental (ACEH) oversight. This IRAP is being submitted based on information presented in our *Subsurface Investigation Report* (Report), dated September 6, 2013, and discussion outcome with our meeting with ACEH on August 29, 2013. This IRAP is focused on the removal of volatile organic compounds (VOCs) in vadose zone (shallow) soil potentially associated with the former dry cleaning machine used at the Site. The proposed interim remedial action is to remove identified sources of soils containing elevated VOCs in vadose soils that pose a vapor intrusion concern beneath the building in the vicinity of the former dry cleaning machine within the 7104 tenant space that used tetrachloroethene (PCE).

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 shopping complex is referred to as the "Dublin Crossroads" (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 former dry cleaner unit at 7102B Dublin Boulevard utilized PCE, a VOC, in the former dry cleaning machine. In 2004, Park Avenue Cleaners relocated to the adjacent retail space at 7104 Dublin Boulevard.

Two dry cleaning machines were located within the central portion of suite; one of which (the southernmost) is the former PCE dry cleaning machine from the adjacent unit at 7102B Dublin Boulevard relocated to the 7104 tenant space. The northernmost former dry cleaning machine was a petroleum-based system purchased circa 2005/2006. 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.

In October 2012, Basics Environmental performed a limited subsurface investigation for the Dublin Crossroads shopping center that 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. The approximate locations are presented in Figure 2. Concentrations of PCE were detected in the two of the three analyzed soil samples at concentrations of 0.011 milligrams per kilogram (mg/kg) (B2 @4.5 ft) and 0.12 mg/kg (B3 @ 4.5 ft). The highest concentration of PCE in the analyzed soil vapor samples was detected to the west of the former dry cleaning machine (SG3) at a concentration of 54,000 micrograms per cubic meter ($\mu g/m^3$) above the commercial land use the Environmental Screening Level (ESL) promulgated by the San Francisco Bay Regional Water Quality Control Board (SFRWQCB).

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. In July and August 2013, Iris Environmental advanced 29 borings at the locations presented in Figure 2 to collect soil, grab-groundwater, and soil vapor and sub-slab soil vapor samples beneath the Site. Maximum concentrations of PCE in soil, groundwater, soil vapor and sub-slab soil vapor were detected in the vicinity of the former dry cleaning machine at the 7104 tenant space. Historical analytical data is presented in Appendix A. Details are presented in the Report, which concluded the following:

- A suspected release of PCE to the subsurface has occurred in the vicinity of the former PCE dry cleaning machine 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.
- Groundwater impacts 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, trichloroethene (TCE) and cis-1,2-dichloroethene (DCE) detected in groundwater were 31 µg/L, 0.6 µg/L and 1.4 µg/L, respectively, indicating that a release of PCE has not significantly impacted shallow or deeper groundwater and that natural attenuation of PCE in groundwater is likely occurring.
- Concentrations of PCE were detected in the analyzed 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.
- Elevated concentrations of PCE were also detected in the outside soil vapor sample locations adjacent to the sanitary sewer line in the alleyway. Although there are 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 lateral migration of soil vapors along the backfill material of the sanitary sewer line.
- 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.

1.2 Recommendations

Based on the above conclusions, Iris Environmental recommends 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 remove presumed source soils beneath the Site. Removal of the source material beneath the Site likely will greatly diminish the potential for vapor intrusion into the building to levels that do not pose an excessive human health inhalation risk.

On August 29, 2013, personnel from Iris Environmental, Shelter Bay Retail Group and ACEH met to discuss the analytical data presented in the Report. ACEH concurred with the recommendation to perform interim remedial action in an effort to remove source soils and reduce the potential for vapor intrusion to building occupants.

1.3 Objectives of the IRAP

The objectives of this IRAP are as follows:

- Establish appropriate remedial action objectives (RAOs);
- Remove source vadose zone soils in the vicinity of the former dry cleaning machine to the extent possible;
- Perform confirmation soil sampling to evaluate whether source soils have been removed to the established RAO;
- Perform sub-slab soil vapor sampling before, during and after excavation activities have been completed to evaluate whether excavation of vadose zone soils have effectively reduced or eliminated the potential vapor intrusion concern to below the established RAO.

1.4 Scope of Work

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

- Develop RAOs for this interim removal action activity;
- Conducted pre-field activities that includes obtaining an excavation permit from the City of Dublin, providing notification to applicable tenants, property owners and the Bay Area Air Quality Management District (BAAQMD) of the upcoming excavation activities and clearing the excavation limit locations of potential underground utilities;
- Install two (2) additional long-term sub-slab vapor probes (SS-04 and SS-05) within the base rock material just beneath the concrete slab to evaluate sub-slab vapor conditions before, during and after excavation activities are completed;
- Excavate VOC-impacted soils from an approximate 20-foot by 40-foot surface area and to a maximum depth of 10 feet;
- Collect confirmation soil samples from the floor and sidewalls of the proposed excavation to document that vadose zone source soils were removed to the RAO;
- Expose the sanitary sewer line towards the rear of the building to install controlled density fill (CDF) material in an effort to prevent soil vapor from migrating back into the building after excavation has been completed;
- Install horizontal piping beneath the concrete slab (after excavation has been completed) that could be used as a potential vapor mitigation system, if needed;
- Remove and transport soil/wastes to appropriate disposal facilities;
- Collect additional sub-slab soil vapor and soil vapor samples for chemical analysis after excavation to evaluate the effectiveness of the proposed interim remedial action and the potential for vapor intrusion to existing and future building occupants; and,
- Document the results of the excavation and sampling activities in an *Interim Removal Action Report* (IRAR).

2.0 REMEDIAL ACTION OBJECTIVES (RAOs)

This interim action is performance-based and focuses on removal of VOC-impacted vadose zone soil. The primary chemical of potential concern (COPC) pertaining to this interim remedial action is PCE in soil, soil vapor, and sub-slab soil vapor. Groundwater RAOs are not proposed at this time. Based on this information, the RAOs for this interim remedial action are as follows:

2.1 Soil

The RAO for soil for this interim remediation is proposed to be the residential use direct contact ESL established at 0.55 mg/kg for PCE (Cal/EPA 2013). The selected RAO is more conservative than the groundwater protection ESL established at 0.7 mg/kg for PCE.

Iris Environmental proposes to excavate and remove impacted soil in the vicinity of the former dry cleaning machine. To evaluate that the RAO has been achieved, confirmation soil samples are proposed to be collected from the excavation sidewalls and floor as later discussed in Section 4.4. Several borings have been advanced in proximity to the proposed excavation and analyzed soil samples have confirmed that the RAOs have been achieved in proximity to the proposed excavation limits. With the exception of the 2-foot and 5-foot samples at IE-29, the soil samples collected and analyzed from the surrounding borings are below the soil RAO established at 0.55 mg/kg. The proposed estimated lateral extent for this interim remedial action is approximately 20-feet by 40-feet; the approximate lateral extent of the excavation is presented in Figure 3.

Soil samples collected at 10 feet bgs at IE-19 and IE-29 (within the lateral excavation limits) are below the soil RAO established at 0.55 mg/kg. Therefore, the vertical extent of the excavation will extend to a depth of approximately 10 feet bgs.

2.2 Sub-Slab Soil Vapor

To evaluate the potential for vapor intrusion beneath the Site, Iris Environmental proposes to use the theoretical calculated commercial land use ESL of 42 $\mu g/m^3$ (assuming a default attenuation factor of 0.05 as recommended by DTSC). The RAO is calculated by multiplying the commercial indoor air ESL for PCE established at 2.1$\mu g/m^3$ by a factor of 20. The sub-slab vapor data is then compared to the theoretical calculated sub-slab ESL to evaluate whether vapor intrusion is occurring beneath the building.

2.3 Soil Vapor

To further evaluate whether interim soil excavation removed the source causing the potential for vapor intrusion beneath the Site, Iris Environmental proposes to use the commercial land use ESL of 2,100 $\mu g/m^3$ for PCE. The existing long-term soil vapor probes installed at depth (5-6 feet bgs) should be monitored over time to evaluate whether the vapor plume beneath the Site vapor intrusion is diminishing on its own or if further remedial action or risk assessment modeling is warranted.

3.0 PREFIELD ACTIVITIES

Site access agreements will be secured with the property owners prior to fieldwork.

Iris Environmental will update its' Site-Specific Health and Safety Plan (HASP) 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 will be kept onsite during field activities. The HASP will detail the work to be performed, safety precautions, emergency response procedures, nearest hospital information, and onsite personnel responsible for managing emergency situations. Subcontractors will be responsible for the health and safety of their own workers and will develop their own HASP as described above.

Prior to conducting work, Iris Environmental will submit required excavation plans and obtain an excavation permit from the City of Dublin (City) for approval. We will not begin work until the permit has been received from the City.

Iris Environmental will mark the proposed excavation limits in white paint and contact Underground Service Alert (USA) at least 48 hours prior to drilling, as required by law.

In advance of excavation work, Iris Environmental will prepare a Fact Sheet summarizing the interim action presented in this IRAP for ACEH approval. Once approved by ACEH, Iris Environmental will distribute the Fact Sheet by hand to adjacent tenants of the Site. In addition, we will mail the Fact Sheet to adjacent property owners to inform them of our upcoming activities.

Iris Environmental will notify the BAAQMD of excavation activities at least five days prior to implementation in accordance with Regulation 8, Rule 40.

4.0 EXCAVATION ACTIVITIES

The associated excavation activities proposed in the sections below are to be completed during normal business hours (8:00 AM to 5:00 PM) Monday to Friday.

4.1 Overview

Interim remedial action will include the excavation of shallow VOC-impacted soil to reduce the threat to human health and the environment beneath the Site in an attempt to provide a permanent solution that reduces the toxicity, mobility and volume of contaminated media. The interim remedial action will target areas beneath the building structure where PCE concentrations in vadose soil exceed proposed RAOs.

4.2 Excavation Limits

The subsurface impacts of the suspected release to subsurface soil appear to be limited in both lateral and vertical extent. The estimated area of PCE-impacted soils above or near the established RAO measures approximately 20- by 40-feet extending to a depth of about 10 feet. The proposed excavation limits are presented in Figure 3. Appendix B presents detailed excavation plans. Excavation may be constrained in some areas by the building foundation, footings, utilities, or roofing supports.

4.3 Excavation Methodologies

The northern exterior glass wall of the building of the 7104 tenant space will be removed to provide access to the excavation area. Access to the 7102 tenant space will be provided through existing roll-up doors.

The concrete floor slab overlying the proposed excavation will be saw-cut and removed and construction debris transported off-site for disposal or recycling. Excavation of PCE-impacted soil will be performed by a California-licensed hazardous waste contractor. A backhoe or excavator will be used to excavate accessible soil to an approximate depth of 10 feet bgs.

Excavation plans (Appendix B) have been submitted to the City and are currently pending approval. The excavation activities are planned to be completed in a four-fold, phased manner: (1) slot cutting along the shear wall that separates the 7102 and 7104 tenant spaces; (2) general excavation on the distal ends of the excavation limits at a safe distance from the shear wall; (3) shallow trenching to native soil (within the sub-slab engineered fill) to install horizontal piping (see Section 4.6); and, (4) exposure of the sanitary sewer line to install controlled density fill (CDF) or flowable fill surrounding the sewer pipe in an effort to prevent potential soil vapor migration along the annulus of the sanitary sewer line back into the building.

4.3.1 Slot Cutting Excavation Area

A shear wall separates the 7102 and 7104 tenant spaces. To maintain the integrity of the shear wall, Iris Environmental proposes to surgically remove PCE-impacted soils on each side of the wall, and below the wall, in a series of slot trenches that vary in width between 5 and 8 feet in length. The footing and slab directly beneath the shear wall is proposed to be left in place. As shown in Appendix B, the slot trenches will be sequentially excavated to approximately 10 feet bgs; trench jacks will be used to stabilize the excavation sidewalls, as needed, in accordance with OSHA requirements (29 CFR, 1926 Subpart P App B).

Upon completion and after collection of adequate confirmation soil samples (Section 4.4), the slot trench will be backfilled (Section 4.5.1) with concrete slurry to approximately one foot below grade. Once completed, this process will be completed for the other side of the wall.

4.3.2 General Excavation Area

Once slot-cutting has been completed, Iris Environmental proposes to remove the remainder of the elevated VOC-containing soils within the excavation limits (Appendix B) using a backhoe. If needed, the proposed excavation will be shored to stabilize the excavation sidewalls in accordance with OSHA requirements (29 CFR, 1926 Subpart P App B). Temporary fencing will be placed around the excavation at the end of each day.

4.3.3 Concrete Slab Trenching to Install Horizontal Piping

As later discussed in Section 4.6, horizontal piping constructed of Schedule 40 PVC is planned to be installed within the sub-slab material for use as a potential vapor mitigation system in the event that sub-slab vapor conditions in the vicinity of the excavation limits do not meet the RAO. To complete this effort, approximate 2-foot wide shallow trenches extending to the top of native soil are planned to be completed using a backhoe as shown in Appendix B.

4.3.4 Sanitary Sewer Line Exposure to Install Flowable Fill

Prior to excavation of the above, the sanitary sewer at the rear of the building with the 7104 tenant space will be exposed using a backhoe or by hand digging. Once the sewer line at the T-junction (just north of the bathrooms) has been exposed, CDF or flowable fill will be installed within the annulus material and around the existing sewer line in an effort to prevent future potential migration of VOC vapors from entering the newly completed excavation. The location of the sewer line that is planned to be exposed for installing CDF is presented in Appendix B. The anticipated depth of the sewer line in this location is 3-4 feet below the existing grade.

4.4 Confirmation Soil Sampling

Excavated soils will be field screened for VOCs utilizing a photoionization detector (PID) to assist in the evaluation of the limits of the excavation. Soil samples from the excavation sidewalls within the main excavation will be collected at a spacing of one sample per 20 lineal feet. The sidewall samples will be collected at depths approximately halfway between the surface and base of the excavation. Soil samples will be collected from the base of the excavation at a minimum of every 400 square feet; Iris Environmental notes that two 10-foot samples (IE-19 and IE-29) have already been collected near the center of the proposed excavation limit. If additional floor samples are collected from a depth of 10 feet bgs, then the floor samples will be collected to the east of IE-19 and west of IE-29, respectively.

Soil samples will be collected from the excavation floor and sidewalls using a backhoe; personnel shall not enter the excavation. Soil samples for analysis of VOCs will be collected from undisturbed soil within the backhoe using a multi-functional sampling device (i.e., EnCore™ Sampler or equivalent) in accordance with EPA Method 5035. The soil samples will be submitted to a state-certified laboratory under chain-of-custody procedures for analysis for VOCs using U.S. EPA Method 8260B. Upon collection, the soil samples will be labeled with identifying information, and stored in a pre-chilled ice-chest awaiting transportation to the laboratory. Selected soil samples for chemical analysis will be recorded onto a chain-of-custody document that will accompany the samples to the specified analytical laboratory. Soil samples are proposed to be analyzed on a RUSH 24-hour turn-around time.

The results of the analytical soil confirmation testing will aide in the determination if over-excavation is required to adequately remove residual VOC-impacted soils above the RAO. Upon receipt of the analytical data, Iris Environmental will verbally report the data to ACEH prior to backfilling the excavation. If the concentrations of PCE in the confirmation samples exceed the RAO for this interim excavation, then subsequent over-excavation may be conducted. We will confer with ACEH the extent to which over-excavation is required based on the analytical results.

4.5 Excavation Backfilling and Material

Excavation backfilling is not proposed to commence until the analytical data for the confirmation soil samples have been evaluated. If the concentrations of PCE in the confirmation soil samples are below the proposed RAO, then Iris Environmental will instruct the environmental contractor to backfill the excavation as described in the sections below.

4.5.1 Slot Cutting Excavation Area

Upon completion of excavation within each sequenced slot trenched area, the excavation will be filled with slurry concrete (2-sack mix) from the base of the excavation to approximately one foot below the existing grade. Once the concrete slurry has cured and backfilling at other locations described below has been completed, horizontal piping will be laid within engineered gravel baserock material to approximately five inches below the existing grade. After backfilling (and installation of horizontal piping), excavated areas will be resurfaced with concrete to match the surrounding surface to the extent practical.

4.5.2 General Excavation Area

Backfill material within the general excavation area is planned to comprise clean imported fill soil consisting of sand, silt, clay and/or gravel suitable for compaction. Documentation will be provided to ensure that the clean backfill material within the general excavation does not contain hazardous substances, either by (a) providing appropriate documentation and/or analytical results from the company supplying the backfill material; or (2) by the collection and analysis of soil samples from the backfill material for an appropriate list of parameters in accordance with California EPA Department of Toxic Substances Control's *Information Advisory for Clean Imported Fill Material* (DTSC 2001). The excavation will be backfilled to approximately one foot below existing grade with imported material placed in horizontal layers of 12 inches or less, condition to near-optimum moisture content and compacted to achieve at least 90% relative compaction.

Once the clean backfill material has been placed and completed, horizontal piping will be laid within engineered gravel base rock material to approximately five inches below grade and excavated areas will be resurfaced with concrete as previously described.

4.5.3 Concrete Slab Trenching to Install Horizontal Piping

Once the horizontal piping has been installed, washed pea gravel is proposed to be placed within the shallow trench to an approximate depth of five inches below grade to minimize sediment from entering the perforations of the slotted horizontal piping (Section 4.6). Upon completion of laying the pea gravel, the excavated area will be resurfaced with concrete as previously described.

4.5.4 Sanitary Sewer Line Exposure to Install CDF

Upon completion of adding CDF to the annulus of the sanitary sewer line near the existing restroom in the 7104 tenant space, either concrete slurry (Section 4.5.1) or clean fill (Section 4.5.2) will be placed within the small excavation and the excavated area will be resurfaced with concrete as previously described.

4.6 Installation of Horizontal Piping

In the event that vadose zone source removal of PCE-impacted soils does not effectively reduce the potential for vapor intrusion beneath the building, Iris Environmental proposes to install a series of horizontal screened (slotted) and blank (solid) PVC piping beneath the existing slab. The horizontal piping could serve as potential infrastructure for either active or passive vapor mitigation measures if sub-slab vapor conditions in the vicinity of the former dry cleaning machine in the 7104 tenant space pose a vapor intrusion concern after excavation has been completed (i.e. if the sub-slab RAO of 42 $\mu g/m^3$ for PCE is exceeded).

Design plans of the horizontal piping that could be used at a later date for potential vapor mitigation are presented in Appendix B. No vapor mitigation other than vadose soil source removal is proposed at this time.

The horizontal piping is proposed to be constructed using Schedule-40 PVC casing, with approximate 0.125 inch factory-cut slots that will be flush-threaded to Schedule 40 PVC blank casing that will run within a common shallow trench extending to beyond the rear of the building. The blank casings are proposed to be capped below grade for connection to a potential vapor mitigation system in the possible future. The terminal ends of the horizontal screened sections of piping will also be fitted with PVC end caps. CDF or flowable fill is planned to be installed at the connections where the blank and screened piping meet and cross the excavation limits in an effort to maximize potential vapor mitigation system effectiveness.

4.7 Waste Disposal Soil Sampling

Iris Environmental estimates up to 300 cubic yards (~450 tons) of soils containing VOCs may be excavated. Actual yardage/tonnage will depend on results of confirmation soil sampling. The excavated soils generated during the excavation will be placed into temporary roll-off bins that will sealed and labeled with the appropriate generator information and later transported to an appropriate facility under manifest for proper disposal, as required.

An appropriate disposal facility licensed to accept the soil generated during the interim remedial action will be selected based on waste characteristics (i.e., chemical concentrations). The waste characteristics of the excavated soil will be determined using existing soil analytical data collected from within the targeted excavation area as well as supplemental analytical data from additional samples as required by the disposal facility during the waste profiling process. Once the waste profile has been approved, the excavated soil will be transported to an appropriate disposal facility (Section 5.1). Based on soil analytical data collected during prior investigations, it is anticipated that the majority of soil generated during the interim remedial actions can be managed as non-hazardous waste and are appropriate for disposal at a Class II disposal facility.

If required by the disposal facility, Iris Environmental will collect representative composite soil samples from roll-off bins to assist in the chemical waste profiling to obtain acceptance to the appropriate waste management facility. If required, the composite soil samples are proposed to be collected and analyzed for appropriate landfill acceptance as follows:

- VOCs by EPA Method 8260B
- Total petroleum hydrocarbons (TPH) quantified in the gasoline (TPH-g), diesel (TPH-d) or motor oil (TPH-m) ranges by 8260/8015M EPA Methods. Soil samples for analysis of extractable TPH-d and TPH-m will be prepared using a silica gel cleanup method (SGC) prior to analysis.
- California Assessment Manual (CAM) 17 Metals by 6000/7000 Series EPA Methods.
- California Waste Extraction Test (WET) Metal and VOC individual analytes, if needed.

- Toxicity Characteristic Leaching Procedure (TCLP) Metal and VOC individual analytes, if needed.

If composite soil sampling and analysis of the roll-off bins are required, the soil samples will be analyzed on a RUSH (24-hour) turn-around time to minimize the time that bins are staged on-Site. Upon receipt of the analytical results, the generated wastes will be profiled for acceptance and transported as outlined in Section 5.0.

4.7 Control Measures during Excavation

The following control measures will be implemented during excavation activities to mitigate potential vapor and dust generation:

- Mist or spray water on soils during excavation activities to prohibit and/or minimize dust generation.
- Mist or spray water on soil immediately prior to or while loading transportation vehicles, if applicable.
- Place excavated soil directly into temporary roll-off storage bins that will be secured with covers.
- Avoid over-application of water and dust suppressants, which could result in excessive runoff or infiltration.
- Minimize drop heights while loading transportation vehicles, if applicable.
- Use tarpaulins or other effective covers for trucks carrying soils that travel on streets, if applicable.
- Air monitoring for total VOCs using a PID to verify that ambient concentrations of volatile chemicals are below short-term exposure limits set by NIOSH or Cal/OSHA, or other appropriate health-based thresholds.

4.8 Sub-Slab Vapor Monitoring Before, During and After Excavation

Based on information provided to Iris Environmental, subsurface utilities beneath the building are limited within southern portions of the building. We understand that the sanitary sewer lines for the building are located in the rear of the building and do not extend to the northern portions of the building. We also understand that underground gas, electric, water and communication lines service the rear of the buildings. Based on this information, the likelihood for vapor transport along utility lines beneath the existing slab is not expected. Nonetheless, Environmental proposes to monitor the sub-slab vapor conditions before, during and after the proposed excavation activities have been completed to evaluate the potential for vapor intrusion to existing and future occupants as was discussed in our August 29, 2013 meeting with ACEH.

To complete this objective, Iris Environmental proposes to install a long-term sub-slab soil vapor probe (SS-04) within the existing sub-slab material in the 7106 vacant tenant space to the west of the planned excavation. In addition, excavation activities will destroy one of the existing long-term sub-slab probes (SS-02) and one soil vapor well (SV-02). Therefore, we propose to install an additional sub-slab soil vapor probe (SS-05) to the north of the proposed excavation limit to evaluate the potential for vapor intrusion and effectiveness of interim removal action. The approximate locations of SS-04 and SS-05 are presented in Figure 3.

4.8.1 Sub-Slab Probe Installation

The sub-slab probes are proposed to be constructed of 3-inch stainless-steel implant probes installed just below the concrete slab approximately 3-4 inches within the existing sub-slab material. The proposed probes to be used 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 proposed to be embedded within the sub-base material beneath the tube and connected with Swagelok fittings to provide an adequate seal. A 12-inch long stainless-steel tube will be cut to account for actual slab thickness at each location. Once cut, the top of the tube will be connected to a Swagelok connector (SS-400-7-4) that will be flush-mounted with a 2-inch diameter recessed core. The annulus of the 1-inch core will be filled with neat cement grout to the top of the rubber plug to provide a seal. Once the grout is cured, the top fitting will be secured with a threaded “tamper-resistant” top that is sealed flush with the interior surface.

4.8.2 Soil Gas and Sub-Slab Probe Sampling Methodology

Soil gas samples will be collected from the sub-slab and existing 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. Newly installed soil vapor probes will be allowed to stabilize for a minimum of two hours prior to purging and sample collection.

4.8.3 Soil Gas and Sub-Slab Probe Sampling Frequency

The following table summarizes the monitoring plan and turn-around times (TAT) to evaluate the potential for vapor intrusion before, during and after excavation activities have been completed:

Sample ID	Type	Before	During	After	TAT
SS-01	Sub-slab			x	48-hour
SS-03	Sub-slab			x	48-hour
SS-04	Sub-slab	x	x	x	48-hour
SS-05	Sub-slab	x	x	x	48-hour
SV-01	Soil vapor			x	48-hour
SV-02	Soil vapor			x	48-hour
SV-03	Soil vapor			x	48-hour
SV-04	Soil vapor			x	48-hour
SV-05	Soil vapor			x	48-hour
SV-06	Soil vapor			x	48-hour
SV-07	Soil vapor			x	48-hour
SV-08	Soil vapor			x	48-hour

Upon collection, the sub-slab and soil gas samples will be recorded on a chain-of-custody document that will accompany the samples from the point of collection to the analytical laboratory. The collected samples are proposed to be analyzed for analysis of VOCs by EPA Method TO-15.

The information collected from these samples will assist in the evaluation as to whether the interim source removal activities were effective in removing the potential vapor intrusion risk to future and existing building occupants and if the vapor plume at depth diminishes on its own.

4.9 Field Variances

Variances from the IRAP will be discussed with ACEH prior to action being taken except for emergencies (when an immediate response is required). The ACEH will be notified if an emergency response is implemented. The field variances will be documented in the IRAR prepared for the project.

5.0 TRANSPORTATION PLAN

The following sections describe the transportation plan for the interim removal action including the potential disposal facilities, the transportation type, transportation routes, site traffic control, and associated record keeping. The excavated soil will be transported via trucks by appropriately licensed waste haulers to the designated disposal facility. Transportation activities are proposed to be performed in compliance with state and federal regulations.

5.1 Potential Disposal Facilities

Based on the analytical data, generated soils are likely to be non-hazardous. Soils classified as non-hazardous waste will be transported to one of the following Class II disposal facilities located at the following address:

Republic Waste's Services Vasco Road Landfill
EPA ID Number CAD 982 407 645
4001 North Vasco Road
Livermore, California 94551
(925) 447-0491

Waste Management's Altamont Landfill
EPA ID Number CAD 981 382 732
10840 Altamont Pass Road
Livermore, California 94551
(925) 455-7301

At this time, Iris Environmental does not anticipate the generation of hazardous wastes. In the event that hazardous soils are generated soils and require disposal to an alternate disposal facility, we will notify ACEH of the facility that will accept hazardous waste.

5.2 Transportation to Disposal Facilities

Approximately 450 tons of soil is anticipated to be removed for this removal action. Assuming each truck/bin carries 15 tons, up to 30 bins/trucks may be needed to transport the impacted soil. The permitted disposal facilities operate a certified weight station at their facility. As such, each truck/bin will be weighed before off-loading its payload. Weight tickets or bills of lading will be provided to the removal action subcontractor after the soil has been shipped off-site.

Before leaving the Site, each truck driver will be instructed to notify the Site manager. Each truck driver will be provided with a Uniform Hazardous Waste Manifest, Non-Hazardous Waste Manifest, or bill-of-lading and the cellular phone number for the Site manager. Each truck driver will be instructed to use the freeway Call Box System (if available), a cellular telephone, and/or their radio dispatch system to call for roadside assistance and report roadside emergencies.

Trucking routes for each of the above disposal facilities are illustrated and presented in Appendix C. Below is a summary of the truck route from the site to the disposal facilities listed above:

5.2.1 Republic Waste's Services Vasco Road Landfill

Trucks will depart the Site and turn left onto Village Parkway and make the first right onto Dublin Boulevard. Trucks will then turn right onto Dougherty Road and merge onto Interstate 580 East towards Stockton, California. Trucks will then proceed on Interstate 580 East until exiting at Exit 55 for Vasco Road towards Brentwood. Keep left at the fork, follow signs and merge onto North Vasco Road until arrival of the disposal facility.

5.2.2 Waste Management's Altamont Landfill

Trucks will depart the Site and turn left onto Village Parkway and make the first right onto Dublin Boulevard. Trucks will then turn right onto Dougherty Road and merge onto Interstate 580 East towards Stockton, California. Trucks will then proceed on Interstate 580 East until exiting at Exit 55 for Vasco Road towards Brentwood. Keep left at the fork, follow signs and merge onto North Vasco Road. Turn right onto Northfront Road and then continue onto Altamont Pass Road until arrival of the disposal facility.

5.3 Site Traffic Control

During soil transport activities, trucks will pick up the roll-off bins that will be staged onsite (in the eastern portions of the parking lot) and enter the Site from the south along Village Parkway. A flag person will be located at the Site to assist the truck drivers to safely drive onto the Site. Transportation will be coordinated in such a manner that on-site trucks will be in communication with the Site trucking coordinator. In addition, vehicles will be required to maintain slow speeds (i.e., less than 5 mph) for safety and for dust control purposes.

Prior to exiting the Site, the vehicle will be swept (as needed) to remove extra soil from areas not covered or protected. This cleanup/decontamination area will be set up as close to the loading area as possible so as to minimize the potential for spreading impacted soil. Prior to offsite transport, the Site manager will be responsible for inspecting each truck/roll-off bin to ensure that the payloads are adequately covered, the trucks are cleaned of excess soil and properly placarded, and that the truck's manifest has been completed and signed by the generator (or its agent) and the transporter. As the trucks leave the Site, the flag person will assist the truck drivers so that they can safely merge with traffic on Village Parkway.

5.4 Record Keeping

The removal action contractor will be responsible for maintaining a field logbook, which will serve to document observations, personnel on site, equipment arrival and departure times, and other important project information. Logbook entries will be complete and accurate enough to permit reconstruction of field activities. Logbooks will be bound, with consecutively numbered pages and each page will indicate the date and time of the entry. Entries will be legible, written in black or blue ink, and signed by the author. Language will be factual and objective. If an error is made, corrections will be made by crossing a line through the error and entering the correct information. Corrections will be dated and initialed. Soil that is profiled as non-hazardous and sent off site for disposal will be documented using a Non-Hazardous Waste Manifest or Bill-of-Lading form. At a minimum, this form will include the following information:

- Generator name and address
- Transportation company
- Accepting facility name and address
- Waste shipping name and description
- Quantity shipped

Prior to transporting the excavated soil offsite, each waste manifest will be signed by the generator or an agent on behalf of the generator. The removal action site manager will maintain one copy of waste manifests on-Site.

6.0 REPORTING

Following receipt and verification of analytical data, Iris Environmental will prepare an Interim Remedial Action Report (IRAR) documenting the methods, activities and analytical results. The IRAR will include a description of the Site, summary of remediation activities, figures depicting the excavation limits and confirmation sample location(s), copies of soil waste manifests, data tables, certified laboratory analytical reports, findings, conclusions, and recommendations. The IRAR will provide comprehensive documentation that the remedial excavation work was performed in accordance with applicable regulations and standard industry practices. Upon completion, we will submit the upload the IRAR to ACEH ftp website and the State of California GeoTracker website, as required.

7.0 SCHEDULE

Iris Environmental will initiate the proposed interim remedial actions upon approval of this IRAP, which we would like to begin in late September upon approval of the excavation permit from the City. Due to the time sensitive nature to complete this work, we respectfully request expeditious review and approval of this IRAP.

We anticipate that it will take approximately two to three weeks to complete the excavation activities and an additional one to two weeks to prepare the IRAR. It is estimated that the proposed interim excavation activities will be effective in reducing PCE concentrations to targeted cleanup levels complete these activities; this tentative schedule will be largely determined by obtaining the necessary permits, availability of contractors and receipt of qualified laboratory data.

8.0 LIMITATIONS

This IRAP is based upon current Site conditions observed by Iris Environmental and current laws, policies, and regulations as of the date of this IRAP. Iris Environmental will not distribute or publish this IRAP 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 IRAP prepared by:

Craig Pelletier, P.G.
Senior Manager

This IRAP reviewed by:

Christopher Alger, PG, CEG, ChG
Principal

September 9, 2013

Iris Project No. 13-945B

10.0 REFERENCES

Basics Environmental. 2012. *Limited Phase II Environmental Site Sampling Report,* 7100-7120 Dublin Boulevard, Dublin, California. November 9.

California Department of Public Health (CDPH). 2013. *MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants*. January 30.

Cal/EPA. 2013. *May 2013 Update to Environmental Screening Levels*. California Regional Water Quality Control Board (RWQCB). San Francisco Bay Region. May 23.

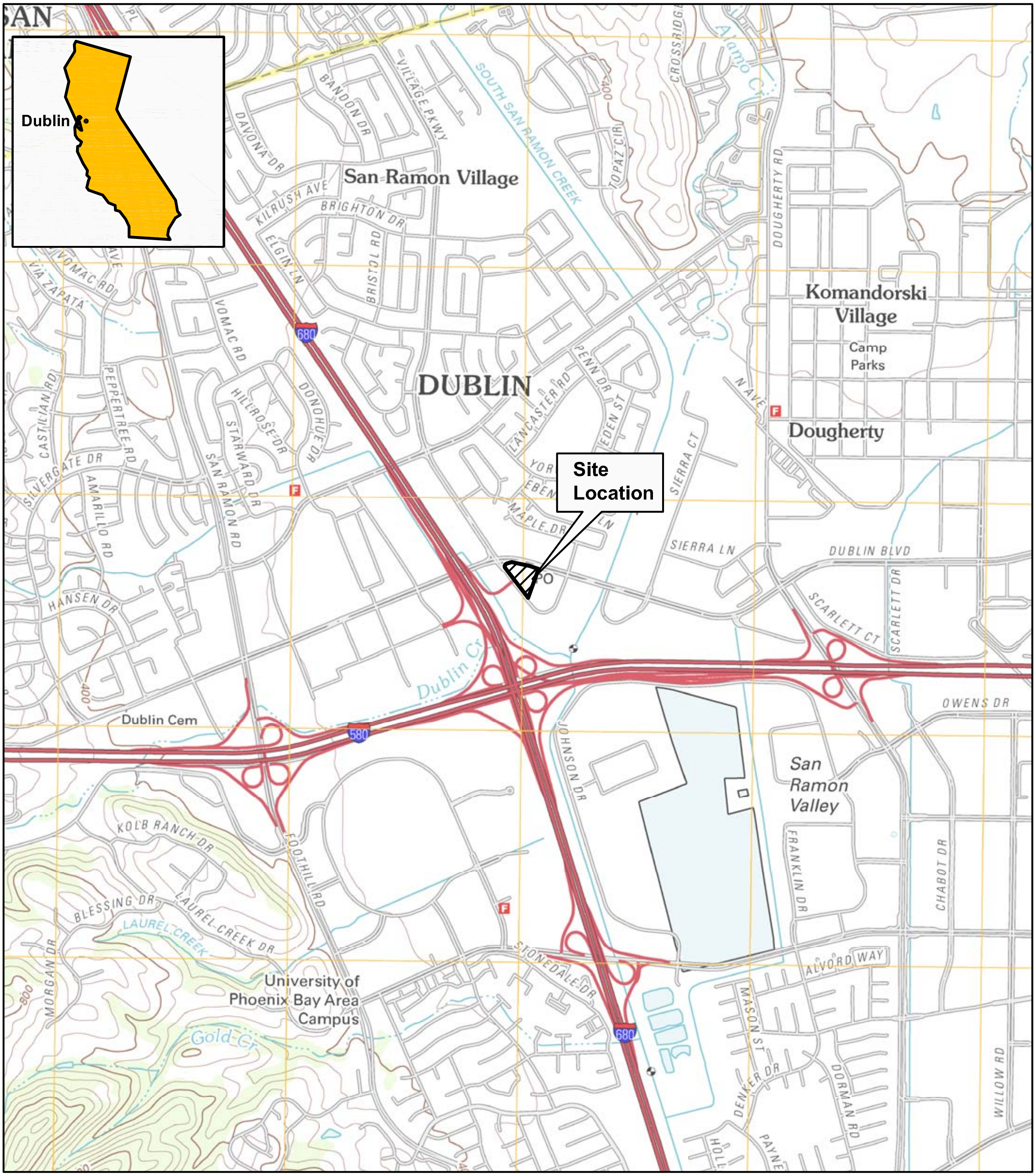
DTSC. 2001. *Information Advisory for Clean Imported Fill Material*. October.

DTSC. 2011. *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*. October.

DTSC. 2011. *Advisory – Active Soil Gas Investigations.* April.

Iris Environmental. 2013. *Subsurface Investigation Report for Former Park Avenue Cleaners at 7100-7120 Dublin Boulevard, Dublin, Alameda County, California*. *ACEH Case No. RO3113*. September 6.

Figures



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

N

0 2000
SCALE IN FEET

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: 09/09/13 | Contract Number: 13-945B

I:\CAD\13\13-945-B\site location.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

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

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SCALE IN FEET (APPROXIMATE)

IRIS ENVIRONMENTAL
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Oakland, California 94612
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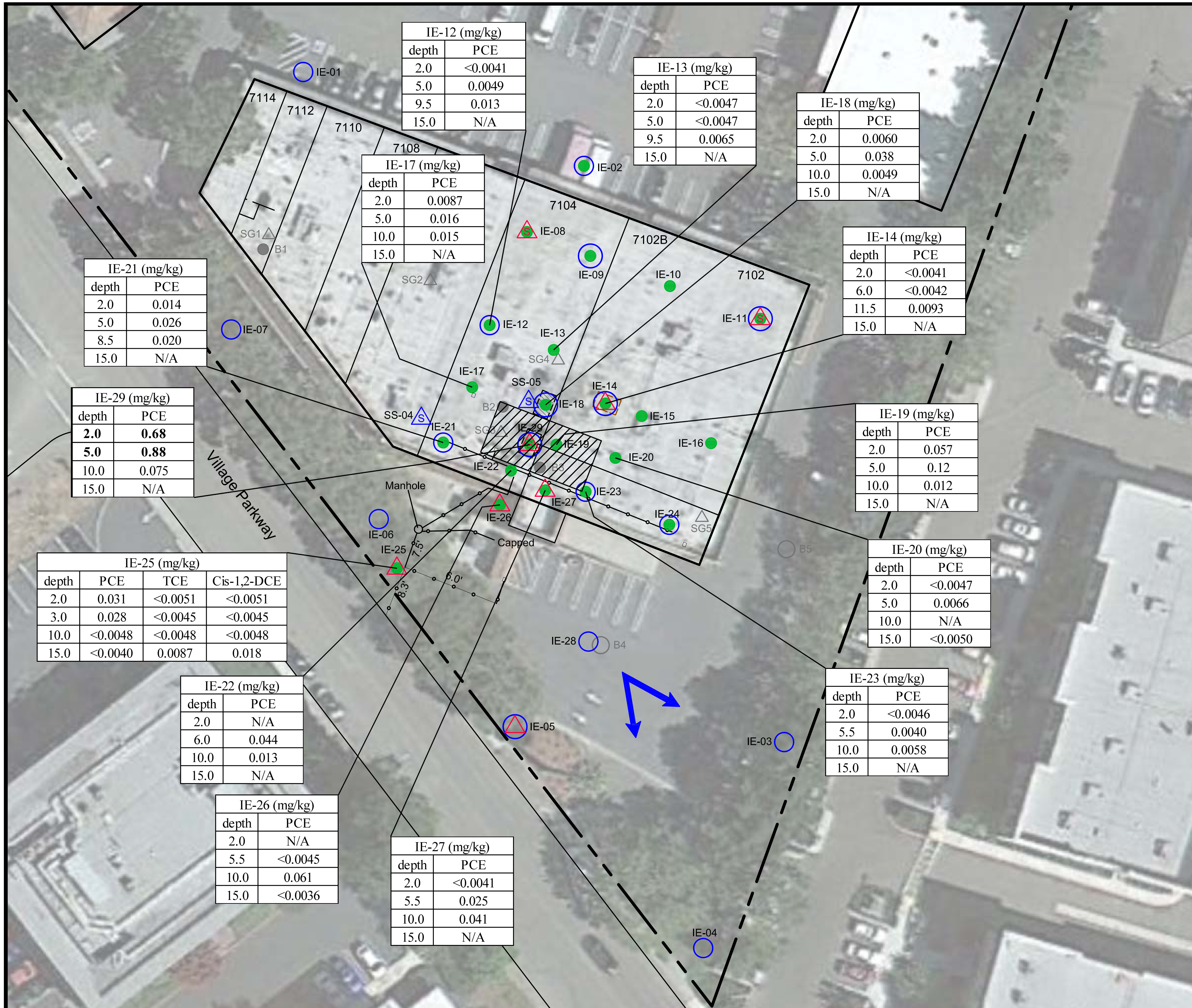
Site Plan with Soil Boring and Sample Locations
7100 - 7120 Dublin Boulevard
Dublin, California

Figure
2

Drafter: EC
Date: 09/09/13
Contract Number: 13-945B



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

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-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
- Existing subslab soil gas and soil gas sampling location
- Grab-groundwater sample location
- Proposed subslab soil gas sampling 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

Proposed Excavation Limits and Sub-Slab Soil Vapor Probes
7100 - 7120 Dublin Boulevard
Dublin, California

Figure
3

Drafter: EC
Date: 09/09/13
Contract Number: 13-945B

Appendix A
Historical 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.

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

			Summary of Analyses(3)
Sample Location	**Depth Collected (feet bgs)**	**Media**	**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

			Summary of Analyses[3]
Sample Location	**Depth Collected (feet bgs)**	**Media**	**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	08/05/13
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	08/05/13
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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**
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

Parameter	Samples								
ID	IE-26	IE-26	IE-26	IE-27	IE-27	IE-27	IE-29	IE-29	IE-29
Type	–	–	–	–	–	–	–	–	–
Depth	5.0	10.0	15.0	2.0	5.0	10.0	2.0	5.0	10.0
Date	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	<0.018	<0.018	<0.014	<0.016	<0.017	<0.017	<0.019	<0.015	<0.016
Benzene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Bromobenzene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Bromodichloromethane	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Bromoform	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Bromomethane (methyl bromide)	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
2-Butanone (methyl ethyl ketone)	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
n-Butylbenzene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
sec-Butylbenzene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
tert-Butylbenzene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Carbon disulfide	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Carbon tetrachloride	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chlorobenzene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chlorobromomethane (bromochloromethane)	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chlorodibromomethane (dibromochloromethane)	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chloroethane (ethyl chloride)	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
Chloroform	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Chloromethane (methyl chloride)	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
2-Chlorotoluene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
4-Chlorotoluene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Cumene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Cymene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2-Dibromo-3-chloropropane	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2-Dibromoethane (ethylene dibromide)	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2-Dichlorobenzene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,3-Dichlorobenzene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,4-Dichlorobenzene	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
Dichlorodifluoromethane (Freon 12)	<0.0091	<0.0089	<0.0071	<0.0081	<0.0087	<0.0083	<0.0093	<0.0073	<0.0082
1,1-Dichloroethane (1,1-DCA)	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,2-Dichloroethane (1,2-DCA)	<0.0045	<0.0045	<0.0036	<0.0041	<0.0043	<0.0041	<0.0047	<0.0037	<0.0041
1,1-Dichloroethene (1,1-DCE)	<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)	<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)	<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 (µg/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

Appendix B

Excavation Plans

EXCAVATION PLAN

7100 - 7120 DUBLIN BLVD., DUBLIN, CA

CONTRACTOR

INNOVATIVE CONSTRUCTION SOLUTIONS–NORCAL, INC. (ICS)
4721 TIDEWATER AVENUE SUITE D
OAKLAND, CA 94601
PHONE: (510) 782–5415
FAX: (510) 782–6576
ATTN: BILL LEWIS

CIVIL ENGINEER

STITT ENGINEERING GROUP
1822 BLOSSOM DR.
ANTIOCH, CA 94509
PHONE: (707) 235–8193
ATTN: JOHN STITT, P.E.

CONSTRUCTION SCOPE

1. EXCAVATE STATE TARGETED SOIL WITHIN THE INTERIOR OF THE COMMERCIAL BUILDING.
2. INSTALL SUB–SLAB DEPRESSURIZATION PIPING SYSTEM.

GENERAL NOTES

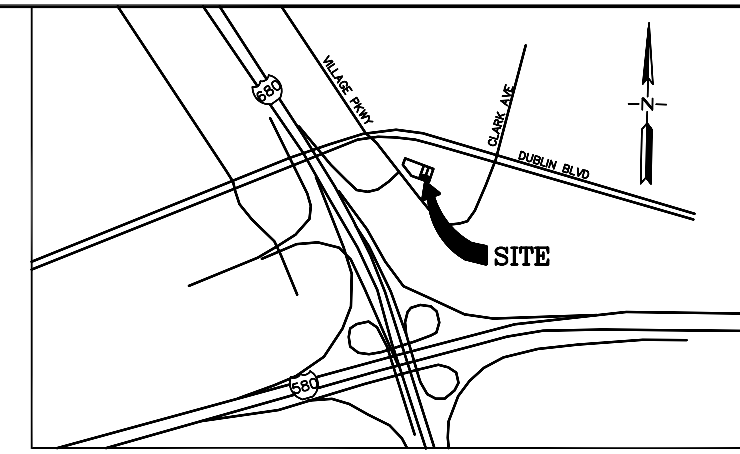
1. ALL WORK TO BE DONE IN CONFORMANCE WITH THE STANDARDS OF THE CITY OF DUBLIN, CBC 2010 AND OSHA EXCAVATION AND TRENCHING STANDARDS.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS.
3. VERIFY ALL GRADES AGAINST EXISTING IMPROVEMENTS, PRIOR TO CONSTRUCTION.
4. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
5. INFORMATION REGARDING EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES SHOWN ON THESE PLANS WAS TAKEN FROM RECORD DATA KNOWN TO THE ENGINEER AND IS NOT TO BE CONSIDERED A FULL CATALOG OF EXISTING CONDITIONS. CONTRACTOR SHALL CONDUCT FIELD INVESTIGATIONS AS REQUIRED TO VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES (WHETHER SHOWN ON THESE PLANS OR NOT) PRIOR TO THE COMMENCEMENT OF WORK. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THESE PLANS.

CITY GRADING NOTES

1. ANY DISPOSAL SITE WITHIN THE CITY OF DUBLIN FOR THE OFF–SITE HAUL DIRT MATERIALS OR SOURCE FOR THE IMPORT FILL WITHIN THE CITY OF DUBLIN SHALL BE APPROVED BY THE CITY PRIOR TO THE COMMENCEMENT OF GRADING.
2. TO MINIMIZE AIR QUALITY IMPACTS OF GRADING AND CONSTRUCTION, THE FOLLOWING MITIGATION MEASURES SHALL BE INCORPORATED INTO THE PROJECT:
   - A. DUST GENERATED ON THE PROJECT SITE SHALL BE CONTROLLED BY WATERING OR APPLYING APPROVED DUST PALLIATIVE ON ALL EXPOSED AREAS AT LEAST TWICE DAILY DURING EXCAVATION, AND ESPECIALLY DURING CLEARING AND GRADING OPERATIONS. ADDITIONAL WATERING ON WINDY OR HOT DAYS IS REQUIRED TO FURTHER REDUCE DUST EMISSIONS;
   - B. DURING CONSTRUCTION, ACTIVITIES INVOLVING EARTH MOVING OR TRAVEL ON UNPAVED SURFACES SHALL BE DISCONTINUED WHEN WIND SPEEDS EXCEED 20 M.P.H., TO PREVENT EXCESSIVE GENERATION OF DUST;
   - C. PAVING SHALL BE COMPLETED AS SOON AS PRACTICABLE TO REDUCE THE TIME THAT BARE SURFACES AND SOILS ARE EXPOSED. IN AREAS WHERE CONSTRUCTION IS DELAYED FOR AN EXTENDED PERIOD OF TIME, THE GROUND SHALL BE RE–VEGETATED TO MINIMIZE THE GENERATION OF DUST;

EXCAVATION NOTES

1. THESE PLANS SHOW THE SEQUENCE OF SOIL EXCAVATION AND CONCRETE BACKFILL FOR THE LIMITS OF EXCAVATION SHOWN WITHIN THE COMMERCIAL BUILDING. ALL WORK IS IN CONFORMANCE WITH THE IRIS ENVIRONMENTAL REMEDIATION PLAN AND SOIL INVESTIGATION WITH BORINGS.
2. LIMITS OF EXCAVATION BASED ON ACTION PLAN BY IRIS ENVIRONMENTAL.
3. SOILS DESCRIBED IN BORING LOGS BY IRIS ENVIRONMENTAL IS CLAYEY SILT AND SILTY SAND.
4. ICS IS TO HAVE A COMPETENT PERSON ON SITE TO CLASSIFY SOILS THAT WILL STAND LONG ENOUGH TO PLACE SHORING AND/OR CONCRETE, AND TO VERIFY THAT SOIL IS AT LEAST OSHA TYPE "B" SOIL.
5. EXCAVATE TRENCH IN PHASING SEQUENCE ORDER SHOWN ON SHEET 2.
6. PLACE TRENCH JACKS IN EXCAVATION AS SOON AS POSSIBLE WITHOUT EXCESSIVE HINDRANCE OF EXCAVATION ACTIVITIES.
7. USE ADDITIONAL SHORT TRENCH JACKS PLACED AT TOP OF TRENCH AND REMOVE FULL LENGTH TRENCH JACKS IN ORDER TO BACKFILL IN STAGES IF SLOUGHING OR RAVELING OCCURS.
8. COMMENCEMENT OF EXCAVATION TO COMPLETE BACKFILL WITH CONCRETE FOR EACH TRENCH SHALL NOT EXCEED 48 HOURS.
9. NEXT PHASE OF EXCAVATION MUST NOT COMMENCE PRIOR TO 48 HOURS OF CURE TIME FOR THE CONCRETE OF THE PREVIOUS PHASE. COMPETENT PERSON TO VERIFY THAT CONCRETE IS SOLID AND STABLE AND READY FOR THE NEXT PHASE.
10. EXCAVATION BACKFILL SHALL BE A MINIMUM 2–SACK CEMENT SLURRY.
11. ICS IS TO PROVIDE ACCESS AND BARRICADING IN ACCORDANCE WITH OSHA REQUIREMENTS.
12. NO WORKERS ARE ALLOWED TO ENTER THE EXCAVATION.
13. THIS PLAN IS IN ACCORDANCE WITH OSHA 1541.1(c)(4), DESIGN BY A LICENSED CIVIL ENGINEER.
14. TABULATED DATA FOR SHORING EQUIPMENT SHALL BE ON THE JOB SITE AT ALL TIMES.
15. MANUFACTURER'S TABULATED DATA APPLIES EXCEPT AS NOTED ON PLAN.
16. ICS IS TO VERIFY THE LOCATION OF ALL UTILITIES OR OBSTRUCTIONS IN CONFLICT WITH THE EXCAVATION AND SHALL EITHER PROTECT IN PLACE, CUT AND CAP, AND / OR DIVERT AS NECESSARY, ULTIMATELY LEAVING SEWER LINE IN OPERATION WHEN EXCAVATION WORK IS COMPLETE.
17. ICS SHALL HAVE A COMPETENT PERSON ON SITE WHERE THESE PLANS ARE TO BE USED. IT IS THIS PERSON'S RESPONSIBILITY TO ENSURE THAT THE SHORING SYSTEM IS INSTALLED IN ACCORDANCE WITH THESE PLANS AND MANUFACTURER'S RECOMMENDATIONS. SHOULD SITE CONDITIONS DIFFER FROM WHAT IS SHOWN ON THESE PLANS THIS PERSON AND/OR ICS FIELD STAFF SHALL NOTIFY THE ENGINEER FOR REMEDIAL ACTION THAT MAY BE TAKEN.



VICINITY MAP

CONSTRUCTION CONTRACTOR NOTE: Construction contractor agrees that in accordance with generally accepted construction practices, construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property, that this requirement shall be made to apply continuously and not be limited to normal working hours, and construction contractor further agrees to defend, indemnify and hold design professional harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting liability arising from the sole negligence of design professional.

UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

SHEET INDEX

INT.	REVISIONS	MARK	DATE

STITT ENGINEERING GROUP
1822 BLOSSOM DR.
ANTIOCH, CA 94509
PHONE: (707) 235–8193

EXCAVATION PLAN

TITLE SHEET & GENERAL NOTES

DUBLIN BLVD. CITY OF DUBLIN CALIFORNIA

DRAWING ID

DESIGN BY JBS

DRAWN BY JBS

CHECKED BY JBS

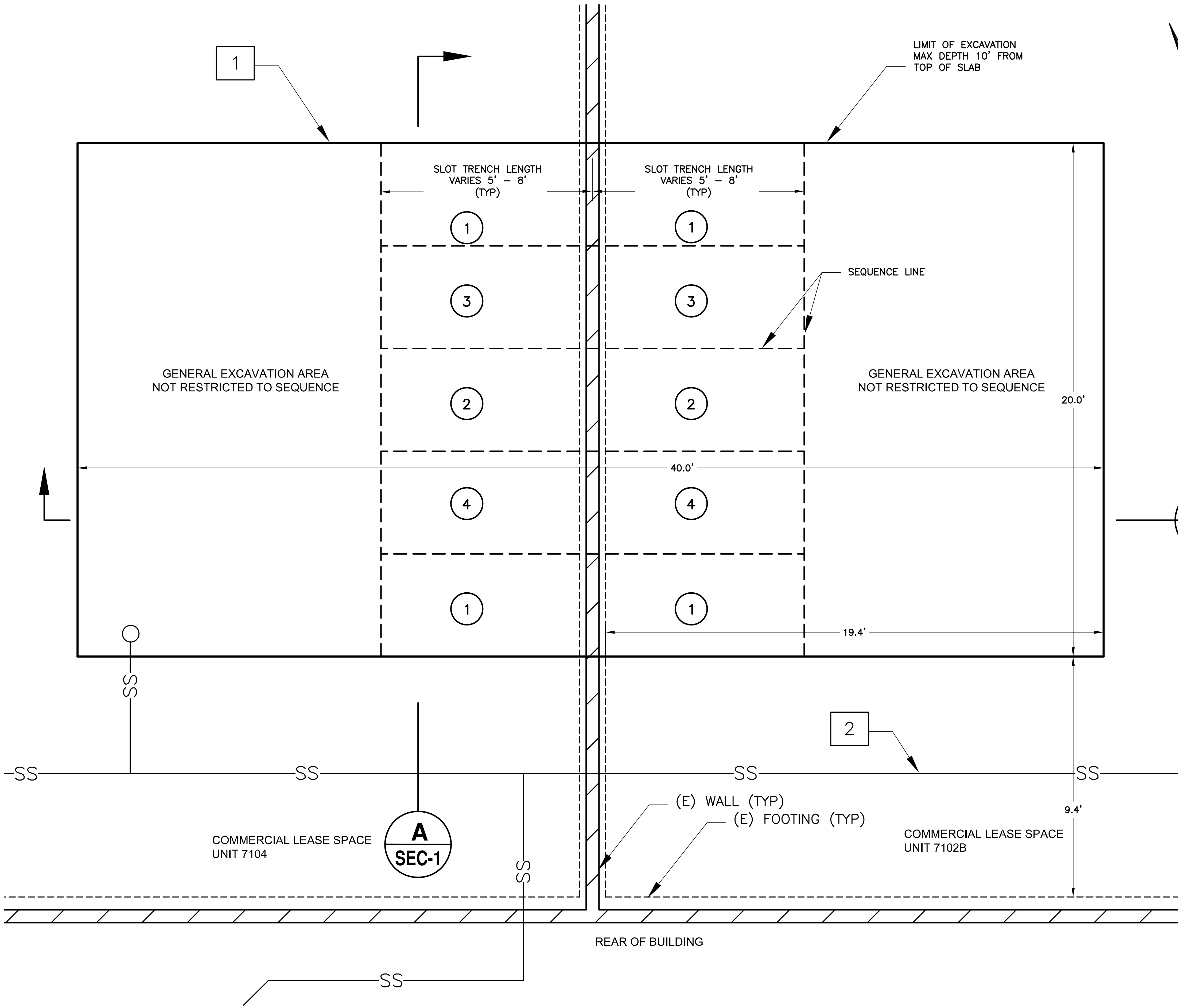
DATE SEPTEMBER 8, 2013

SCALE AS NOTED

SHEET 1

G-1

OF 5 SHEETS



PLAN
SCALE 1/4" = 1'

LEGEND

——SS——	EXISTING SEWER LINE
————	LIMIT OF EXCAVATION LINE

EXCAVATION SCOPE

1. SAW CUT CONCRETE SLAB AT EXCAVATION LINE, WORKING ONE SIDE OF WALL AT A TIME.
2. EXCAVATE 10' DOWN FROM TOP OF SLAB.
3. BACKFILL WITH SLURRY CONCRETE (2–SACK MIX) ACCORDING TO SEQUENCED EXCAVATION PLAN. SEE EXCAVATION NOTES SHEET 1.
4. INSTALL SLAB REINFORCING STEEL, DOWELING INTO EXISTING AND POUR 5" SLAB. REINFORCING REBAR SHALL BE 12" EACH WAY OR IN KIND.
5. REPEAT PROCESS FOR OTHER SIDE OF WALL.

CONSTRUCTION NOTES

1	CONSTRUCTION LIMIT LINE. EXCAVATION LINE MAY VARY AS DETERMINED IN FIELD TESTING.
2	APPROXIMATE LOCATION OF SEWER LINE. PROTECT IN PLACE AND/OR REPLACE COMPONENTS AS NECESSARY.
(1)	PHASING SEQUENCE OF EXCAVATION

DATE	MARK	REVISIONS	INIT.

REGISTERED PROFESSIONAL ENGINEER
JOHN B. STITT
No. C44592
CIVIL
STATE OF CALIFORNIA

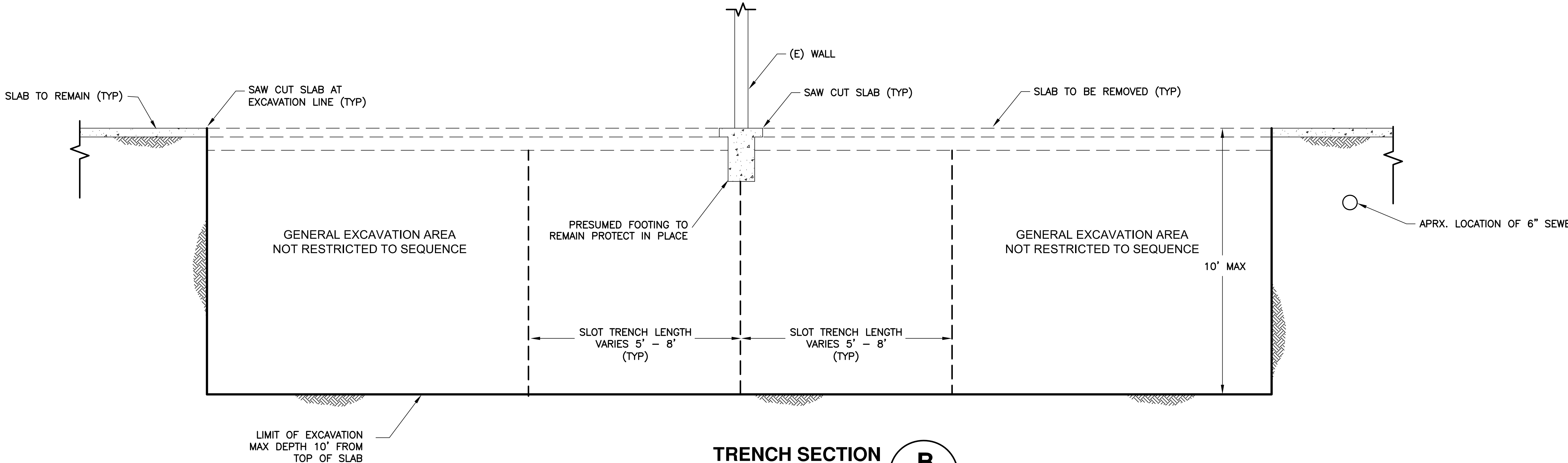
STITT ENGINEERING GROUP
1822 BLOSSOM DR.
ANTIOCH, CA 94509
PHONE: (707) 235-8193

EXCAVATION PLAN

EXCAVATION PLAN

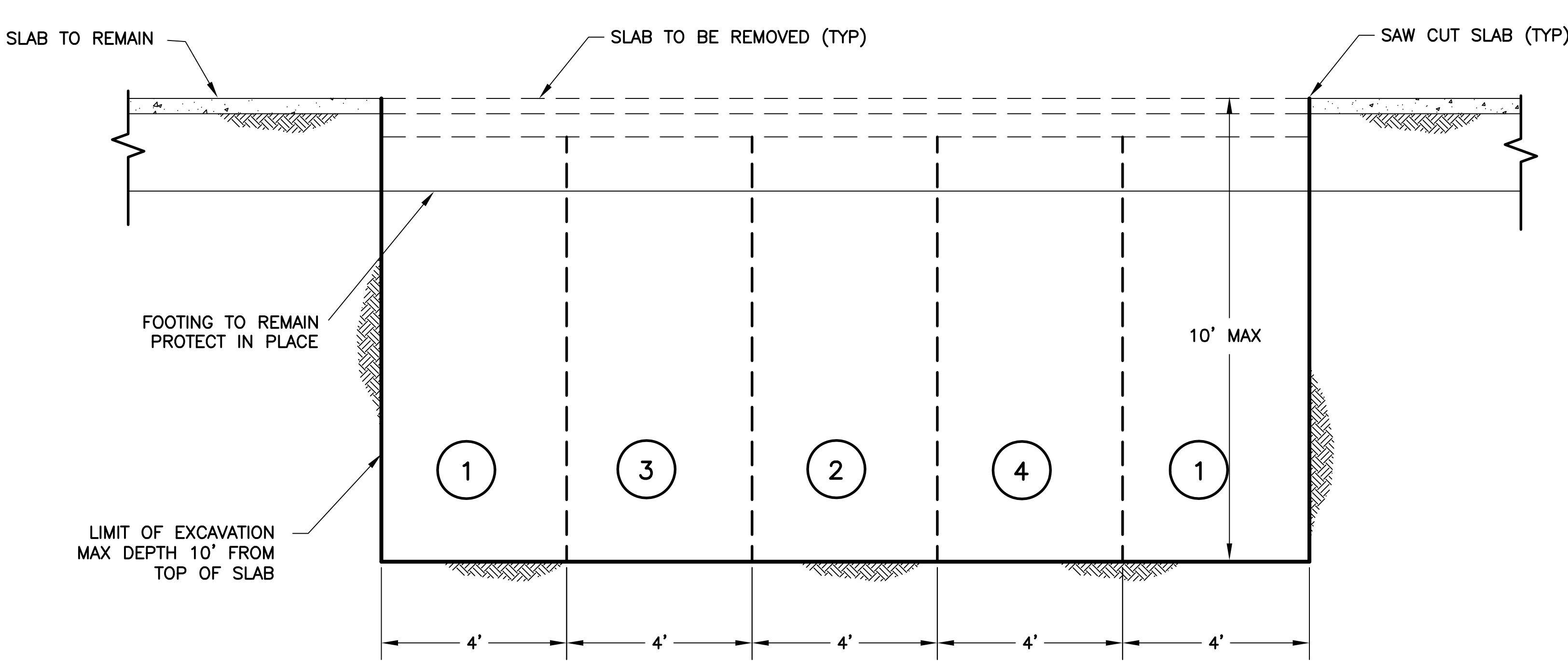
DUBLIN BLVD. CITY OF DUBLIN CALIFORNIA

DRAWING ID	
DESIGN BY	JBS
DRAWN BY	JBS
CHECKED BY	JBS
DATE	SEPTEMBER 8, 2013
SCALE	AS NOTED
SHEET 2	EX-1
OF 5 SHEETS	



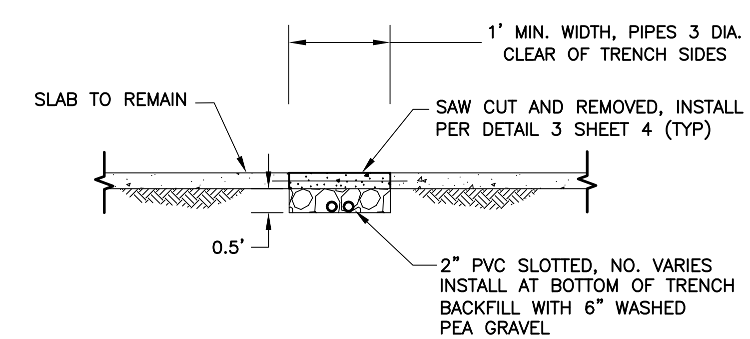
TRENCH SECTION B
-

SCALE 1/4" = 1'



TRENCH SECTION A
-

SCALE 1/4" = 1'



TRENCH SECTION C
-

SCALE 1/4" = 1'

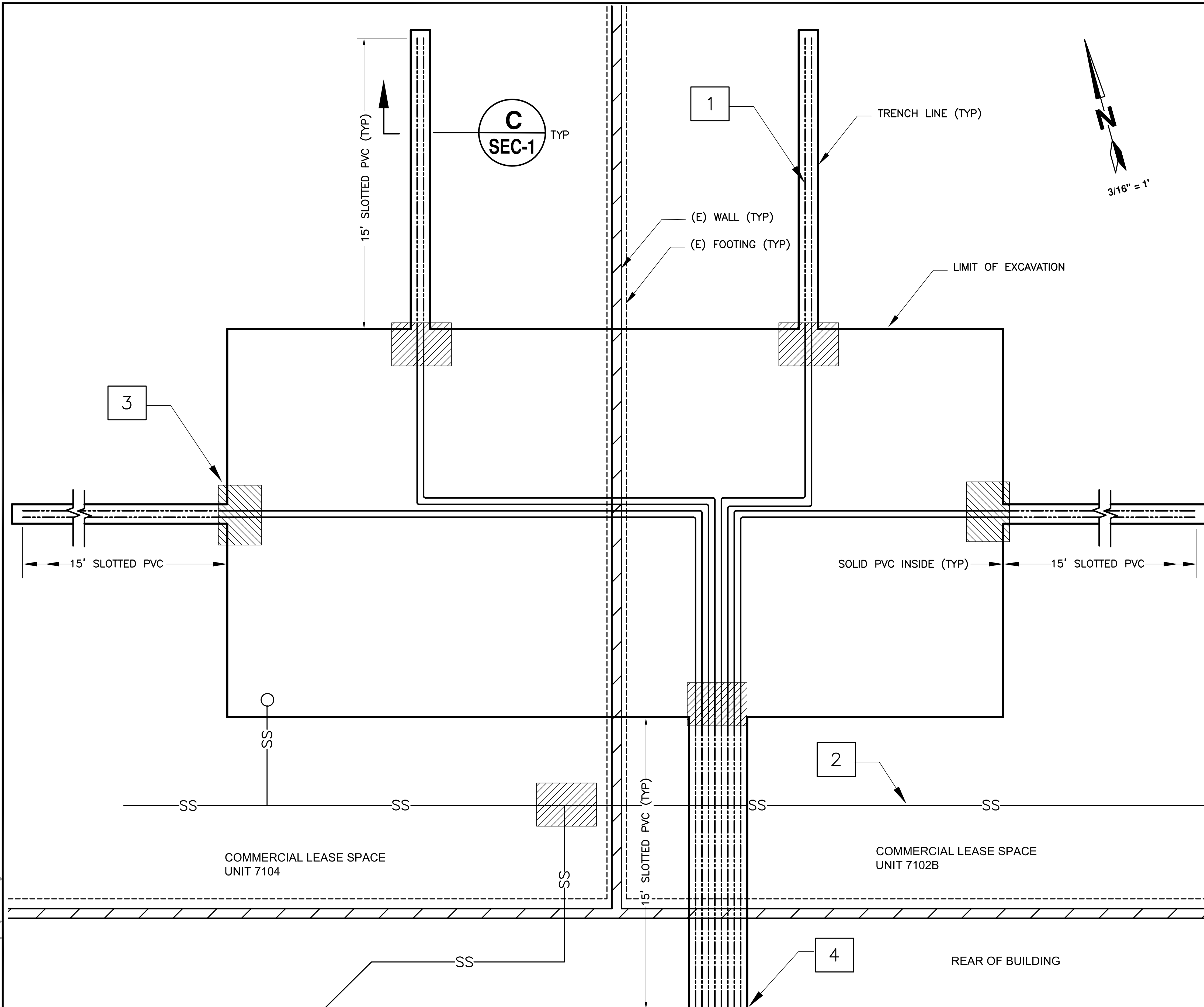
DATE	MARK	REVISIONS	INIT.

REGISTERED PROFESSIONAL ENGINEER
JOHN B. STITT
No. C44592
CIVIL
STATE OF CALIFORNIA

STITT ENGINEERING GROUP
1822 BLOSSOM DR.
ANTIOCH, CA 94509
PHONE: (707) 235–8193

EXCAVATION PLAN
SECTIONS
DUBLIN BLVD. CITY OF DUBLIN CALIFORNIA

DRAWING ID
DESIGN BY JBS
DRAWN BY JBS
CHECKED BY JBS
DATE SEPTEMBER 8, 2013
SCALE AS NOTED
SHEET 3
SEC-1
OF 5 SHEETS



PLAN
SCALE 3/16" = 1'

LEGEND

—SS—	EXISTING SEWER LINE
——	LIMIT OF EXCAVATION
——	2" PVC SOLID PIPE
—·—·—	2" PVC SLOTTED PIPE
(hatch)	2-SACK SLURRY BACKFILL [3]

PIPING NOTES

1. INSTALL 2" PVC PIPING ON TOP OF 2-SACK SLURRY BACKFILL, CAPPING ENDS OF ALL PIPING. STUB PIPING INTO EXTERIOR TRAFFIC RATED PULL BOX. SEE DETAIL 3 AND 2 SHEET 5.
2. INSTALL CDF (2-SACK SLURRY) AT POINTS INDICATED.
3. BACKFILL WITH PEA GRAVEL OVER TOPS OF SLOTTED 2" PVC PIPE.
4. INSTALL CONCRETE SLAB PER PLANS.

CONSTRUCTION NOTES

1. ALL PIPING 2" PVC. USE /8" SLOTTED PIPE OUTSIDE EXCAVATION LINE AND SOLID PVC PIPE INSIDE EXCAVATION LINE – SCHEDULE 40 (TYP).
2. APPROXIMATE LOCATION OF SEWER LINE. PROTECT IN PLACE AND/OR REPLACE COMPONENTS AS NECESSARY.
3. INSTALL COLLAR DAMN WITH 2-SACK SLURRY AS SHOWN IN HATCH AREAS (APPROXIMATELY 1 CUBIC FOOT EACH), 4" CLEAR AROUND PIPES (TYP).
4. CAP AND TERMINATED PIPES UNDER TEMPORARY PAVING, OUTSIDE FOUNDATION LINE OF BUILDING.

DATE	MARK	REVISIONS	INIT.

REGISTERED PROFESSIONAL ENGINEER JOHN B. STITT No. C44592 CIVIL STATE OF CALIFORNIA

STITT ENGINEERING GROUP
1822 BLOSSOM DR.
ANTIOCH, CA 94509
PHONE: (707) 235-8193

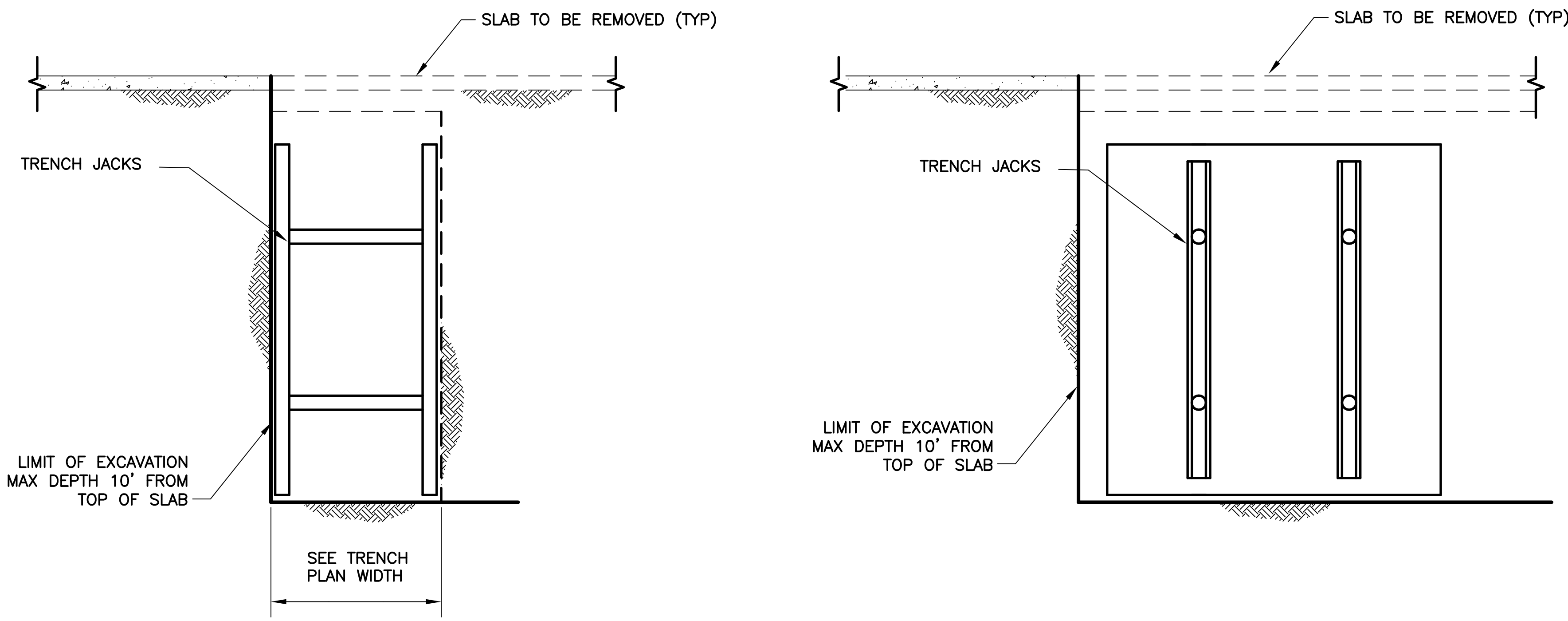
EXCAVATION PLAN

SUB-SLAB DEPRESSURIZATION PLAN

DUBLIN BLVD. CITY OF DUBLIN CALIFORNIA

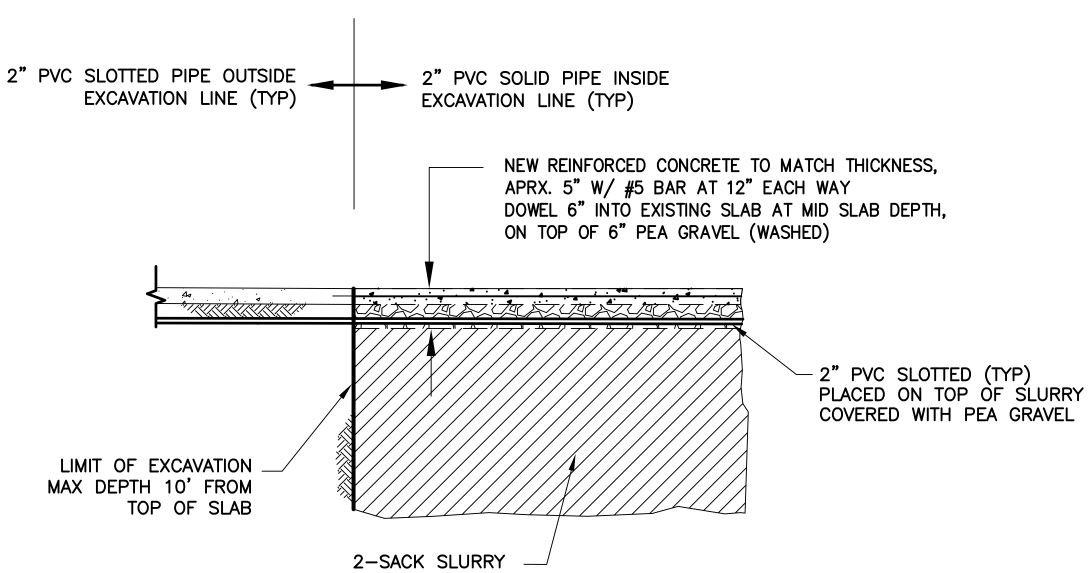
DRAWING ID

DESIGN BY JBS
DRAWN BY JBS
CHECKED BY JBS
DATE SEPTEMBER 8, 2013
SCALE AS NOTED
SHEET 4
SSD-1
OF 5 SHEETS



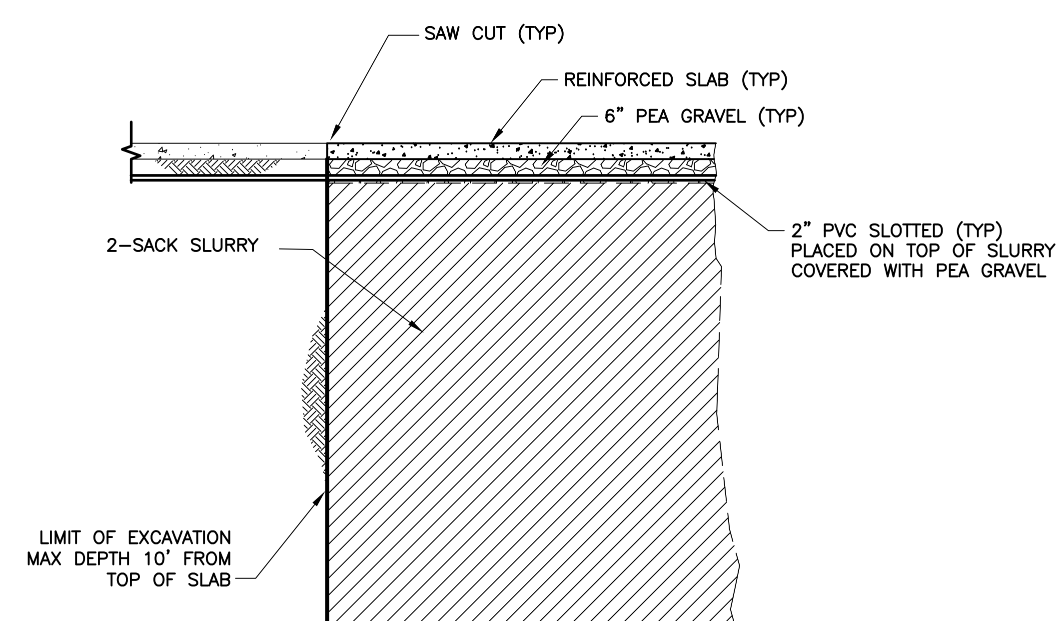
TYPICAL TRENCH SHORING — 2 / -

SCALE 1/4" = 1'



NEW SLAB DETAIL — 1 / -

NTS



SUB-SLAB DEPRESSURIZATION PIPE DETAIL — 3 / -

NTS

DATE	MARK	REVISIONS	INIT.

STITT ENGINEERING GROUP
1822 BLOSSOM DR.
ANTIOCH, CA 94509
PHONE: (707) 235-8193

EXCAVATION PLAN

CONSTRUCTION DETAILS

DUBLIN BLVD. — CITY OF DUBLIN — CALIFORNIA

DRAWING ID

DESIGN BY: JBS

DRAWN BY: JBS

CHECKED BY: JBS

DATE: SEPTEMBER 8, 2013

SCALE: AS NOTED

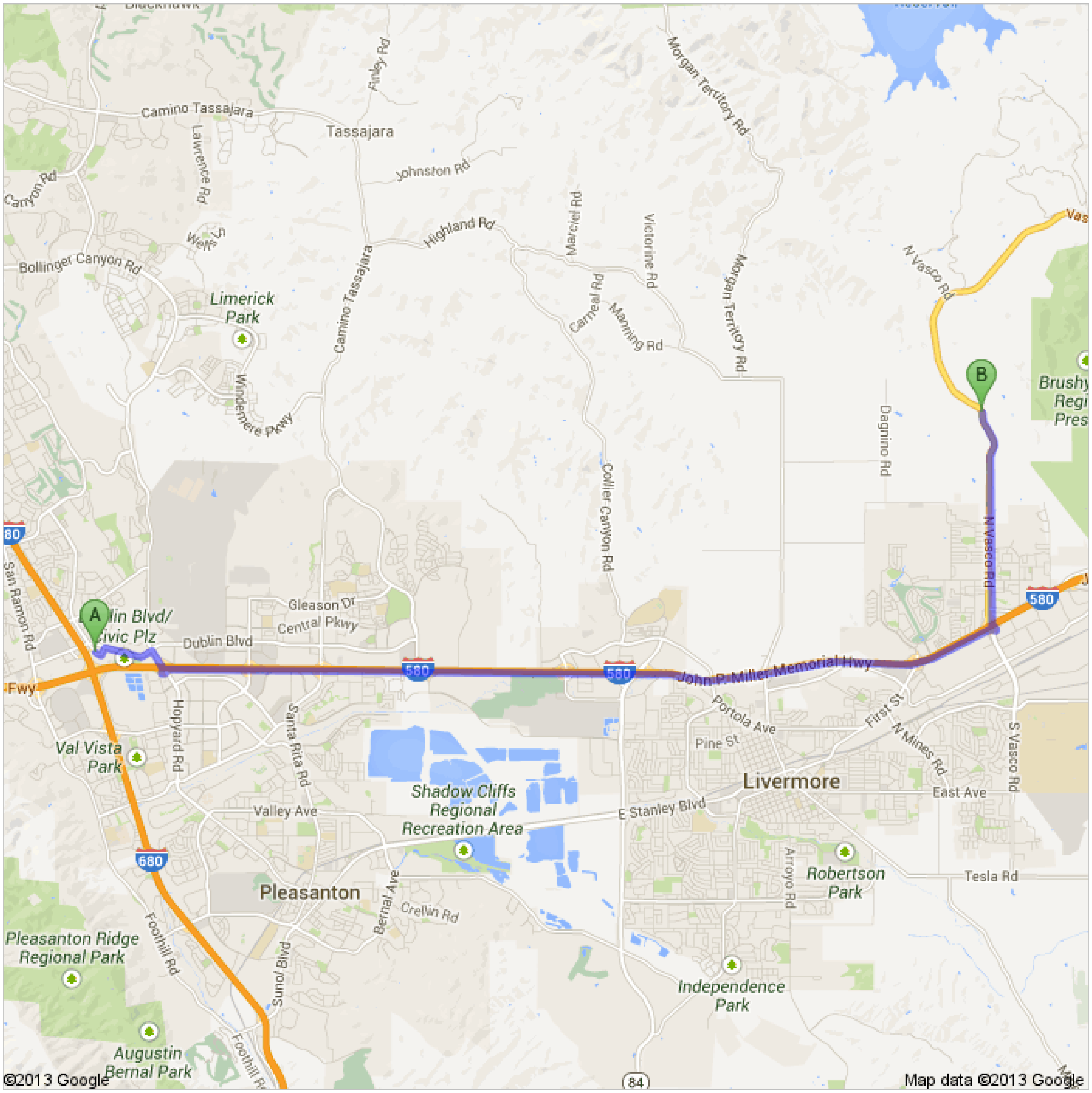
SHEET 5

CD-1

OF 5 SHEETS

Appendix C
Disposal Facility Trucking Routes

Directions to 4001 N Vasco Rd, Livermore, CA 94551
14.2 mi – about **16 mins**



Village Pkwy

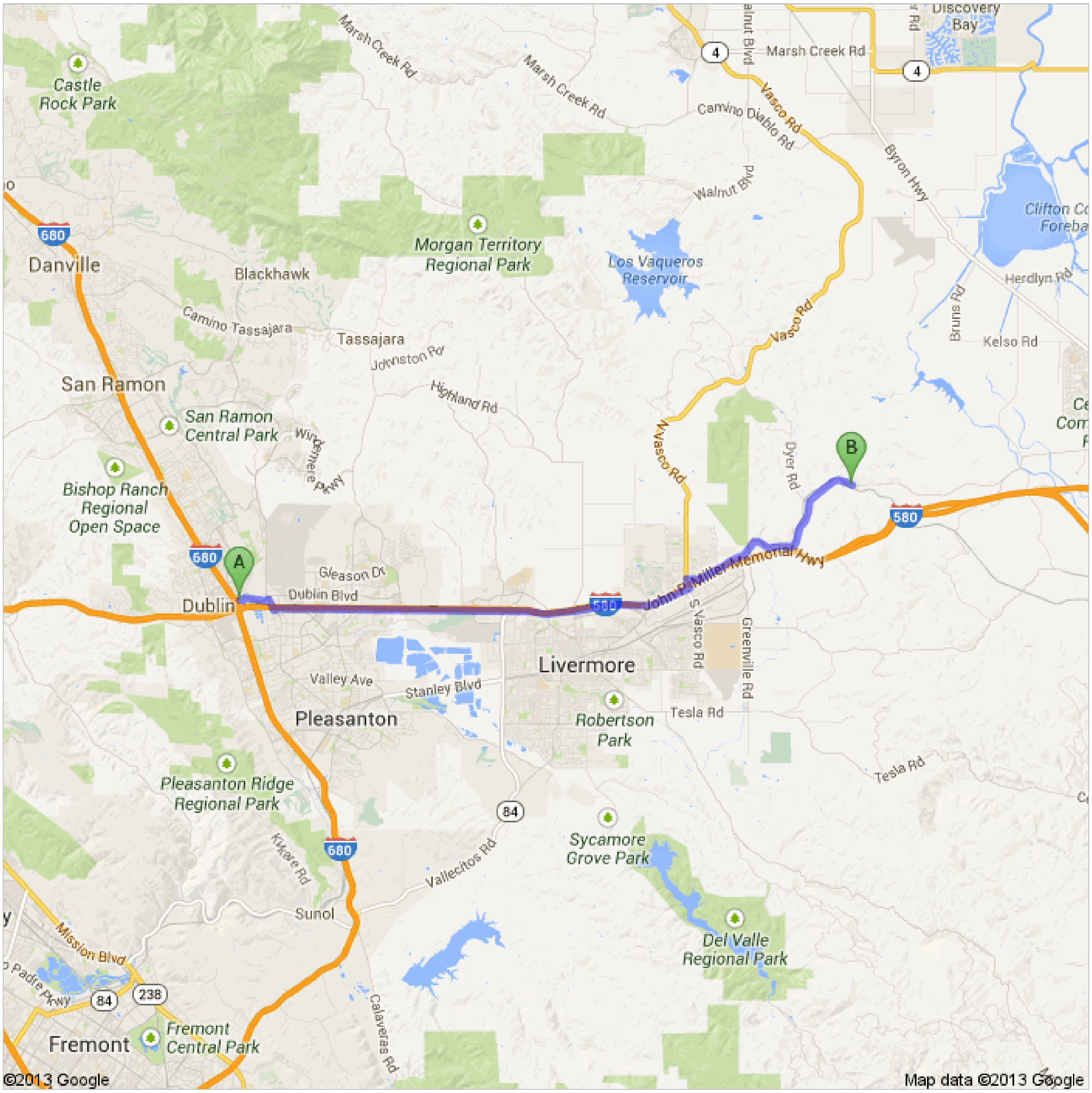
1.	Head **southeast** on **Village Pkwy** toward **Clark Ave**	go 325 ft total 325 ft
2.	Continue onto **Clark Ave**	go 0.1 mi total 0.2 mi
3.	Turn right onto **Dublin Blvd** About 1 min	go 0.6 mi total 0.8 mi
4.	Turn right onto **Dougherty Rd** About 51 secs	go 0.3 mi total 1.1 mi
5.	Slight right to merge onto **I-580 E** toward **Stockton** About 9 mins	go 10.1 mi total 11.2 mi
6.	Take the **Vasco Rd** exit toward **Brentwood**	go 0.1 mi total 11.3 mi
7.	Keep left at the fork, follow signs for **Vasco Road N** and merge onto **N Vasco Rd** Destination will be on the right About 4 mins	go 2.9 mi total 14.2 mi

4001 N Vasco Rd, Livermore, CA 94551

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Google

Directions to 10840 Altamont Pass Rd, Livermore, CA 94551
17.3 mi – about **21 mins**



Village Pkwy

1.	Head **southeast** on **Village Pkwy** toward **Clark Ave**	go 325 ft total 325 ft
2.	Continue onto **Clark Ave**	go 0.1 mi total 0.2 mi
3.	Turn right onto **Dublin Blvd** About 1 min	go 0.6 mi total 0.8 mi
4.	Turn right onto **Dougherty Rd** About 51 secs	go 0.3 mi total 1.1 mi
5.	Slight right to merge onto **I-580 E** toward **Stockton** About 9 mins	go 10.1 mi total 11.2 mi
6.	Take the **Vasco Rd** exit toward **Brentwood**	go 0.1 mi total 11.3 mi
7.	Keep left at the fork, follow signs for **Vasco Road N** and merge onto **N Vasco Rd**	go 0.5 mi total 11.8 mi
8.	Turn right onto **Northfront Rd** About 2 mins	go 0.8 mi total 12.6 mi
9.	Continue onto **Altamont Pass Rd** Destination will be on the left About 6 mins	go 4.7 mi total 17.3 mi

10840 Altamont Pass Rd, Livermore, CA 94551