

LIMITED PHASE II SUBSURFACE SITE INVESTIGATION

145 South Montgomery

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This email transmits our summary report of our recent Phase II subsurface investigation of the site at 145 South Montgomery Street in San Jose. The tables and figure are attached.

Summary Report of Limited Phase II Subsurface Site Investigation 145 South Montgomery Street, San Jose, California

Summary

Iris Environmental has completed a subsurface investigation of the 145 South Montgomery Street site, including collection and analysis of soil, grab groundwater, and soil gas samples. Our findings are as follows:

1. **Off-site diesel release:** diesel and naphthalene were detected in groundwater and soil at the upgradient site boundary (IE-01) suggesting impacts from an off-site diesel release are migrating on to the property.
2. **Potential on-site diesel/motor oil release:** diesel and motor oil were detected in groundwater and soil near the upgradient site boundary directly below the location the former oil tank (IE-02). The tank is half on and half off the current property boundary, so assignment of release responsibility may be difficult.
3. **Potential minor on-site gasoline release:** several gasoline volatile organic compounds (VOCs) were detected below screening levels in shallow soil gas near the former gasoline UST.

Introduction

Iris Environmental has conducted a subsurface investigation of the commercial property located at 145 South Montgomery Street in San Jose (the Site). Our subsurface Site investigation was performed in support of the potential acquisition of the site by Google, Inc., in accordance with our table Summary of Proposed Sampling and Analysis Program dated October 28, 2016.

Site Description

The property comprises 4.14 acres and is improved with an approximately 108,000-square foot building in the front/eastern portion of the site and an asphalt-paved parking lot in the rear/western portion of the site. The site layout is depicted in Figure 1. The onsite building is a former bakery and is currently occupied by AT&T as an office and storage space. The site was previously occupied by commercial and industrial uses including for truck repair and paint spraying.

The site is not known to be impacted with contamination, and no known releases of contaminants have occurred, except as discussed immediately below. Potential environmental issues identified through our Phase I Environmental Site Assessment dated October 25, 2016, and targeted for further investigation in the subsurface site investigation, are as follows.

During an on-Site investigation conducted in 2003, free product was noted in groundwater encountered at approximately 30 feet below ground surface (bgs) in three on-Site borings. The detection of free product is indicative of a release of petroleum hydrocarbons. The source of the free product is unknown but is likely due to either an on-Site release or an off-Site source that is impacting the Site. Note that there was a former "covered oil tank set in ground" that has not been investigated and is located upgradient of the free product detections.

A possible off-Site source for the free product detections noted above is the adjacent property to the west (17 Otterson Street) which has residual total petroleum hydrocarbon (TPH) as diesel in soil due to a leaking underground storage tank (UST) removed from the property in 1989. Groundwater was not sampled in 1989 and it is unknown whether groundwater impacts from this upgradient property are the source of free product in on-Site groundwater.

The adjacent property to the south (645 Park Avenue) is subject to a Site Management Plan (SMP) due to the presence of elevated concentrations of arsenic and lead in soil. Although this property received case closure from the RWQCB, the case closure letter indicates that the source of the arsenic and lead is not known. Given that the extent of the soil containing elevated metals concentrations is not known, it is possible that soil containing elevated metals concentrations may also be present on-Site.

Two 6,000-gallon USTs have been used and removed from the Site in 1992 and 2003. Based on review of the results of a 2003 on-Site investigation, the RWQCB issued a No Further Action (NFA) letter for potential undetected releases from these tanks on August 6, 2004 (RWQCB 2004). The letter indicates that, based on a review of the data, "groundwater beneath the subject site has not been impacted from undetected releases from the existing UST system" and that "no further action related to monitoring for MTBE and other fuel oxygenates is required at this time." Note that the 2003 on-Site investigation may not have been sufficiently adequate to conclusively rule out a release from the UST. Based on our understanding of the

groundwater flow at the time of the investigation, the sample locations were not located in a downgradient location relative to the former UST and dispenser.

These potential environmental issues were further investigated through the subsurface site investigation described herein.

Scope of Investigation

Iris Environmental and our subcontractors performed a limited subsurface investigation of the site on November 9, 2016. Borings were advanced at three locations (IE-01 through IE-03) as shown on Figure 1.

- IE-01 is located at the upgradient site boundary, in the northeastern corner of the parking lot in the back of the building.
- IE-02 is located directly downgradient of the former covered oil tank set in the parking lot in the back of the building.
- IE-03 is located at the downgradient site boundary, in the front of the building near the former 6,000 gallon gasoline USTs.

At each of these three locations, borings were advanced using a direct-push drilling rig to between 30 and 40 feet below ground surface, until first encountered groundwater. Soil samples were collected from each boring at the top of the saturated zone, at a depth of approximately 22 feet bgs. Soil sampling was added to the investigation because of observed staining and free product at the top of the saturated zone. One grab groundwater sample was also collected from each boring of first encountered groundwater. At each of the three locations, a second boring was advanced to approximately 15 feet bgs, for emplacement and sampling of a nested temporary soil gas probes at 5 and 15 feet bgs.

The collected soil, grab groundwater, and soil gas samples were submitted to a State-certified laboratory, Curtis and Tompkins of Berkeley, California, for the analytical program summarized in Table 1.

Results

Sampling results are summarized in Table 2 (soil), Table 3 (grab groundwater), and Table 4 (soil gas). These results are discussed below by sampling location.

Upgradient Northern Location IE-01

Groundwater sampling results (see Table 3) at IE-01 indicate that diesel and naphthalene are present in groundwater. The results were non-detect for all other VOCs, gasoline and motor oil.

Diesel and naphthalene were detected at concentrations exceeding conservative screening levels. These constituents are typically associated with a diesel petroleum hydrocarbon release and an offsite diesel release is known to have occurred from a former leaking UST located upgradient at 17 Otterson Street. Metals results are discussed separately, below.

Soil sampling results (see Table 2) at IE-01 are non-detect for all analytes other than gasoline, diesel, motor oil, and naphthalene. Naphthalene was the only compound detected above conservative screening levels. These impacts appear to be related to the offsite diesel release that occurred at 17 Otterson Street and are consistent with field observations of petroleum hydrocarbon staining in soils at this depth.

Soil gas sampling results (see Table 4) at IE-01 are low to non-detect for most analytes. No analytes were detected at concentrations exceeding risk-based screening concentrations (RBSCs) developed according to the DTSC Vapor Intrusion Guidance (October 2011). The results were also compared to more conservative screening levels calculated using the default attenuation factor recommended by the US EPA. No analytes were detected at concentrations exceeding these conservative screening levels, with the exception of benzene and 1,3-butadiene, which were detected at concentrations slightly exceeding their respective screening levels. Benzene and 1,3-butadiene did not exceed the screening levels developed based on the default attenuation factor recommended by the RWQCB Environmental Screening Levels (ESLs).

Upgradient Southern Location IE-02

Groundwater sampling results (see Table 3) at IE-02 indicate the presence of petroleum hydrocarbons. Gasoline, diesel, and motor oil were all detected at concentrations exceeding conservative screening levels. Results for VOCs were low to non-detect for all analytes, except naphthalene which was detected at a concentration exceeding conservative screening levels. Additionally, free product was observed at the top of the saturated zone, indicating a potential nearby release. This location is directly downgradient of the former covered oil tank set indicating a petroleum hydrocarbon release may have occurred from the former covered oil tank set. Metals results are discussed separately, below.

Soil sampling results (see Table 2) at IE-02 are low to non-detect for most analytes. Diesel and motor oil were detected at concentrations exceeding the conservative screening levels, which is consistent with the observed free product in soil at this location. Acetone was also detected at a level slightly exceeding its conservative screening level. These results support that a release may have occurred from the former covered oil tank set located nearby.

Soil gas sampling results (see Table 4) at IE-02 are low to non-detect for most analytes. No analytes were detected at concentrations exceeding RBSCs developed according to the DTSC Vapor Intrusion Guidance (October 2011). The results were also compared to more conservative screening levels calculated using the default attenuation factor recommended by

the US EPA. No analytes were detected at concentrations exceeding these conservative screening levels, with the exception of benzene in the sample from 15 feet bgs and 1,3-butadiene in both samples, which were detected at concentrations slightly exceeding their respective screening levels. Benzene and 1,3-butadiene did not exceed the screening levels developed based on the default attenuation factor recommended by the RWQCB ESLs.

Downgradient Location IE-03

Groundwater sampling results (see Table 3) at IE-03 are low to non-detect for all analytes. Results for all VOCs and TPHs were non-detect, indicating that groundwater at this location is not impacted by petroleum hydrocarbons. Metals results are discussed separately, below.

Soil sampling results (see Table 2) at IE-03 are low to non-detect for all analytes. The only analytes detected were diesel, motor oil, and acetone and each was detected at concentrations below conservative screening levels.

Soil gas sampling results (see Table 4) at IE-03 are low to non-detect for most analytes. No analytes were detected at concentrations above RBSCs developed according to the DTSC Vapor Intrusion Guidance (October 2011). Several VOCs including BTEX were detected at low levels in shallow soil gas, suggesting a minor release may have occurred from the dispenser or piping associated with the former on-Site gasoline USTs or from a spill on the ground surface. PCE was also detected at a greater concentration in shallow soil gas here than at the deep location. The results were also compared to more conservative screening levels calculated using the default attenuation factor recommended by the US EPA. No analytes were detected at concentrations exceeding these conservative screening levels, with the exception of benzene and 1,3-butadiene, which were detected at concentrations slightly exceeding their respective screening levels. Benzene and 1,3-butadiene did not exceed the screening levels developed based on the default attenuation factor recommended by the RWQCB ESLs. PCE was not detected at concentrations exceeding its screening level, but the concentration is similar to the screening level calculated using the default attenuation factor recommended by the US EPA.

Metals in Groundwater

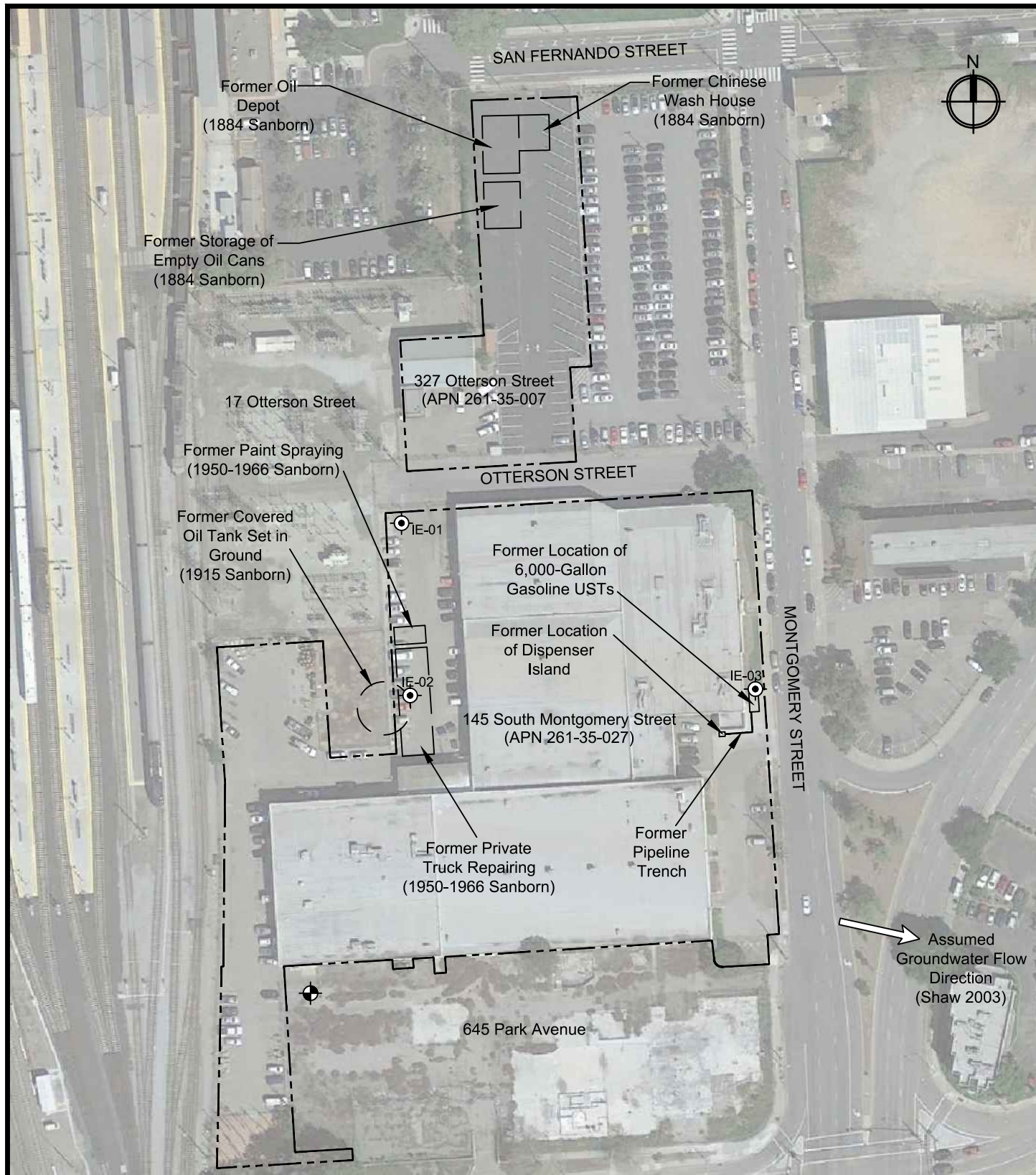
Metals were detected at consistent concentrations in groundwater at the upgradient locations IE-01 and IE-02. These results exceed conservative drinking water standards for most metals, but are below hazardous waste criteria for all metals with the exception of chromium. Heavy metal impacts have been known to be associated with some petroleum hydrocarbon releases, in particular from motor oil. Groundwater sampling results for metals at the downgradient location IE-03 were low to non-detect for all analytes, indicating that the extent of potential impacts from metals in groundwater is unknown and may not be widespread. The elevated metals concentrations that potentially exist at the Site should be evaluated during any construction dewatering to determine appropriate methods for off-site disposal of wastewater.

November 18, 2016

DRAFT

Additionally, soils should be characterized for metals to evaluate the potential for concentrations exceeding hazardous waste screening criteria if soils are evaluated for potential offhaul.

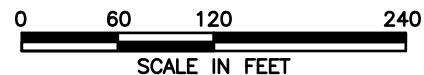
Please let us know if you have any questions regarding this summary report.



Explanation

- Approximate property boundary
- Boring location
- ⊙ Suspected monitoring well location

Basemap: Google Earth.



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Phase II Sampling Locations
 145 South Montgomery Street
 San Jose, California

Figure

1

Table 1. Summary of Proposed Sampling and Analysis Program

Location	Sample ID	Depth (ft bgs)	Matrix	Laboratory Analyses			Sampling Rationale
				VOCs	TPH	Metals	
IE- 01	IE -01- GW	See (5)	Groundwater	X	X	X	Upgradient definition of groundwater contamination.
	IE -01- SO	21.0	Soil	X	X		
	IE -01- 1	5.0	Soil gas	X			
	IE -01- 2	15.0	Soil gas	X			
IE- 02	IE -02- GW	See (5)	Groundwater	X	X	X	Upgradient definition of groundwater contamination.
	IE -02- SO	22.0	Soil	X	X		
	IE -02- 1	5.0	Soil gas	X			
	IE -02- 2	15.0	Soil gas	X			
IE- 03	IE -03- GW	See (5)	Groundwater	X	X	X	Downgradient definition of groundwater contamination near locations of historical detections.
	IE -03- SO	22.0	Soil	X	X		
	IE -03- 1	5.0	Soil gas	X			
	IE -03- 2	15.0	Soil gas	X			

Notes:

- (1) "X" indicates sample to be run for indicated chemical analysis.
- (2) "VOCs" indicates volatile organic compounds by USEPA Method 8260B for groundwater and USEPA TO-15 Hi/Lo (Full-scan/SIM) for soil gas samples.
- (3) "TPH" indicates total petroleum hydrocarbons including:
 - TPH-g – gasoline range organics (GRO) by USEPA method 8260B;
 - TPH-d – diesel range organics (DRO) by USEPA method 8015, with silica gel cleanup; and
 - TPH-mo – motor oil range organics (ORO) by USEPA method 8015, with silica gel cleanup.
- (4) "Metals" indicates Title 22 Metals by USEPA method 6010B/7471A.
- (5) Grab groundwater sample to be collected from first encountered groundwater, anticipated to be at a depth of 30-35 ft bgs.

Table 2. Soil Results Summary

Parameter/Method	Screening Level (1)		Results	Flag	Results	Flag	Results	Flag
Location			IE-01-21.0		IE-02-22.0		IE-03-22.0	
Sample Date			11/9/2016		11/9/2016		11/9/2016	
Units	mg/kg		mg/kg		mg/kg		mg/kg	
Total Petroleum Hydrocarbons (TPH) by USEPA Methods 3511/8015B								
TPH-G	none		0.96	Y	59	Y	<0.18	
TPH-D	440	a	59	Y	6200		73	Y
TPH-MO	5100	b	16		6100		200	
Volatile Organic Compounds (VOCs) by USEPA Method SW-846 8260B								
Acetone	0.5	b	<5.4		1.4		0.014	
Benzene	0.044	b	<1.4		<0.28		<0.0024	
Bromobenzene	1800	a	<1.4		<0.28		<0.0024	
Bromodichloromethane	1.3	a	<1.4		<0.28		<0.0024	
Bromoform	1.7	b	<1.4		<0.28		<0.0024	
Bromomethane	0.3	b	<2.7		<0.55		<0.0047	
2-Butanone (methyl ethyl ketone)	5.1	b	<2.7		<0.55		<0.0047	
n-Butylbenzene	6400	c	<1.4		<0.28		<0.0024	
sec-Butylbenzene	12000	c	<1.4		<0.28		<0.0024	
tert-Butylbenzene	12000	c	<1.4		<0.28		<0.0024	
Carbon tetrachloride	0.048	b	<1.4		<0.28		<0.0024	
Chlorobenzene	1.5	b	<1.4		<0.28		<0.0024	
Chlorodibromomethane (dibromochloromethane)	3.8	b	<1.4		<0.28		<0.0024	
Chloroethane (ethyl chloride)	1.1	b	<2.7		<0.55		<0.0047	
Chloroform	0.068	b	<1.4		<0.28		<0.0024	
Chloromethane (methyl chloride)	29	b	<2.7		<0.55		<0.0047	
2-Chlorotoluene	2600	c	<1.4		<0.28		<0.0024	
4-Chlorotoluene	2300	c	<1.4		<0.28		<0.0024	
Cumene	9900	a	<1.4		<0.28		<0.0024	
Cymene	none		<1.4		<0.28		<0.0024	
1,2-Dibromo-3-chloropropane	0.0045	b	<1.4		<0.28		<0.0024	
1,2-Dibromoethane (ethylene dibromide)	0.00033	b	<1.4		<0.28		<0.0024	
1,2-Dichlorobenzene	1.6	b	<1.4		<0.28		<0.0024	
1,3-Dichlorobenzene	7.4	b	<1.4		<0.28		<0.0024	
1,4-Dichlorobenzene	0.59	b	<1.4		<0.28		<0.0024	
Dichlorodifluoromethane (Freon 12)	370	a	<2.7		<0.55		<0.0047	
1,1-Dichloroethane (1,1-DCA)	0.2	b	<1.4		<0.28		<0.0024	
1,2-Dichloroethane (1,2-DCA)	0.0045	b	<1.4		<0.28		<0.0024	
1,1-Dichloroethene (1,1-DCE)	0.55	b	<1.4		<0.28		<0.0024	
cis-1,2-Dichloroethene (cis-1,2-DCE)	0.19	b	<1.4		<0.28		<0.0024	
trans-1,2-Dichloroethene (trans-1,2-DCE)	0.67	b	<1.4		<0.28		<0.0024	
1,2-Dichloropropane	0.12	b	<1.4		<0.28		<0.0024	
1,3-Dichloropropane	2200	c	<1.4		<0.28		<0.0024	
2,2-Dichloropropane	none		<1.4		<0.28		<0.0024	
1,1-Dichloropropene	none		<1.4		<0.28		<0.0024	
cis-1,3-Dichloropropene	none		<1.4		<0.28		<0.0024	
trans-1,3-Dichloropropene	none		<1.4		<0.28		<0.0024	
Ethylbenzene	1.4	b	<1.4		<0.28		<0.0024	
Hexachlorobutadiene	0.68	b	<1.4		<0.28		<0.0024	

Table 2. Soil Results Summary

Parameter/Method	Screening Level (1)		Results	Flag	Results	Flag	Results	Flag
Location			IE-01-21.0		IE-02-22.0		IE-03-22.0	
Sample Date			11/9/2016		11/9/2016		11/9/2016	
Units	mg/kg		mg/kg		mg/kg		mg/kg	
Methyl tert-butyl ether (MTBE)	0.023	b	<1.4		<0.28		<0.0024	
Methylene bromide	99	a	<1.4		<0.28		<0.0024	
Methylene chloride	0.077	b	<5.4		<1.1		<0.0095	
4-Methyl-2-pentanone (methyl isobutyl ketone)	2.8	b	<2.7		<0.55		<0.0047	
Naphthalene	0.033	b	49		<0.28		<0.0024	
n-Propylbenzene	24000	a	<1.4		<0.28		<0.0024	
Styrene	1.5	b	<1.4		<0.28		<0.0024	
1,1,1,2-Tetrachloroethane	0.01	b	<1.4		<0.28		<0.0024	
1,1,2,2-Tetrachloroethane	0.018	b	<1.4		<0.28		<0.0024	
Tetrachloroethene (PCE)	0.42	b	<1.4		<0.28		<0.0024	
Toluene	2.9	b	<1.4		0.3		<0.0024	
1,2,3-Trichlorobenzene	310	c	<1.4		<0.28		<0.0024	
1,2,4-Trichlorobenzene	1.5	b	<1.4		<0.28		<0.0024	
1,1,1-Trichloroethane (1,1,1-TCA)	7.8	b	<1.4		<0.28		<0.0024	
1,1,2-Trichloroethane (1,1,2-TCA)	0.07	b	<1.4		<0.28		<0.0024	
Trichloroethene (TCE)	0.46	b	<1.4		<0.28		<0.0024	
Trichlorofluoromethane (Freon 11)	5400	c	<1.4		<0.28		<0.0024	
1,2,3-Trichloropropane	0.021	c	<1.4		<0.28		<0.0024	
1,1,2-Trichlorotrifluoroethane	170000	a	<1.4		<0.28		<0.0024	
1,2,4-Trimethylbenzene	240	a	<1.4		<0.28		<0.0024	
1,3,5-Trimethylbenzene	1100	c	<1.4		<0.28		<0.0024	
Vinyl chloride	0.01	b	<2.7		<0.55		<0.0047	
Xylenes	none		<1.4		<0.28		<0.0024	

Definitions:

- (1) < 10 Not detected at or above the laboratory method detection limit of 10 mg/kg
- (2) mg/kg milligrams per kilogram
- (3) **Bold** font indicates a detection at or above the laboratory reporting limit.
- (4) **Boxed** results exceed the most conservative screening level (see note 3 below).
- (5) Y Sample exhibits chromatographic pattern which does not resemble standard.

Notes:

- (1) The screening levels used here to evaluate soil data are the most conservative screening levels available from the following sources:
 - (a) Regional Screening Levels (RSLs) for industrial soil (USEPA, May 2016).
 - (b) SF RWQCB Environmental Screening Levels (ESLs) for shallow soils where groundwater is a current or potential source of drinking water under a commercial/industrial land use scenario (Cal/EPA, February 2016).
 - (c) California Department of Toxic Substances Control (DTSC) Office of Human and Ecological Risk (HERO) Human Health Risk Assessment (HHRA) Note 3. June 2016.

Table 3. Groundwater Sampling Results

	Environmental Screening Levels (2)		Hazardous Waste Screening Levels (3)		IE-01-GW	Flag	IE-02-GW	Flag	IE-03-GW	Flag
Sample Date					11/9/2016		11/9/2016		11/9/2016	
Units	(mg/L)		(mg/L)		(mg/L)		(mg/L)		(mg/L)	
<i>Total Petroleum Hydrocarbon (TPH) by EPA 8015B</i>										
Gasoline Range Organics (GRO)-C5-C12	0.1	b	none		<1.7		0.94		<0.05	
Diesel Range Organics [C10-C28]	0.1	b	none		3	Y	11	Y	<0.056	
Motor Oil Range Organics [C24-C36]	0.1	b	none		<0.37		11		<0.33	
<i>Volatile Organic Compounds (VOCs) by EPA 8260B</i>										
Acetone	1.5	b	none		<0.33		<0.01		<0.01	
Benzene	0.001	a	0.5	b	<0.017		<0.0005		<0.0005	
Bromobenzene	none		none		<0.017		<0.0005		<0.0005	
Bromodichloromethane	0.08	b	none		<0.017		<0.0005		<0.0005	
Bromoform	0.08	b	none		<0.033		<0.001		<0.001	
2-Butanone (methyl ethyl ketone)	5.57	b	200	b	<0.33		<0.01		<0.01	
n-Butylbenzene	none		none		<0.017		<0.0005		<0.0005	
sec-Butylbenzene	none		none		<0.017		0.0009		<0.0005	
tert-Butylbenzene	none		none		<0.017		<0.0005		<0.0005	
Carbon disulfide	none		none		<0.017		<0.0005		<0.0005	
Carbon tetrachloride	0.0002	b	0.5	b	<0.017		<0.0005		<0.0005	
Chlorobenzene	0.025	b	100	b	<0.017		<0.0005		<0.0005	
Chlorobromomethane (bromochloromethane)	none		none		<0.017		<0.0005		<0.0005	
Chlorodibromomethane	0.046	b	none		<0.017		<0.0005		<0.0005	
Chloroethane (ethyl chloride)	0.016	b	none		<0.033		<0.001		<0.001	
Chloroform	0.002	b	6	b	<0.017		<0.0005		<0.0005	
Chloromethane (methyl chloride)	0.188	b	none		<0.033		<0.001		<0.001	
2-Chlorotoluene	none		none		<0.017		<0.0005		<0.0005	
4-Chlorotoluene	none		none		<0.017		<0.0005		<0.0005	
Cumene	none		none		<0.017		0.001		<0.0005	
Cymene	none		none		<0.017		<0.0005		<0.0005	
1,2-Dibromo-3-chloropropane	0.0002	b	none		<0.067		<0.002		<0.002	
1,2-Dibromoethane (ethylene dibromide)	0.00005	b	none		<0.017		<0.0005		<0.0005	
1,2-Dichlorobenzene	0.014	b	none		<0.017		<0.0005		<0.0005	
1,3-Dichlorobenzene	0.065	b	none		<0.017		<0.0005		<0.0005	
1,4-Dichlorobenzene	0.005	a	7.5	b	<0.017		<0.0005		<0.0005	
Dichlorodifluoromethane (Freon 12)	none		none		<0.033		<0.001		<0.001	
1,1-Dichloroethane (1,1-DCA)	0.005	a	none		<0.017		<0.0005		<0.0005	
1,2-Dichloroethane (1,2-DCA)	0.0005	a	0.5	b	<0.017		<0.0005		<0.0005	
1,1-Dichloroethene (1,1-DCE)	0.003	b	0.7	b	<0.017		<0.0005		<0.0005	
cis-1,2-Dichloroethene (cis-1,2-DCE)	0.006	a	none		<0.017		<0.0005		<0.0005	
trans-1,2-Dichloroethene (trans-1,2-DCE)	0.01	a	none		<0.017		<0.0005		<0.0005	
1,2-Dichloropropane	0.005	a	none		<0.017		<0.0005		<0.0005	
1,3-Dichloropropane	none		none		<0.017		<0.0005		<0.0005	
2,2-Dichloropropane	none		none		<0.017		<0.0005		<0.0005	
1,1-Dichloropropene	none		none		<0.017		<0.0005		<0.0005	
cis-1,3-Dichloropropene	none		none		<0.017		<0.0005		<0.0005	
trans-1,3-Dichloropropene	0.0005	a	none		<0.017		<0.0005		<0.0005	
Ethylbenzene	0.013	b	none		<0.017		0.0012		<0.0005	
Hexachlorobutadiene	0.0001	b	none		<0.067		<0.002		<0.002	
2-Hexanone (methyl butyl ketone)	none		none		<0.33		<0.01		<0.01	
Methyl bromide (bromomethane)	0.008	b	none		<0.033		<0.001		<0.001	
Methyl tert-butyl ether (MTBE)	0.005	b	none		<0.017		<0.0005		<0.0005	
Methylene bromide	none		none		<0.017		<0.0005		<0.0005	
Methylene chloride	0.005	b	none		<0.33		<0.01		<0.01	
4-Methyl-2-pentanone (methyl isobutyl ketone)	0.12	b	none		<0.33		<0.01		<0.01	
Naphthalene	0.0002	b	none		1.7		0.055		<0.002	
n-Propylbenzene	none		none		<0.017		<0.0005		<0.0005	
Styrene	0.01	b	none		<0.017		<0.0005		<0.0005	
1,1,1,2-Tetrachloroethane	0.0006	b	none		<0.017		<0.0005		<0.0005	
1,1,2,2-Tetrachloroethane	0.001	a	none		<0.017		<0.0005		<0.0005	

Table 3. Groundwater Sampling Results

	Environmental Screening Levels (2)		Hazardous Waste Screening Levels (3)		IE-01-GW	Flag	IE-02-GW	Flag	IE-03-GW	Flag
Sample Date					11/9/2016		11/9/2016		11/9/2016	
Units	(mg/L)		(mg/L)		(mg/L)		(mg/L)		(mg/L)	
Tetrachloroethene (PCE)	0.003	b	0.7	b	<0.017		<0.0005		<0.0005	
Toluene	0.04	b	none		<0.017		<0.0005		<0.0005	
1,2,3-Trichlorobenzene	none		none		<0.017		<0.0005		<0.0005	
1,2,4-Trichlorobenzene	0.005	a	none		<0.017		<0.0005		<0.0005	
1,1,1-Trichloroethane (1,1,1-TCA)	0.062	b	none		<0.017		<0.0005		<0.0005	
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	a	none		<0.017		<0.0005		<0.0005	
Trichloroethene (TCE)	0.005	a	0.5	b	<0.017		<0.0005		<0.0005	
Trichlorofluoromethane (Freon 11)	0.15	a	none		<0.033		<0.001		<0.001	
1,2,3-Trichloropropane	none		none		<0.017		<0.0005		<0.0005	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	none		none		<0.067		<0.002		<0.002	
1,2,4-Trimethylbenzene	none		none		<0.017		0.0017		<0.0005	
1,3,5-Trimethylbenzene	none		none		<0.017		0.0038		<0.0005	
Vinyl acetate	none		none		<0.33		<0.01		<0.01	
Vinyl chloride	0.00006	b	0.2	b	<0.017		<0.0005		<0.0005	
o-Xylene	none		none		<0.017		0.0017		<0.0005	
m-/p- Xylene	none		none		<0.017		0.0043		<0.0005	
<i>Metals by EPA 6010B and 7471A</i>										
Antimony	0.006	a	15	a	0.72		1.1		<0.01	
Arsenic	0.01	a	5	a	1.9		1.3		<0.005	
Barium	1	a	100	a	28		42		<0.005	
Beryllium	0.003	b	0.75	a	0.11		0.16		<0.002	
Cadmium	0.0003	b	1	a	0.16		0.22		<0.005	
Chromium	0.05	a	5	a	12		15		<0.005	
Cobalt	0.003	b	80	a	2.2		3.3		<0.005	
Copper	0.003	b	25	a	5.8		8		<0.005	
Lead	0.003	b	5	a	2.4		2		<0.005	
Mercury	0.00005	b	0.2	a	0.00036		0.014		0.0014	
Molybdenum	0.1	b	350	a	0.44		0.41		<0.005	
Nickel	0.008	b	20	a	14		18		<0.005	
Selenium	0.005	b	1	a	0.17		0.3		<0.01	
Silver	0.0002	b	5	a	<0.025		<0.025		<0.005	
Thallium	0.002	a	7	a	<0.05		<0.05		<0.01	
Vanadium	0.019	b	24	a	7.5		12		<0.005	
Zinc	0.08	b	250	a	19		18		0.16	

Notes:

- (1) All results in milligrams per kilogram (mg/L)
- (2) The Environmental Screening Level that is used is the most conservative value from the following sources:
 - (a) Maximum Contaminant Levels (MCL) for drinking water (Cal/EPA September 2016)
 - (b) Tier 1 Environmental Screening Levels (ESLs) for groundwater that is a current or potential source of drinking water (Cal/EPA, February 2016).
- (3) The Hazardous Waste Screening Level that is used is the most conservative value from the following sources:
 - (a) California Soluble Threshold Limit Concentration (STLC) hazardous waste screening level.
 - (b) Federal Toxicity Characteristic Leaching Procedure (TCLP) hazardous waste screening level.
- (4) **Bold** font indicates a detection at or above the laboratory reporting limit.
- (5) Boxed results exceed a conservative environmental screening level for drinking water.
- (6) Shaded results exceed a hazardous waste screening criteria.

Definitions:

- none No established screening level
- < X Not detected at or above the laboratory reporting limit of X mg/kg
- Y Sample exhibits chromatographic pattern which does not resemble standard.

Table 4. Soil Gas Chemical Analytical Results – VOCs

Parameter	RBSC (2)	Samples						
Sample Location	–	IE-01-1	IE-01-2	IE-02-1	IE-02-2	IE-03-1	IE-03-1-DUP	IE-03-2
Sample Depth (ft bgs)	–	5	15	5	15	5	5	15
Sample Date	–	11/9/2016	11/9/2016	11/9/2016	11/9/2016	11/9/2016	11/9/2016	11/9/2016
Units	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
Volatile Organic Compounds (VOCs) by USEPA Method TO-15								
Acetone	2.4E+08	210	29	96	180	65	63	51
Acrolein	1.7E+02	<10	<10	<8.8	<9.8	<8.1	<8	<8
Benzene	9.2E+02	17	21	11	21	37	39	18
Benzyl chloride (alpha chlorotoluene)	6.0E+02	<5.7	<5.7	<5	<5.5	<4.6	<4.5	<4.5
Bromodichloromethane	1.6E+03	<7.4	<7.4	<6.4	<7.2	<5.9	<5.9	<5.9
Bromoform	9.8E+04	<11	<11	<9.9	<11	<9.1	<9	<9
Methyl bromide (bromomethane)	5.4E+04	<4.3	<4.3	<3.7	<4.2	<3.4	<3.4	<3.4
1,3-Butadiene	9.3E+01	2.5	6.1	3.9	2.7	<2	<1.9	3.7
2-Butanone (methyl ethyl ketone)	5.0E+07	45	9.4	29	46	19	18	13
Carbon disulfide	6.0E+06	16	13	9.8	<3.3	16	16	3.6
Carbon tetrachloride	6.8E+02	<6.9	<7	<6	<6.7	<5.6	<5.5	<5.5
Chlorobenzene	5.4E+05	<5.1	<5.1	<4.4	<4.9	<4.1	<4	<4
Chlorodibromomethane	2.4E+03	<9.4	<9.5	<8.2	<9.1	<7.5	<7.5	<7.5
Chloroethane (ethyl chloride)	1.3E+04	<2.9	<2.9	<2.5	<2.8	<2.3	<2.3	<2.3
Chloroform	1.0E+03	<5.4	<5.4	<4.7	<5.2	<4.3	<4.3	<4.3
Chloromethane (methyl chloride)	6.9E+05	<2.3	<2.3	<2	<2.2	<1.8	<1.8	<1.8
Cyclohexane	6.1E+07	620	190	170	32	86	86	20
1,2-Dibromoethane (ethylene dibromide)	1.3E+02	<8.5	<8.5	<7.4	<8.2	<6.8	<6.7	<6.7
1,2-Dichlorobenzene	2.2E+06	<6.6	<6.7	<5.8	<6.4	<5.3	<5.3	<5.3
1,3-Dichlorobenzene	1.3E+06	<6.6	<6.7	<5.8	<6.4	<5.3	<5.3	<5.3
1,4-Dichlorobenzene	2.8E+03	<6.6	<6.7	<5.8	<6.4	<5.3	<5.3	<5.3
Dichlorodifluoromethane (Freon 12)	1.1E+06	<5.4	<5.5	<4.7	<5.3	<4.4	<4.3	<4.3
1,1-Dichloroethane (1,1-DCA)	1.9E+04	<4.5	<4.5	<3.9	<4.3	<3.6	<3.5	<3.5
1,2-Dichloroethane (1,2-DCA)	9.2E+02	<4.5	<4.5	<3.9	<4.3	<3.6	<3.5	<3.5
1,1-Dichloroethene (1,1-DCE)	6.6E+05	<4.4	<4.4	<3.8	<4.2	<3.5	<3.5	<3.5
cis-1,2-Dichloroethene (cis-1,2-DCE)	7.6E+04	<4.4	<4.4	<3.8	<4.2	<3.5	<3.5	<3.5
trans-1,2-Dichloroethene (trans-1,2-DCE)	7.6E+05	<4.4	<4.4	<3.8	<4.2	<3.5	<3.5	<3.5
1,2-Dichloropropane	2.9E+03	<5.1	<5.1	<4.4	<4.9	<4.1	<4	<4
cis-1,3-Dichloropropene	1.7E+03	<5	<5	<4.4	<4.9	<4	<4	<4
trans-1,3-Dichloropropene	1.7E+03	<5	<5	<4.4	<4.9	<4	<4	<4
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	3.4E+08	<7.7	<7.8	<6.7	<7.5	<6.2	<6.1	<6.1
Ethyl acetate	6.9E+05	4.1	<4	<3.5	10	<3.2	<3.2	<3.2
Ethylbenzene	1.2E+04	<4.8	<4.8	<4.2	5.4	49	51	<3.8
4-Ethyltoluene	1.1E+06	<5.4	<5.5	<4.7	<5.3	51	55	<4.3
Heptane	7.7E+06	4.7	9.3	11	26	75	77	21
Hexachlorobutadiene	1.6E+03	<12	<12	<10	<11	<9.4	<9.3	<9.3
Hexane	7.5E+06	5.6	13	12	28	180	180	24
2-Hexanone (methyl butyl ketone)	3.2E+05	<4.5	<4.5	7.2	<4.4	<3.6	<3.6	<3.6
Methyl tert-butyl ether (MTBE)	1.1E+05	4.6	<4	<3.5	<3.9	<3.2	<3.2	<3.2
Methylene chloride	2.4E+04	<3.8	<3.9	<3.3	<3.7	<3.1	<3	<3
4-Methyl-2-pentanone (methyl isobutyl ketone)	3.2E+07	<4.5	<4.5	12	11	310	320	8.3
Naphthalene	1.0E+03	<23	<23	<20	<22	<19	<18	<18
Styrene	9.8E+06	<4.7	25	<4.1	<4.6	<3.8	<3.7	<3.7
1,1,2,2-Tetrachloroethane	5.3E+02	<7.6	<7.6	<6.6	<7.3	<6.1	<6	<6
Tetrachloroethene (PCE)	6.4E+03	<7.5	<7.5	<6.5	<7.3	64	66	14
Tetrahydrofuran	1.7E+07	<3.2	<3.3	<2.8	<3.2	<2.6	<2.6	<2.6
Toluene	2.9E+06	21	27	17	21	32	32	14
1,2,4-Trichlorobenzene	6.4E+03	<8.2	<8.2	<7.1	<7.9	<6.6	<6.5	<6.5
1,1,1-Trichloroethane (1,1,1-TCA)	1.0E+07	23	1300	<5.2	<5.8	<4.8	<4.8	<4.8
1,1,2-Trichloroethane (1,1,2-TCA)	1.8E+03	<6	<6.1	<5.2	<5.8	<4.8	<4.8	<4.8
Trichloroethene (TCE)	6.9E+03	<5.9	<6	<5.2	<5.7	<4.8	<4.7	<4.7
Trichlorofluoromethane (Freon 11)	6.7E+06	<6.2	<6.2	<5.4	<6	<5	<4.9	5.7
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	3.1E+08	<8.4	<8.5	<7.4	<8.2	<6.8	<6.7	<6.7

Table 4. Soil Gas Chemical Analytical Results – VOCs

Parameter	RBSC (2)	Samples						
Sample Location	–	IE-01-1	IE-01-2	IE-02-1	IE-02-2	IE-03-1	IE-03-1-DUP	IE-03-2
Sample Depth (ft bgs)	–	5	15	5	15	5	5	15
Sample Date	–	11/9/2016	11/9/2016	11/9/2016	11/9/2016	11/9/2016	11/9/2016	11/9/2016
Units	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
1,2,4-Trimethylbenzene	7.3E+05	<5.4	<5.5	6.7	9.7	250	260	8.2
1,3,5-Trimethylbenzene	7.3E+05	<5.4	<5.5	<4.7	<5.3	99	110	<4.3
Vinyl acetate	1.9E+06	<3.9	<3.9	<3.4	<3.8	<3.1	<3.1	<3.1
Vinyl chloride	3.0E+02	<2.8	<2.8	<2.5	<2.7	<2.3	<2.2	<2.2
m-,p-Xylene	9.6E+05	6.3	16	11	14	200	220	11
o-Xylene	9.6E+05	<4.8	<4.8	<4.2	5	180	190	6.8

Notes:

- (1) All results in micrograms per cubic meter (µg/m³).
- (2) Soil gas sampling results are compared to risk-based screening concentrations (RBSCs) for a future onsite commercial scenario developed using the Johnson & Ettinger (J&E) Model with a 5-foot bgs attenuation factor as described in the Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance) (DTSC, October 2011). The RBSC used here is the most conservative between the cancer-based and noncancer-based screening levels.
- (3) **Bold** font indicates a detection at or above the laboratory reporting limit.
- (4) Boxed results exceeded the RBSC

Definitions:

- < 1.0 = not detected at or above the laboratory reporting limit of 1.0 µg/m³
RBSC = risk-based screening concentration