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Alameda County
Environmental Health

Via Email

November 19, 2009

Jerry Wickham, P.E.
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Draft Sub-slab Soil Gas Sampling and Analysis Plan
Former Nestlé USA, Inc. Facility
1310 14th Street, Oakland, California

Dear Mr. Wickham:

On behalf of Nestlé USA, Inc., and in response to your technical report request of September 18, 2009, Iris Environmental hereby submits the *Draft Sub-slab Soil Gas Sampling and Analysis Plan, Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California*. This sampling and analysis plan summarizes the technical approach that will be followed during the upcoming sub-slab soil gas investigation of the former Carnation Dairy facility located at 1310 14th Street in Oakland, California.

Perjury Statement

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.

Please don't hesitate to call us at (510) 834-4747 if you have any questions regarding this report.

Sincerely,

IRIS ENVIRONMENTAL

Rob Balas
Principal, Air Sciences

Gregory S. Noblet, P.E.
Senior Manager

Attachments: *Draft Sub-slab Soil Gas Sampling and Analysis Plan, Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California*

DRAFT

SUB-SLAB SOIL GAS SAMPLING AND ANALYSIS PLAN

Former Nestlé USA, Inc. Facility

1310 14th Street, Oakland, California

November 19, 2009

Prepared for:

Nestlé USA, Inc.
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TABLE OF CONTENTS

Table of Contents i
1.0 Introduction 1
2.0 Background 1
2.1 Site History 1
2.2 Remedial Activities 1
2.3 Site Investigations 2
2.4 Corrective Action Plan 3
3.0 Chemicals of Potential Concern in Indoor Air 3
4.0 Risk-based Sub-slab Soil Gas Screening Levels 3
4.1 Target Indoor Air Concentrations 3
4.2 Calculation of Risk-based Sub-slab Soil Gas Screening Levels 5
5.0 Pre-Sampling Investigation 6
6.0 Sub-slab Soil Gas Sample Collection and Analysis 7
6.1 Emplacement of Sub-slab Soil Gas Probes 7
6.2 Sample Collection 8
6.3 Leak Test 8
6.4 Procedure for Low-flow Conditions 9
6.5 Sample Handling and Documentation 9
6.5.1 Field Notes 9
6.5.2 Sample Labeling 9
6.5.3 Chain of Custody 9
6.5.4 Sample Container Preservation 10
6.6 Field QA/QC Procedures 10
6.6.1 Trip Blank Sample 10
6.6.2 Field Duplicate Sample 11
6.8 Sample Analysis 11
6.9 Laboratory QA/QC Procedures 12
6.10 Post-sampling Activities 12
7.0 Data Analysis and Reporting 12
8.0 Health and Safety Plan 12
9.0 References 12

List of Tables

Table 1. Cancer and Noncancer Toxicity Values

Table 2. Commercial Exposure Assumptions

Table 3. Risk-based Target Concentrations in Indoor Air

Table 4. Risk-based Levels of Concern in Sub-slab Soil Gas and Laboratory Reporting Limits

List of Figures

Figure 1. Site Location Map

Figure 2. Proposed Sub-slab Soil Gas Sampling Locations

Figure 3. Sub-slab Soil Gas Probe Diagram

Appendix A – Results of Previous Site Investigations

Table 1a. Soil Gas Sampling Results, Vapors in Soil - August 99 (ECM, 2008b)

Table 1b. Soil Gas Sampling Results, Vapors in Soil - May 08 (ECM, 2008b)

Table 2. Historical Soil Sample Results (1999-2008) (ECM, 2008b)

Table 3. Historical Groundwater Sample Results (1993-2008) (ECM, 2008b)

Figure 2. Supplemental Soil, Soil Gas and Groundwater Investigation, Soil Boring Locations, May 2008 (ECM, 2008a)

Figure 9. Revised Site Conceptual Model – November 2008, Soil Gas Sampling Results (August 1999) (ECM, 2008b)

1.0 INTRODUCTION

Iris Environmental is submitting this sub-slab soil gas sampling and analysis plan (SAP) in response to the Alameda County Environmental Health (ACEH) department request for a *Work Plan for Subslab Vapor Sampling* in their September 18, 2009 letter. Previous site investigations at the commercial property located at northwestern portion of 1310 14th Street in Oakland, California (site) have documented the presence of volatile organic compounds (VOCs) in the subsurface at the site (Iris Environmental, 2009a). Of concern is the possibility that VOCs present in the subsurface may migrate upwards via diffusion through the vadose (unsaturated) soil zone, and be transported by advection through cracks, conduits, or seams in the building foundation into the indoor air space of the existing onsite commercial building (a transport phenomenon known as "vapor intrusion"), where potential occupants may be exposed to the volatile chemicals via the inhalation route. The vapor intrusion pathway was previously evaluated as part of the screening health risk evaluation, and it was found that vapor intrusion is unlikely to be occurring at levels of concern to commercial workers. Nonetheless, given the uncertainly inherent in vapor intrusion modeling, ACEH would like to confirm the results of vapor intrusion analysis. Accordingly, the purpose of the investigation described in this SAP is to measure the concentrations of VOCs in sub-slab soil gas beneath the commercial building, and to gather the data necessary to evaluate whether vapor intrusion is occurring at the site at significant levels. To this end, this SAP summarizes the technical approach that will be followed during the upcoming sub-slab soil gas investigation.

2.0 BACKGROUND

2.1 Site History

The 1310 14th Street site (see Figure 1) was formerly occupied by the Carnation Dairy. The primary activities conducted at the site were the manufacturing and distribution of ice cream and packaged milk. Delivery trucks were fueled and maintained onsite; the fuel storage and dispensing system was located in the northwest portion of the site, and consisted of underground storage tanks and associated underground piping. These activities were conducted at the site until 1988. The underground storage tanks and associated piping are now known to have leaked petroleum products into site soils, resulting in petroleum contamination of subsurface soils, a layer of petroleum product floating on the groundwater table, and dissolved petroleum hydrocarbons in site groundwater (ETIC, 2001a). These impacts have been partially addressed by various remedial activities, as described below.

2.2 Remedial Activities

Five underground storage tanks and associated underground piping were removed from the site between December 1988 and January 1989, including: two 12,000-gallon diesel tanks, two 10,000-gallon gasoline tanks, and one 1,000-gallon used oil tank. At that time, 1,200 cubic yards of petroleum hydrocarbon-impacted soil were excavated, treated onsite, and replaced into the excavation. Noted at the time of this removal action was the presence of petroleum hydrocarbons in the soil and floating on the groundwater table outside of the excavation area (ETIC, 2001a).

Various site investigations and remedial activities have been conducted at the site since the initial underground storage tank excavations. Remedial activities have included the following (COFS, 2000; ETIC, 2001a):

- Approximately 1.5 million gallons of groundwater were extracted from the subsurface following removal of the underground storage tanks.
- Product skimming was conducted between January and March 1989. Approximately 1,800 gallons of liquid phase hydrocarbons were removed from the subsurface.
- A soil vapor extraction system was operated from January 1994 to February 1995. An estimated 5,200 gallons of hydrocarbon equivalent were removed from the subsurface.
- A multi-phase extraction system was operated from August 1997 through June 2000. A total of 10,875 pounds of hydrocarbons were removed during this period.

Current site conditions have been previously characterized through soil, soil gas, and groundwater sampling conducted in May of 2008, as described below.

2.3 Site Investigations

Impacts to site soil, groundwater, and soil gas, associated with leaks of petroleum hydrocarbons from underground storage tanks and piping, have been documented in several site investigations performed since 1991. Soil gas investigations were performed in 1999 and in May of 2008. Soil investigations were performed at the time of underground storage tank excavation in 1991, in 1999, and most recently in May of 2008. Groundwater monitoring was performed on a regular basis from 1993 to 2004 and in May of 2008.

As noted in the *Supplemental Soil, Soil Gas, and Groundwater Investigation Report* (ECM, 2008a), components of the May 2008 site investigation consisted of

- soil sampling for total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs) at five locations (SB-16 through SB-20), at various depths, to provide current characterization of residual hydrocarbon impacts in the area downgradient from the former underground storage tanks;
- soil sampling for TPH and VOCs at seven locations (SB-21 through SB-27), at various depths, to provide delineation of hydrocarbon impacts in areas of the site which had not been thoroughly characterized;
- soil sampling for polychlorinated biphenyls (PCBs) at seven locations (PCB-1 through PCB-7), at various depths, to document the presence or absence of PCBs at the site;
- soil gas sampling for TPH and VOCs at 12 locations (SB-16 through SB-27), including seven locations in the area downgradient from the former underground storage tanks (SB-20 through SB-27), at a depth of 5 feet, to provide a complete set of soil gas data for use in evaluating vapor intrusion; and
- grab groundwater sampling for TPH and VOCs at 11 locations (SB-16 through SB-27 exclusive of SB-23).

The results of all previous site investigations, as summarized in Table 1a (1999 soil gas data), Table 1b (2008 soil gas data), Table 2 (soil TPH and VOC data), Table 3 (soil PCB data), and Table 4 (groundwater data) of the *Revised Site Conceptual Model Report* (ECM, 2008b), are provided in Appendix A.

2.4 Corrective Action Plan

A draft corrective action plan (CAP) for the site was prepared by Environmental Cost Management Inc. and submitted to ACEH on May 19, 2009 (ECM, 2009). The draft CAP summarized site characterization and remediation activities, and developed and evaluated remedial alternatives. The draft CAP included a screening level human health evaluation that evaluated potential health impacts to various receptor populations associated with the presence of VOCs at the site (Iris Environmental, 2009b). The human health evaluation presented site-specific vapor intrusion modeling with the Johnson and Ettinger Model which concluded that site conditions are such that vapor intrusion is occurring below levels of concern for onsite commercial/industrial workers. As noted above, the ACEH requested that a sub-slab soil gas investigation be performed to measure VOC concentrations beneath the building and thereby confirm the results of the vapor intrusion modeling evaluation. Based on the data collected as part of this SAP, the CAP would be modified as appropriate.

3.0 CHEMICALS OF POTENTIAL CONCERN IN INDOOR AIR

Chemicals of potential concern (COPCs) (*i.e.*, target analytes) for the sub-slab soil gas investigation include all VOCs that have been previously detected at the site in soil gas. The 28 VOCs previously detected in soil gas are presented in Table 1.

4.0 RISK-BASED SUB-SLAB SOIL GAS SCREENING LEVELS

Risk-based sub-slab soil gas screening levels of COPCs in air are established here to guide the selection of appropriate sampling and analysis protocols, and to provide numerical criteria for evaluation of the sub-slab soil gas sampling results. Risk-based sub-slab soil gas screening levels are developed from target indoor air concentrations calculated in Section 4.1 and a default sub-slab attenuation factor as presented in Section 4.2.

4.1 Target Indoor Air Concentrations

Target indoor air concentrations are modified California Human Health Screening Levels (CHHSLs) for indoor air under a commercial exposure scenario, assuming a target cancer risk of 1×10^{-5} (*i.e.*, 10 in a million) and a target hazard index of 1.0 (Cal/EPA, 2005a; 2005b). The target indoor air concentrations are developed using the same methodology (Cal/EPA, 2005a; 2005b), sources of cancer and noncancer toxicity values (Cal/EPA, 2009; USEPA, 2009a; USEPA, 2009b), and exposure assumptions (Cal/EPA, 2005b; 2005d) used by OEHHA in development of the published CHHSLs; the modifications consist of: 1) the use of a 1×10^{-5} target risk level, 2) the use of current cancer and noncancer toxicity values, and 3) the use of USEPA noncancer inhalation toxicity values if they are more conservative than Cal/EPA values.

The target risk level of 1×10^{-5} is based on an "acceptable" cancer risk level, as defined and endorsed by relevant state and federal agencies. The National Contingency Plan (NCP) is cited by USEPA (1989) as the basis for defining acceptable incremental (from a particular site) risk levels. According to the NCP, lifetime incremental cancer risk levels posed by a site should not exceed the risk range of one in a million (1×10^{-6}) to 100 in a million (1×10^{-4}). Thus, USEPA and Cal/EPA agencies typically consider the 1×10^{-6} risk level to be an insignificant risk, and consider a calculated excess cancer risk between 1×10^{-6} and 1×10^{-4} to be within the acceptable risk range. For commercial-industrial exposure scenarios, a typical point of departure is a risk level of 1×10^{-5}; *i.e.*, if risks are at or below 1×10^{-5}, the agency of record will generally accept no further action. Relatedly, California Proposition 65 cites the 1×10^{-5} risk level as the threshold of concern under commercial-industrial exposure scenarios. Therefore, target indoor air concentrations and, by extension, sub-slab soil gas screening levels for commercial-industrial exposures are based on a 1×10^{-5} risk level.

The target indoor air concentration, based on potential cancer effects, of each carcinogenic COPC that could be present in the indoor air of the onsite commercial/industrial building is estimated using standard USEPA and Cal/EPA DTSC risk assessment methodology (USEPA, 1989; Cal/EPA,1994) and Cal/EPA OEHHA risk assessment guidance (Cal/EPA, 2005a):

$$CA_c = \frac{TR \times AT_c}{URF \times EF \times ED} \qquad (1)$$

where:

- CA_c = concentration of chemical in indoor air (µg/m^3) that produces the target cancer risk under either a commercial/industrial or residential exposure scenario;
- TR = target inhalation cancer risk (unitless);
- URF = unit risk factor (per µg/m^3);
- AT_c = averaging time for carcinogenic effects (d);
- EF = exposure frequency (d/yr); and
- ED = exposure duration (yr).

The target indoor air concentration, based on potential noncancer effects, of each COPC that could be present in the indoor air of the onsite commercial/industrial building is estimated using standard USEPA and Cal/EPA DTSC risk assessment methodology (USEPA, 1989; Cal/EPA,1994) and Cal/EPA OEHHA risk assessment guidance (Cal/EPA, 2005a):

$$CA_{nc} = \frac{THQ \times AT_{nc} \times REL}{EF \times ED} \qquad (2)$$

where:

- CA_{nc} = concentration of chemical in indoor air (µg/m^3) that produces the target noncancer hazard quotient under a commercial/industrial or residential exposure scenario;
- THQ = target inhalation noncancer hazard quotient (unitless);

REL = reference exposure level (also known as the reference concentration [RfC]) (µg/m^3); and

AT_{nc} = averaging time for noncarcinogenic effects (d).

The toxicity values and commercial exposure assumptions used to develop target indoor air concentrations are documented in Tables 1 and 2. Target indoor air concentrations are presented in Table 3.

4.2 Calculation of Risk-based Sub-slab Soil Gas Screening Levels

Risk-based sub-slab soil gas screening levels are developed using a slab attenuation factor of 0.01, consistent with DTSC vapor intrusion guidance (Cal/EPA, 2005c). By definition, the attenuation factor is the ratio of the chemical concentration in indoor air (resulting from vapor intrusion) to the chemical concentration in soil gas beneath the building:

$$\alpha \equiv \frac{C_{IA}}{C_{SG}} \quad (3)$$

where:

α = attenuation factor (unitless);

C_{IA} = concentration of chemical in indoor air (µg/m^3); and

C_{SG} = concentration of chemical in soil gas (µg/m^3).

Risk-based sub-slab soil gas screening levels for COPCs are derived from the target indoor air concentrations (see Section 4.1, above) and, in accordance with DTSC vapor intrusion guidance (Cal/EPA, 2005c), an assumed slab attenuation factor of 0.01. A slab attenuation factor of 0.01 means that chemical concentrations are assumed to decrease by a factor of 100 as the chemicals are transported from sub-slab soil gas into the indoor air space of the overlying building. In other words, risk-based sub-slab soil gas screening levels are 100 times higher than target indoor air concentrations.

For each carcinogenic chemical, the cancer-based sub-slab soil gas screening level is calculated from:

$$SL_{SSSG,c} = \frac{CA_c}{\alpha} \quad (4)$$

where:

$SL_{SSSG,c}$ = cancer-based sub-slab soil gas screening level (µg/m^3);

CAc = cancer-based target indoor air concentration (µg/m^3); and

α = slab attenuation factor (unitless).

For each chemical, the noncancer-based sub-slab soil gas screening level is calculated from:

$$SL_{SSSG,nc} = \frac{CA_{nc}}{\alpha} \qquad (5)$$

where:

$SL_{SSSG,nc}$ = noncancer-based sub-slab soil gas screening level (µg/m^3);

CA_{nc} = noncancer-based target indoor air concentration (µg/m^3); and

α = slab attenuation factor (unitless).

Risk-based sub-slab soil gas screening levels for COPCs are documented in Table 4. The sub-slab soil gas sampling and analysis methodologies described below are designed to achieve laboratory reporting limits which are below these risk-based sub-slab soil gas screening levels. If not possible, the lowest practically feasible detection limits will be achieved.

5.0 PRE-SAMPLING INVESTIGATION

Iris Environmental participated in a site visit on October 21, 2009 prior to the sub-slab soil gas investigation. The purpose of the site visit is to conduct a walkthrough/inspection of the existing onsite building for the purposes of: 1) identifying appropriate sub-slab soil gas sampling locations; 2) identifying any potential vapor intrusion conduits (utility penetrations, cracks, etc.) through the building foundation; 3) identifying any potential indoor chemical sources; and 4) ascertaining building ventilation characteristics.

During the site visit, six locations were identified for sub-slab soil gas sampling. These proposed locations are shown on Figure 2. These locations were chosen according to the following criteria: proximity to previously identified soil, soil gas, and groundwater impacts; coverage of the building footprint; and avoidance of existing subsurface features including previously abandoned soil borings. Previously identified impacts to site soil gas, soil, and groundwater – as represented by benzene concentrations – are shown graphically in Figure 2. The benzene impacts to soil and groundwater shown in Figure 2 are taken from Figures 24 and 32, respectively, of the *Revised Site Conceptual Model Report* (ECM, 2008b). The benzene impacts to soil gas shown in Figure 2 are plotted by Iris Environmental, based on 2008 soil gas data reported by ECM (2008b).

Numerous floor drains and sumps are present at the building. Iris Environmental “sniffed” all slab penetrations with a parts per billion (ppb)-level VOC meter, to determine if volatile chemicals are intruding into the building through these penetrations. No elevated (relative to outdoor/background levels) VOC readings were measured, anywhere on site.

On the date of the site visit, the building remains unoccupied, and is was generally empty, except for scattered debris, empty spray paint cans, and one burned automobile. The interior walls of the building were covered with graffiti (spray paint) of varying age (some recent), but this paint did not seem to be emitting detectable amounts of VOCs. There is another small structure on the site, apparently previously used as a large walk-in freezer. This structure has some empty Freon canisters inside.

The building has no functioning ventilation system, save natural ventilation. The building has large open doorways and is expected to be well-ventilated by natural ventilation. The use of the default air exchange rate is highly conservative for the building. The building has a single story and is 15 to 20 feet tall. The building comprises a series of bays of varying size, typically with rollup doors at each end. All rollup doors facing the interior of the property were either open or missing at the time of the pre-sampling site visit. Abandoned/nonfunctioning ventilation equipment was observed in several of the bays.

6.0 SUB-SLAB SOIL GAS SAMPLE COLLECTION AND ANALYSIS

Sub-slab soil gas sampling activities will be completed in general accordance with the guidance specified by Los Angeles Regional Water Quality Control Board (RWQCB) (Cal/EPA, 1997), jointly by DTSC and Los Angeles RWQCB (Cal/EPA, 2003), and by DTSC (Cal/EPA, 2005c). As noted above, sub-slab soil gas sampling is proposed at six locations in the building as shown in Figure 2.

6.1 Emplacement of Sub-slab Soil Gas Probes

All sub-slab utilities will be located and clearly marked on the slab prior to drilling. A small-diameter hole – approximately 1.0 inches in diameter – will be drilled through the concrete of the foundation slab at the desired sample location using either an electric hand drill or concrete corer. The tip of the sampling probe will be seated beneath the concrete slab. The sampling probe will be constructed with the following specifications, in accordance with DTSC sub-slab sampling guidance (Cal/EPA, 2005c)

1. Vapor probes will be constructed of 1/8-inch or 1/4-inch diameter brass or stainless steel pipe, with a filter tip at the down-hole end. A Teflon™ sealing disk will be placed between the probe tip and the blank pipe, if necessary. The annular space between the probe pipe and subslab gravel will be filled with sand to cover the filter tip.
2. Bentonite chips will be emplaced immediately above the sand pack, followed by a mixture of bentonite chips and bentonite powder used to fill the borehole annular space to approximately one inch below the top of the concrete foundation. Sufficient water will be added to hydrate the bentonite to insure proper sealing, and care used in placement of the bentonite to prevent post-emplacement expansion which might compromise both the probe and cement seal. The probe pipe will be affixed to the foundation slab with quick-setting contaminant-free Portland cement.
3. The probe will be constructed with a recessed threaded cap with a brass or stainless steel threaded fitting or compression fitting so the probe completion is nearly flush with the foundation slab to reduce the tripping hazard. In addition, a cover similar to an electrical floor box cover may be used to prevent tampering.

An example of a sub-slab soil gas sampling probe is shown in Figure 3.

Following probe emplacement, soil gas sampling will not be conducted for at least 30 minutes to allow the cement to cure and to allow for subsurface conditions to equilibrate. The probe installation time and the estimated purge volume of each probe will be recorded in the field logbook. The purge volume of each soil gas probe installation will be estimated as the summation of the volumes of the sample pipe, the sample line, and the sand pack or annular space around the probe tip.

6.2 Sample Collection

Sub-slab soil gas samples will be collected into batch-certified, 1-liter, silicon-lined, stainless steel Summa canisters. Each canister will be equipped with a mass flow controller device that regulates the flow of air into the canister at a rate between 100 and 200 milliliters per minute (mL/min) to limit stripping of chemical compounds, to prevent ambient air from diluting the soil gas samples, and to reduce the variability of purging and sampling rates. A low purge/sampling rate increases the likelihood that representative soil gas samples are collected. Given the small volume of soil gas drawn from the probe assembly, the zone of influence about the probe tip is expected to be small, on the order of 4 inches.

After waiting for at least 30 minutes following probe installation, the sampling assembly will be purged of three purge volumes with a disposable syringe; three volumes is the default number of purge volumes recommended in the DTSC and Los Angeles RWQCB joint soil gas guidance document (Cal/EPA, 2003). Once the sampling assembly has been purged, the Summa canister valve will be opened to draw a soil gas sample from the sample line into the canister. As discussed below in Section 7.3, a leak detection test will be conducted immediately before and after the soil gas sample is collected

Sub-slab soil gas samples will be analyzed at an offsite State-certified laboratory by USEPA Method TO-15 Low-level. Laboratory reporting limits for this method are documented in Table 4. Samples will be analyzed on a standard laboratory turnaround time of 10 working days from the date the canisters are received at the laboratory (samples received after 3 p.m. are considered to have arrived on the next business day). Sample handling and documentation are discussed below in Section 7.6.

6.3 Leak Test

A leak test will be performed in conjunction with each collected sub-slab soil gas sample, to verify that ambient air is not diluting the sample or contaminating the sample with external contaminants. The leak test will be conducted using a helium shroud apparatus (NYSDOH, 2006). A shroud will be placed over the sub-slab probe and the 1-liter Summa canister, so that the probe surface seal and all sampling train components are within the shroud. Helium will be injected into the shroud and maintained within the shroud at a stable concentration of approximately 30 percent during sample collection. A handheld helium detector will be used to measure the helium concentration within the shroud and within the sampling line by use of a tee connection just upstream from the Summa canister. The helium concentration within the sampling line will be measured immediately before and after the soil gas sample is collected. Because minor leakage around the probe seal should not materially affect the usability of the soil vapor sampling results, the mere presence of the tracer gas in the sampling line is not a cause for alarm (NYSDOH, 2006). If high concentrations (greater than 10 percent of the helium concentration in the shroud) of helium are observed in the sampling line, sampling train fittings will be checked, and the probe surface seal will be enhanced as necessary to reduce the infiltration of ambient air.

6.4 Procedure for Low-flow Conditions

Low- or no-flow conditions (sample flow rates of less than 10 mL/min) may be encountered during sampling; fine-grained soils and/or soils with high moisture content at the site may make effective collection of a soil gas sample difficult. If such conditions are encountered, step-out sampling will be conducted at the affected location. Each step-out sample location will be located approximately three feet from the previous attempted sampling location. The step-out sampling procedure will be identical to the sampling procedure for all other soil gas sampling locations.

6.5 Sample Handling and Documentation

6.5.1 Field Notes

Field notes will be maintained in a log. The following information will be recorded in the log for each sample collected:

- Summa canister serial number;
- flow controller serial number;
- sample location (marked on site map);
- field sample identification (ID) number;
- start time and canister vacuum;
- stop time and canister vacuum;
- sampler's name and affiliation; and
- any other relevant information.

A digital photograph will be taken at each sampling location at the time of sampling, to further document the sampling conditions.

6.5.2 Sample Labeling

Each collected air sample will be assigned a unique, descriptive field sample ID number that identifies the sample location and date of collection. Upon receipt at the laboratory, each sample will also be given a unique laboratory sample ID number for internal tracking purposes. The field sample ID and laboratory sample ID numbers will appear on the final laboratory report.

6.5.3 Chain of Custody

The collected air samples will be transported to the analytical laboratory via overnight courier (*e.g.*, FedEx). The samples will be accompanied by a chain of custody (COC) form that contains the following information:

- project name, location, and reference number;
- sampler's name, affiliation, and signature;

- for each individual sample,
  - field sample ID number,
  - date collected,
  - start time and canister vacuum,
  - stop time and canister vacuum, and
  - analyses requested;
- date and time relinquished by the sampler to the shipper; and
- remarks.

The completed COC record will be provided by the laboratory with the analytical report.

6.5.4 Sample Container Preservation

No chemical or thermal preservation of the Summa canisters is required. The sample hold time for the analytical methods is 30 days.

6.6 Field QA/QC Procedures

In accordance with joint DTSC and Los Angeles RWQCB soil gas sampling guidance (Cal/EPA, 2003), at least one trip blank sample and one field duplicate sample will be included in the sub-slab soil gas investigation. Each trip blank sample will consist of a Summa canister that is identical to the others, accompanies the others from the laboratory to the site and back to the laboratory, and is analyzed at the laboratory with the others; no ambient air is drawn into the Summa canister at the site, however. Each field duplicate sample will be collected in a separate Summa canister, either simultaneously with the associated primary sample by use of a tee connection, or immediately after collection of the associated primary sample. The procedures for analysis of trip blank and field duplicate soil gas samples are discussed in the next sections.

6.6.1 Trip Blank Sample

One trip blank sample will be included in the sub-slab soil gas investigation. The trip blank sample will consist of a Summa canister that is identical to the others (*i.e.*, is cleaned, individually certified, and evacuated by the laboratory), accompanies the others from the laboratory to the site and back to the laboratory, and is analyzed at the laboratory with the others; no sample is drawn into the Summa canister at the site, however, and the trip blank "sample" that is analyzed is comprised of laboratory-certified "clean" air that is injected into every canister when it arrives back at the laboratory. The rationale for transporting an empty trip blank canister, rather than a canister already filled with laboratory-certified clean air, is to provide the greatest opportunity for cross-contamination to occur by maintaining the maximum pressure differential between the evacuated canister and ambient air. The trip blank sample should not contain any target compound at a concentration greater than the reporting limit, and should not contain any additional compounds with elution characteristics and mass spectral features that would interfere with the identification and measurement of a target compound. If the trip blank should be contaminated as described above and the contaminant is also detected in sub-slab soil gas samples, those project samples will be flagged as possibly contaminated (USEPA, 1999).

6.6.2 Field Duplicate Sample

Field duplicate sub-slab soil gas samples will be collected at an approximate rate of 10 percent; one field duplicate sample will therefore be included in the sub-slab soil gas investigation. The field duplicate sample will consist of a second sub-slab soil gas sample collected from the same probe as the associated primary sample, either simultaneously with the associated primary sample by use of a tee connection, or immediately after collection of the associated primary sample. The field duplicate sample will be collected at a location where concentrations of target analytes are expected to be highest, based upon a review of existing site data.

Field duplicate results will be used to evaluate the overall precision of field sampling and laboratory analytical procedures. Field duplicate samples will not be used to evaluate the potential health impacts associated with inhalation exposures; all health risk calculations will be based on primary sample results.

Field duplicate results will be evaluated by calculating the relative percent difference (RPD) between each primary and duplicate result. The USEPA provides guidance for the evaluation of field duplicate results in *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, 2004). No numerical criteria are provided. The guidance states:

> "Field duplicate samples may be collected and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. The results, therefore, may have more variability than laboratory duplicates that measure only laboratory performance…There are no 'required' review criteria for determining comparability of field duplicate analyses."

It should be further noted that primary and duplicate sub-slab soil gas samples are not true duplicates (such as could be achieved when sampling water or soil by collecting a single sample, homogenizing it, then splitting it), but instead are two distinct samples collected into separate canisters through separate flow regulators. Furthermore, if the primary and duplicate samples are collected in series (*i.e.*, at different times), then additional variability would be introduced. In practice, if the difference between primary and field duplicate results exceeds a factor of 2 for most analytes, these results would indicate a high level of variability, and additional analysis or action may be warranted.

6.8 Sample Analysis

Sub-slab soil gas samples will be analyzed by USEPA Method TO-15 Low-level by Air Toxics, Inc. of Folsom, a State-certified analytical laboratory. Laboratory reporting limits for this method are documented in Table 4. Samples will be analyzed on a standard laboratory turnaround time of 10 working days from the date the canisters are received at the laboratory (samples received after 3 p.m. are considered to have arrived on the next business day).

6.9 Laboratory QA/QC Procedures

The laboratory will follow the QA/QC procedures outlined in the *Interim Guidance for Active Soil Gas Investigation* (Cal/EPA, 1997) and in USEPA Method TO-15 Low-level. If there is any inconsistency between procedures, the more restrictive and specific requirements will prevail.

6.10 Post-sampling Activities

Following completion of sampling activities, all sampling locations will be recorded by measuring from nearby relevant site features. The foundation probes will be properly decommissioned after all sampling is completed. The probe tip, probe piping, bentonite, and grout will be removed by redrilling. The borehole will be filled with grout and concrete patch material. Surface restoration will include a follow-up visit for final sanding and finish work to restore the floor slab to its original condition, if necessary.

7.0 DATA ANALYSIS AND REPORTING

A Sampling and Analysis Report (SAR) will be submitted to ACEH following sub-slab soil gas sampling. This report will document the methodology and results of the sub-slab gas investigation. Included in this report will be a comparison of the sub-slab soil gas sampling results to the established risk-based levels of concern, *i.e.*, the sub-slab soil gas screening levels developed in Section 4.0. The cancer-based and noncancer-based screening levels will be applied to the data to quantify the cumulative (multi-chemical) cancer risk and noncancer hazard index, with respect to vapor intrusion into the overlying commercial building, associated with each sub-slab soil gas sample. These estimated cancer risks and noncancer hazard indices will be compared to thresholds of concern of 1×10^{-5} and 1.0, respectively. If the estimated risk and hazard are below thresholds of concern at all sub-slab sampling locations, it will be concluded that vapor intrusion is unlikely to be occurring at levels of concern to commercial workers in the building. If estimated risk or hazard is above levels of concern at one or more locations, then additional investigation or action may be warranted pending discussions with the ACEH.

8.0 HEALTH AND SAFETY PLAN

With respect to potential inhalation exposures to toxic or carcinogenic compounds, a review of previously collected soil gas and indoor air data indicates that collection of indoor air and soil gas samples may be safely performed without respiratory protection. There are no other known potential environmental hazards at the site. There are potential physical safety hazards associated with drilling for installation of the sub-slab soil gas probes. An Environmental Health and Safety Plan (EHASP) will be developed by Iris Environmental and will be implemented during field work associated with sub-slab soil gas sampling.

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Table 1. Carcinogenic and Noncarcinogenic Toxicity Values

Chemical of Potential Concern	Unit Risk Factor (URF)		Reference Concentration (RfC)	
	Value (per µg/m³)	Source	Value (µg/m³)	Source
Volatile Organic Compounds (VOCs)				
Acetone	NC	NC	3.1E+04	3
Benzene	2.9E-05	1	3.0E+01	2
1,3-Butadiene	1.7E-04	1	2.0E+00	2
2-Butanone (methyl ethyl ketone)	NC	NC	5.0E+03	2
Carbon disulfide	NC	NC	7.0E+02	2
Chlorobenzene	NC	NC	1.0E+03	1
Chloroform	5.3E-06	1	3.0E+02	1
Chloromethane (methyl chloride)	NC	NC	9.0E+01	2
Cyclohexane	NC	NC	6.0E+03	2
1,2-Dichlorobenzene	NC	NC	2.0E+02	3
1,3-Dichlorobenzene	NC	NC	1.1E+02	4R
1,4-Dichlorobenzene	1.1E-05	1	8.0E+02	1
Dichlorodifluoromethane (Freon 12)	NC	NC	2.0E+02	3
1,1-Dichloroethane	1.6E-06	1	7.0E+02	3
1,2-Dichloroethane	2.1E-05	1	4.0E+02	1
1,1-Dichloroethene (1,1-DCE)	NC	NC	7.0E+01	1
cis-1,2-Dichloroethene (cis-1,2-DCE)	NC	NC	3.5E+01	2R
1,4-Dioxane	7.7E-06	1	3.0E+03	1
Ethanol	NC	NC	1.1E+03	2b R
Ethylbenzene	2.5E-06	1	1.0E+03	2
4-Ethyltoluene	NC	NC	1.0E+02	2c
Heptane	NC	NC	7.0E+02	2d
Hexane	NC	NC	7.0E+02	2
Methyl tertiary butyl ether (MTBE)	2.6E-07	1	3.0E+03	2
Methylene chloride	1.0E-06	1	4.0E+02	1
4-Methyl-2-pentanone (methyl isobutyl ketone)	NC	NC	3.0E+03	2
2-Propanol	NC	NC	7.0E+03	1
Styrene	NC	NC	9.0E+02	1
Tetrachloroethene (PCE)	5.9E-06	1	3.5E+01	1

Table 1. Carcinogenic and Noncarcinogenic Toxicity Values

Chemical of Potential Concern	Unit Risk Factor (URF) Value (per µg/m^3)	Unit Risk Factor (URF) Source	Reference Concentration (RfC) Value (µg/m^3)	Reference Concentration (RfC) Source
Tetrahydrofuran	2.0E-06	NC	3.0E+03	e
Toluene	NC	NC	3.0E+02	1
1,1,1-Trichloroethane	NC	NC	1.0E+03	1
Trichloroethene (TCE)	2.0E-06	1	6.0E+02	1
Trichlorofluoromethane (Freon 11)	NC	NC	7.0E+02	3
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113	NC	NC	3.0E+04	3
1,2,4-Trimethylbenzene	NC	NC	7.0E+00	3
1,3,5-Trimethylbenzene	NC	NC	6.0E+00	3
Xylenes	NC	NC	1.0E+02	2

Notes:

(a) Sources of toxicity data are as follows.

1 – *OEHHA Toxicity Criteria Database* (Cal/EPA, 2009c)

2 – *Integrated Risk Information System* (IRIS) (USEPA, 2009b)

3 – *Regional Screening Levels for Chemical Contaminants at Superfund Sites* (USEPA, 2009a)

4 – *USEPA Region 9 PRG Table* (2004)

R – Route-to-route extrapolation

a – Xylenes is used as a surrogate

b – Hexane is used as a surrogate.

(b) Isobutanol was used as the surrogate for ethanol's oral and inhalation noncancer reference dose.

(c) Xylene was used as the surrogate for 4-ethyltoluene's oral and inhalation noncancer reference dose.

(d) Hexane was used as the surrogate for this heptane's oral and inhalation noncancer reference dose.

(e) Tetrahydrofuran toxicological values were derived from *Draft Toxicological Review of Tetrahydrofuran (USEPA, 2007).*

(f) "NC" indicates that the chemical is classified as a noncarcinogen for the inhalation pathway.

Table 2. Commercial/Industrial Exposure Assumptions

Parameter	Symbol	Value	Units
Exposure frequency	EF	250	d/yr
Exposure duration	ED	25	yr
Averaging time for carcinogenic effects	AT_c	25,550	d
Averaging time for noncarcinogenic effects	AT_{nc}	9,125	d
Target cancer risk	TR	1.E-05	none
Target noncancer hazard quotient	THQ	1.0	none

Notes:

(1) Exposure assumptions are default values for the commercial/industrial scenario recommended by DTSC/HERD (Cal/EPA, 2005c).

Table 3. Risk-based Target Indoor Air Concentrations

Chemical of Potential Concern	Cancer-based Target Concentration (CA_c) (µg/m^3)	Noncancer-based Target Concentration (CA_{nc}) (µg/m^3)	Controlling Target Concentration (CA) (µg/m^3)
Volatile Organic Compounds (VOCs)			
Acetone	NC	4.5E+04	4.5E+04
Benzene	1.4E+00	4.4E+01	1.4E+00
1,3-Butadiene	2.4E-01	2.9E+00	2.4E-01
2-Butanone (methyl ethyl ketone)	NC	7.3E+03	7.3E+03
Carbon disulfide	NC	1.0E+03	1.0E+03
Chlorobenzene	NC	1.5E+03	1.5E+03
Chloroform	7.7E+00	4.4E+02	7.7E+00
Chloromethane (methyl chloride)	NC	1.3E+02	1.3E+02
Cyclohexane	NC	8.8E+03	8.8E+03
1,2-Dichlorobenzene	NC	2.9E+02	2.9E+02
1,3-Dichlorobenzene	NC	1.5E+02	1.5E+02
1,4-Dichlorobenzene	3.7E+00	1.2E+03	3.7E+00
Dichlorodifluoromethane (Freon 12)	NC	2.9E+02	2.9E+02
1,1-Dichloroethane	2.6E+01	1.0E+03	2.6E+01
1,2-Dichloroethane	1.9E+00	5.8E+02	1.9E+00
1,1-Dichloroethene (1,1-DCE)	NC	1.0E+02	1.0E+02
cis-1,2-Dichloroethene (cis-1,2-DCE)	NC	5.1E+01	5.1E+01
1,4-Dioxane	5.3E+00	4.4E+03	5.3E+00
Ethanol	NC	1.5E+03	1.5E+03
Ethylbenzene	1.6E+01	1.5E+03	1.6E+01
4-Ethyltoluene	NC	1.5E+02	1.5E+02
Heptane	NC	1.0E+03	1.0E+03
Hexane	NC	1.0E+03	1.0E+03
Methyl tertiary butyl ether (MTBE)	1.6E+02	4.4E+03	1.6E+02
Methylene chloride	4.1E+01	5.8E+02	4.1E+01
4-Methyl-2-pentanone (methyl isobutyl ketone)	NC	4.4E+03	4.4E+03
2-Propanol	NC	1.0E+04	1.0E+04
Styrene	NC	1.3E+03	1.3E+03
Tetrachloroethene (PCE)	6.9E+00	5.1E+01	6.9E+00

Table 3. Risk-based Target Indoor Air Concentrations

Chemical of Potential Concern	Cancer-based Target Concentration (CA_c) (µg/m^3)	Noncancer-based Target Concentration (CA_{nc}) (µg/m^3)	Controlling Target Concentration (CA) (µg/m^3)
Tetrahydrofuran	2.0E+01	4.4E+03	2.0E+01
Toluene	NC	4.4E+02	4.4E+02
1,1,1-Trichloroethane	NC	1.5E+03	1.5E+03
Trichloroethene (TCE)	2.0E+01	8.8E+02	2.0E+01
Trichlorofluoromethane (Freon 11)	NC	1.0E+03	1.0E+03
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NC	4.4E+04	4.4E+04
1,2,4-Trimethylbenzene	NC	1.0E+01	1.0E+01
1,3,5-Trimethylbenzene	NC	8.8E+00	8.8E+00
Xylenes	NC	1.5E+02	1.5E+02

Notes:

(1) Risk-based target concentrations of volatile chemicals in indoor air are calculated in accordance with USEPA and Cal/EPA risk assessment methodology (USEPA, 1989; Cal/EPA, 2005a).

(2) Cancer-based target concentrations are based on a target risk of 1×10^{-5}. Noncancer-based target concentrations are based on a target hazard quotient of 1.0.

(3) "NC" = noncarcinogenic.

Table 4. Risk-based Levels of Concern in Sub-slab Soil Gas and Laboratory Reporting Limits

Chemical of Potential Concern	Cancer-based Sub-slab Soil Gas Screening Level ($SL_{SSSG,c}$) ($\mu g/m^3$)	Noncancer-based Sub-slab Soil Gas Screening Level ($SL_{SSSG,nc}$) ($\mu g/m^3$)	Controlling Sub-slab Soil Gas Screening Level (SL_{SSSC}) ($\mu g/m^3$)	Laboratory Reporting Limit ($\mu g/m^3$)
Volatile Organic Compounds (VOCs)				
Acetone	NC	4.5E+06	4.5E+06	1.2E+00
Benzene	1.4E+02	4.4E+03	1.4E+02	1.6E-01
1,3-Butadiene	2.4E+01	2.9E+02	2.4E+01	2.2E-01
2-Butanone (methyl ethyl ketone)	NC	7.3E+05	7.3E+05	3.0E-01
Carbon disulfide	NC	1.0E+05	1.0E+05	1.6E+00
Chlorobenzene	NC	1.5E+05	1.5E+05	4.7E-01
Chloroform	7.7E+02	4.4E+04	7.7E+02	5.0E-01
Chloromethane (methyl chloride)	NC	1.3E+04	1.3E+04	2.1E-01
Cyclohexane	NC	8.8E+05	8.8E+05	3.5E-01
1,2-Dichlorobenzene	NC	2.9E+04	2.9E+04	6.1E-01
1,3-Dichlorobenzene	NC	1.5E+04	1.5E+04	6.1E-01
1,4-Dichlorobenzene	3.7E+02	1.2E+05	3.7E+02	6.1E-01
Dichlorodifluoromethane (Freon 12)	NC	2.9E+04	2.9E+04	5.0E-01
1,1-Dichloroethane	2.6E+03	1.0E+05	2.6E+03	8.2E-02
1,2-Dichloroethane	1.9E+02	5.8E+04	1.9E+02	8.2E-02
1,1-Dichloroethene (1,1-DCE)	NC	1.0E+04	1.0E+04	4.0E-02
cis-1,2-Dichloroethene (cis-1,2-DCE)	NC	5.1E+03	5.1E+03	8.0E-02
1,4-Dioxane	5.3E+02	4.4E+05	5.3E+02	3.7E-01
Ethanol	NC	1.5E+05	1.5E+05	9.6E-01
Ethylbenzene	1.6E+03	1.5E+05	1.6E+03	8.8E-02
4-Ethyltoluene	NC	1.5E+04	1.5E+04	5.0E-01
Heptane	NC	1.0E+05	1.0E+05	4.2E-01
Hexane	NC	1.0E+05	1.0E+05	3.6E-01
Methyl tertiary butyl ether (MTBE)	1.6E+04	4.4E+05	1.6E+04	3.7E-01
Methylene chloride	4.1E+03	5.8E+04	4.1E+03	7.1E-01
4-Methyl-2-pentanone (methyl isobutyl ketone)	NC	4.4E+05	4.4E+05	4.2E-01
2-Propanol	NC	1.0E+06	1.0E+06	1.2E+00
Styrene	NC	1.3E+05	1.3E+05	4.3E-01
Tetrachloroethene (PCE)	6.9E+02	5.1E+03	6.9E+02	1.4E-01

Table 4. Risk-based Levels of Concern in Sub-slab Soil Gas and Laboratory Reporting Limits

Chemical of Potential Concern	Cancer-based Sub-slab Soil Gas Screening Level ($SL_{SSSG,c}$) (μg/m³)	Noncancer-based Sub-slab Soil Gas Screening Level ($SL_{SSSG,nc}$) (μg/m³)	Controlling Sub-slab Soil Gas Screening Level (SL_{SSSC}) (μg/m³)	Laboratory Reporting Limit (μg/m³)
Tetrahydrofuran	2.0E+03	4.4E+05	2.0E+03	1.5E+00
Toluene	NC	4.4E+04	4.4E+04	7.6E-02
1,1,1-Trichloroethane	NC	1.5E+05	1.5E+05	1.1E-01
Trichloroethene (TCE)	2.0E+03	8.8E+04	2.0E+03	1.1E-01
Trichlorofluoromethane (Freon 11)	NC	1.0E+05	1.0E+05	5.7E-01
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NC	4.4E+06	4.4E+06	7.8E-01
1,2,4-Trimethylbenzene	NC	1.0E+03	1.0E+03	5.0E-01
1,3,5-Trimethylbenzene	NC	8.8E+02	8.8E+02	5.0E-01
Xylenes	NC	1.5E+04	1.5E+04	8.8E-02

Notes:

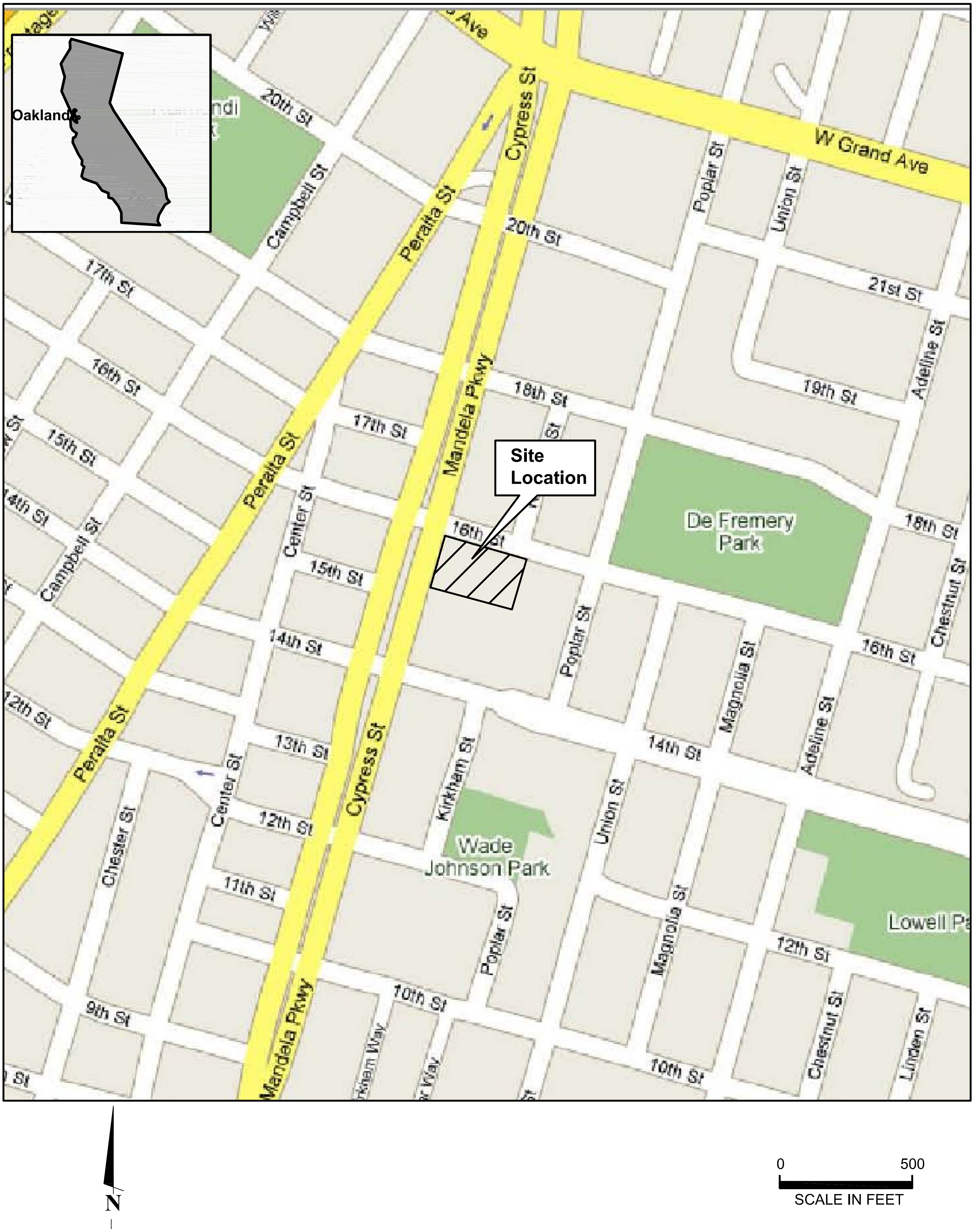
(1) Each risk-based sub-slab soil gas screening level is calculated from 1) the risk-based target concentration of the chemical in indoor air (see Table 3) and 2) the DTSC-recommended (Cal/EPA, 2005b) default slab attenuation factor of 0.01:

$SL_{SSSG,c} = CA_c / \alpha$

$SL_{SSSG,nc} = CA_{nc} / \alpha$

(2) Cancer-based screening levels are based on a target risk of 1×10^{-6}. Noncancer-based screening levels are based on a target hazard quotient of 1.0.

(3) "NC" = noncarcinogenic.



IRIS ENVIRONMENTAL

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

Site Location Map
Former Nestlé USA, Inc. Facility
1310 14th Street, Oakland, California

Figure
1

Drafter: EC | Date: 11/12/08 | Contract Number: 07-557-A

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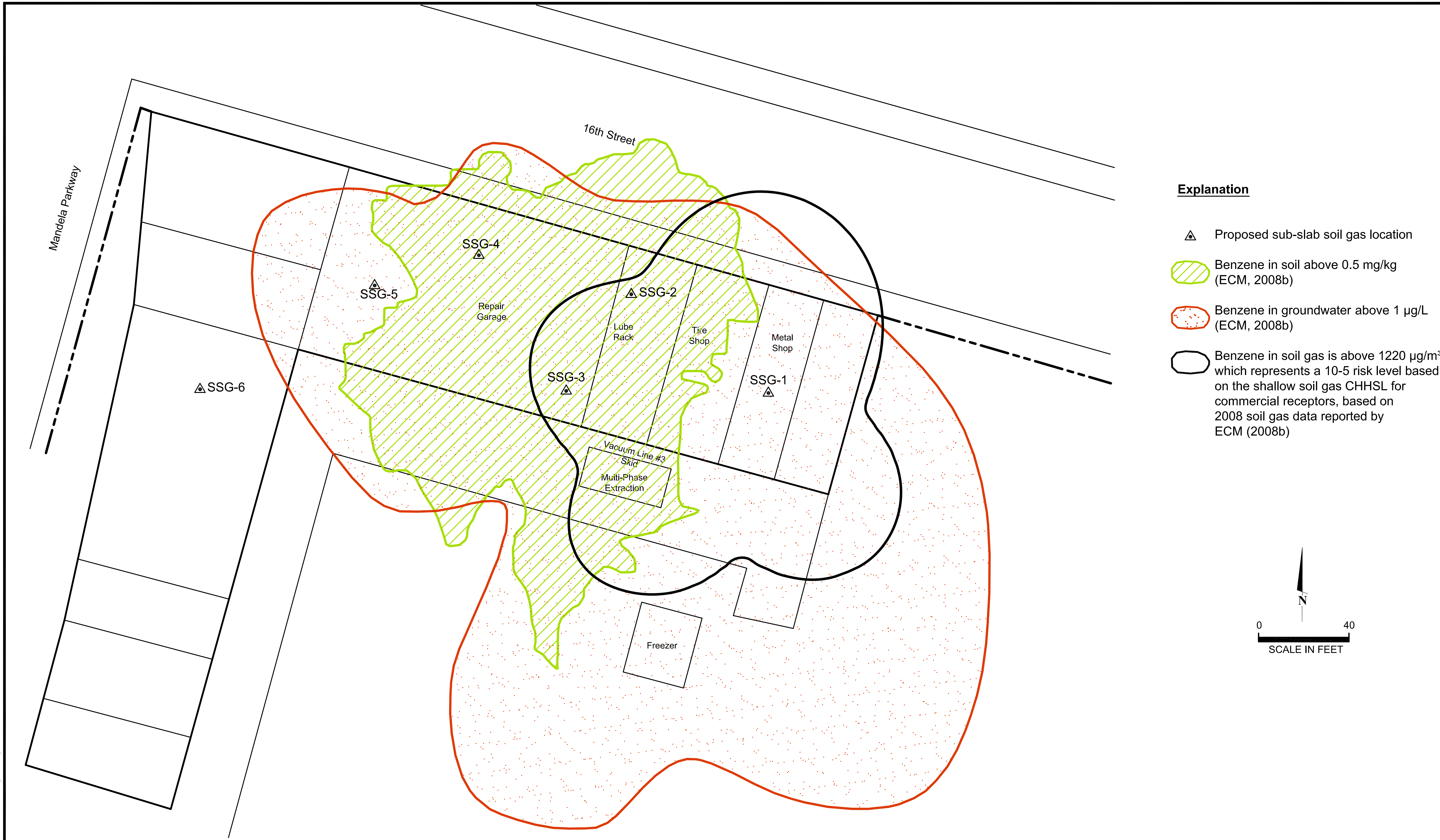

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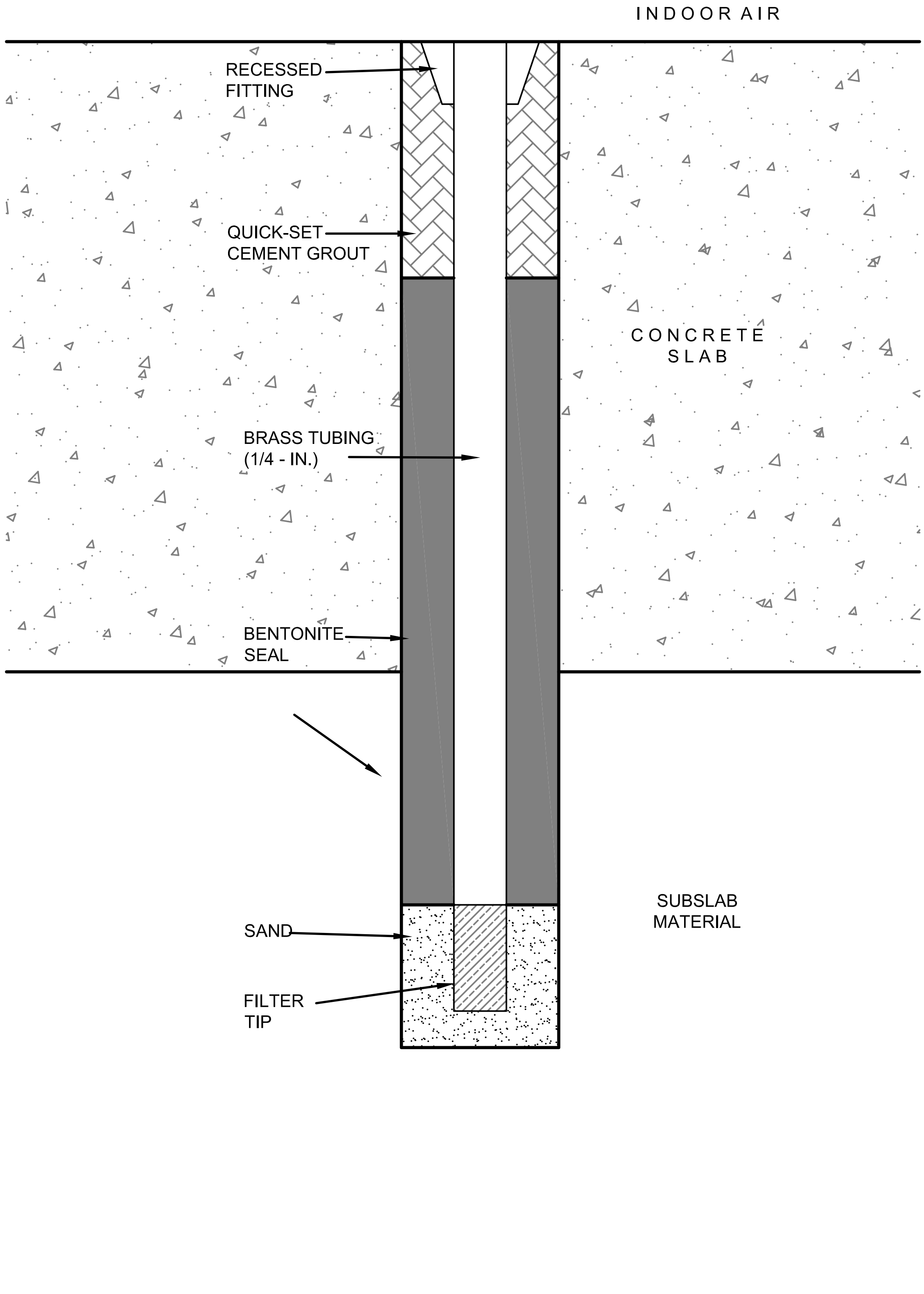
Proposed Sub-slab Soil Gas Sampling Locations
Former Nestlé USA, Inc. Facility
1310 14th Street
Oakland, California

Figure
2

Drafter: EC
Date: 10/30/09
Contract Number: 07-557B



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Sub-slab Soil Gas Sampling Probe
Former Nestlé USA, Inc. Facility
1310 14th Street
Oakland, California

Figure
3

Drafter: EC
Date: 10/06/09
Contract Number: 08-631-B

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Appendix A

Results of Previous Site Investigations

Table 1a: Soil Gas Sampling Results
Vapors in Soil - August 99

Concentration (ppbv)

Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	TPH-d	Acetone	1,3-Bu-tadiene	2-Bu-tanone	Carbon Disulfide	Chloro-benzene	Chloro-form	Chloro-methane	Cyclo-hexane	1,2-Di-chloro-benzene	1,3-Di-chloro-benzene	1,4-Di-chloro-benzene	1,1-Di-chloro-ethane	1,2-Di-chloro-ethane	1,1-Di-chloro-ethene	cis-1,2-Dichloro-ethene
SB1, 3'	4.3	3.1	<0.65	2.74	800	NA	77 a	2.8	13	6.2	<0.65	<0.65	<0.65	<2.6	<0.65	<0.65	0.77	<0.65	<0.65	<0.65	<0.65
SB2, 3'	7.5	12	3.6	17.6	1,100	NA	260 a	<2.7	24	9.0	<0.67	3.9	<0.67	12	<0.67	<0.67	1.8	<0.67	<0.67	<0.67	<0.67
SB3, 3'	9,900	230	68	67	36,000	NA	<190	<190	<190	<190	<48	<48	<48	<190	<48	<48	<48	<48	<48	<48	<48
SB3, 3' dup	9,500	240	<140	<140	40,000	NA	<580	<580	<580	<580	<140	<140	<140	<580	<140	<140	<140	<140	<140	<140	<140
SB4, 3'	1,200	76	8.1	18.7	4,600	NA	200 a	19	<14	<14	<3.5	<3.5	<3.5	32	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
SB5, 3'	7.6	5.6	0.80	1.9	1,900	NA	45 a	61	12	18	<0.71	<0.71	0.77	8.2	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71
SB6, 3'	3.0	4.2	<0.68	2.52	560	NA	11 a	<2.7	4.0	<2.7	<0.68	<0.68	<0.68	<2.7	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
SB7, 3'	5.9	6.2	0.87	4.3	780	NA	43 a	3.4	7.9	3.3	<0.73	<0.73	<0.73	5.1	<0.73	<0.73	2.0	<0.73	<0.73	<0.73	<0.73
SB8, 3'	10	12	3.8	15.7	1,300	NA	42 a	<11	<11	<11	<2.8	<2.8	<2.8	<11	<2.8	<2.8	<2.8	<2.8	<2.8	<2.8	<2.8
SB9, 3'	12	18	1.7	9.9	690	NA	19 a	<2.7	6.0	<2.7	<0.68	1.1	<0.68	4.9	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68
SB10, 3'	3.5	2.8	<0.80	1.7	610	NA	39 a	<3.2	9.7	<3.2	<0.80	1.6	<0.80	<3.2	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
SB11, 3'	2.7	1.9	<0.82	0.91	520	NA	38 a	<3.3	9.9	<3.3	<0.82	<0.82	3.7	<3.3	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82
SB12, 3'	250	<70	<70	610	750,000	NA	<280	<280	<280	<280	<70	<70	<70	<280	480	<70	76	<70	<70	<70	<70
SB13, 3'	0.91	8.5	<0.67	1.3	550	NA	49 a	<2.7	5.5	6.4	<0.67	<0.67	<0.67	<2.7	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67
SB14, 3'	2.7	5.3	0.87	4.7	620	NA	10 a	<2.8	3.5	<2.8	<0.70	<0.70	<0.70	<2.8	<0.70	<0.70	1.6	<0.70	<0.70	<0.70	<0.70
SB15, 3'	42	12	1.6	6.7	2,100	NA	51 a	13	13	<5.8	<1.4	<1.4	<1.4	<5.8	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4

Sample ID	1,4-Di-oxane	Ethanol	4-Ethyl-toluene	Freon 11	Freon 12	Freon 113	Hep-tane	Hex-ane	4-Methyl-2-penta-none	Methylene Chloride	Methyl t-butyl ether	2-Pro-panol	Sty-rene	Tetra-chloro-ethene	Tetra-hydro-furan	1,1,1-Tri-chloro-ethane	Tri-chloro-ethene	1,2,4-Tri-methyl-benzene	1,3,5-Tri-methyl-benzene
SB1, 3'	<2.6	63	<2.6	0.74	0.93	27	<2.6	4.4	3.8	3.7	<2.6	5.6	<0.65	1.2	<2.6	<0.65	<0.65	1.1	<0.65
SB2, 3'	<2.7	110	<2.7	1.2	200	<0.67	3.3	5.3	8.1	2.2	<2.7	<2.7	3.0	<0.67	<2.7	<0.67	<0.67	2.0	0.77
SB3, 3'	<190	<190	<190	<48	180	<48	<190	590	<190	<48	<190	<190	<48	<48	<190	<48	<48	<48	<48
SB3, 3' dup	<580	<580	<580	<140	160	<140	<580	580	<580	<140	<580	<580	<140	<140	<580	<140	<140	<140	<140
SB4, 3'	<14	1,400	<14	<3.5	100	<3.5	<14	19	15	340	<14	22	<3.5	160	<14	21	<3.5	<3.5	<3.5
SB5, 3'	3.3	55	<2.8	4.4	1.2	3.4	<2.8	<2.8	<2.8	<0.71	<2.8	<2.8	<0.71	<0.71	<2.8	<0.71	<0.71	<0.71	<0.71
SB6, 3'	<2.7	35	<2.7	<0.68	<0.68	<0.68	<2.7	<2.7	<2.7	<0.68	<2.7	<2.7	<0.68	<0.68	<2.7	<0.68	<0.68	1.1	<0.68
SB7, 3'	8.2	94	<2.9	0.74	1.1	<0.73	<2.9	6.8	4.4	<0.73	<2.9	3.8	1.0	2.0	<2.9	<0.73	<0.73	1.8	<0.73
SB8, 3'	<11	62	<11	6.5	630	<2.8	<11	<11	<11	<2.8	<11	<11	<2.8	<2.8	<11	<2.8	<2.8	5.3	<2.8
SB9, 3'	<2.7	47	<2.7	1.5	20	<0.68	<2.7	4.3	<2.7	<0.68	<2.7	<2.7	<0.68	<0.68	<2.7	<0.68	<0.68	2.3	0.77
SB10, 3'	<3.2	40	<3.2	<0.80	1.4	<0.80	<3.2	3.9	<3.2	<0.80	<3.2	<3.2	<0.80	<0.80	<3.2	<0.80	<0.80	1.2	<0.80
SB11, 3'	22	23	<3.3	4.6	<0.82	<0.82	<3.3	<3.3	<3.3	1.2	<3.3	<3.3	<0.82	<0.82	<3.3	<0.82	<0.82	0.85	<0.82
SB12, 3'	<280	<280	760	<70	<70	<70	<280	18,000	<280	<70	<280	<280	<70	<70	<280	<70	<70	580	740
SB13, 3'	4.3	410 b	<2.7	<0.67	<0.67	<0.67	3.4	<2.7	<2.7	5.6	<2.7	26	<0.67	<0.67	58	<0.67	<0.67	1.1	<0.67
SB14, 3'	<2.8	67	<2.8	<0.70	<0.70	<0.70	<2.8	<2.8	2.8	1.3	2.9	<2.8	0.82	<0.70	<2.8	<0.70	<0.70	2.0	0.81
SB15, 3'	<5.8	190	<5.8	<1.4	46	<1.4	<5.8	50	<5.8	4.8	<5.8	<5.8	<1.4	2.1	<5.8	<1.4	<1.4	1.8	<1.4

Notes:

ppbv Parts per billion volumetric.

a Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
b Exceeds instrument calibration range.

NA Not analyzed.
TPH-g Total Petroleum Hydrocarbons as gasoline.
TPH-d Total Petroleum Hydrocarbons as diesel.

Table 1b: Soil Gas Sampling Results
Vapors in Soil - May 08

Boring Location	Sample Depth (feet bgs)	Date of Sample Collection	Analytical results (ug/L) of Vapor							
			TPH g	TPH d	Benzene	Ethylbenzene	Toluene	Xylenes, Tot	1,2-DCA	Others
SB-16	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-17	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-18	5	19-May-08	630	<50	2.2	<0.10	0.44	<0.30	<0.10	
SB-19	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-20/ PCB-7	5	19-May-08	19	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-21/ PCB-8	5	19-May-08	25	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-22	5	19-May-08	2,600	<50	40	7.7	32	19.1	<0.10	Dichlorodifluoromethane: 0.39
SB-23	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-24/ PCB-1	5	19-May-08	<10	<50	<0.10	<0.10	0.22	<0.30	<0.10	
SB-25/ PCB-2	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-26	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	Dichlorodifluoromethane: 10
SB-27/ PCB-3	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-22 dup	5	19-May-08	2,600	<50	40	7.5	32	18.0	<0.10	Dichlorodifluoromethane: 0.38
Probe Blank	NA	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	

Notes:

EPA Method 8260B for VOC Analyses of soil vapor
EPA Mentod 8015m for TPH-g and TPH-d analyses of soil vapor

Table 2: Historical Soil Sample Results (1999 - 2008)

Boring Location	Sample Depth (feet bgs)	Date of Sample Collection	Analytical results (mg/Kg)								
			TPH g	TPH d	TPH mo	Benzene	Toluene	Ethylbenzene	Xylenes, Tot	1,2-DCA	Others
SB-1	3.5-4.0	08/12/99	<0.13	**1,200**	NA	<0.0013	<0.0013	<0.0013	<0.0013	<0.0011	
SB-1	6.5-7.0	08/12/99	<0.10	<5.9	NA	<0.001	<0.001	<0.001	<0.001	<0.0008	
SB-2	3.5-4.0	08/12/99	<0.09	<5.6	NA	<0.0009	<0.0009	<0.0009	<0.0009	<0.001	
SB-2	6.5-7.0	08/12/99	<0.10	<5.9	NA	<0.001	<0.001	<0.001	<0.001	**0.001**	
SB-3	3.5-4.0	08/12/99	<0.10	<5.6	NA	<0.001	<0.001	<0.001	<0.001	**0.0007**	
SB-3	6.5-7.0	08/12/99	**6,160**	<5.7	NA	**11**	**190**	**100**	**460**	**0.0018**	MTBE: 0.073
SB-4	3.5-4.0	08/12/99	<0.10	<5.5	NA	<0.001	<0.001	<0.001	<0.001	<0.0007	
SB-4	6.5-7.0	08/12/99	**1**	**94**	NA	**0.082**	**0.0085**	**0.0073**	**0.013**	**0.001**	
SB-5	3.5-4.0	08/12/99	<0.09	<5.5	NA	<0.0009	<0.0009	<0.0009	<0.0009	**0.0006**	
SB-5	6.5-7.0	08/12/99	<0.08	<5.9	NA	<0.0008	<0.0008	<0.0008	<0.0008	**0.0009**	
SB-6	3.5-4.0	08/13/99	<0.10	<5.5	NA	<0.001	<0.001	<0.001	<0.001	<0.0008	
SB-6	6.5-7.0	08/13/99	10,100	**1,100**	NA	**76**	**490**	**170**	**990**	**0.43**	
SB-7	3.5-4.0	08/12/99	<0.10	<5.4	NA	<0.001	<0.001	<0.001	<0.001	<0.0008	
SB-7	6.5-7.0	08/12/99	<0.11	<5.8	NA	<0.0011	<0.0011	<0.0011	<0.0011	<0.0009	
SB-8	3.5-4.0	08/12/99	<0.10	<5.6	NA	<0.001	<0.001	<0.001	<0.001	<0.0007	
SB-8	6.5-7.0	08/12/99	**13**	<5.8	NA	**0.43**	**0.36**	**0.12**	**0.83**	**0.0012**	MTBE: 0.022
SB-9	3.5-4.0	08/13/99	<0.09	<5.6	NA	<0.0009	<0.0009	<0.0009	<0.0009	<0.001	
SB-9	6.5-7.0	08/13/99	<0.61	<5.8	NA	**0.024**	<0.0061	<0.0061	<0.0061	<0.0011	
SB-10	3.5-4.0	08/13/99	<0.09	<5.6	NA	<0.0009	<0.0009	<0.0009	<0.0009	<0.0008	
SB-10	6.5-7.0	08/13/99	<0.13	<6.4	NA	<0.0013	<0.0013	<0.0013	<0.0013	<0.001	
SB-11	3.5-4.0	08/13/99	<0.20	<5.5	NA	<0.002	<0.002	<0.002	<0.002	<0.0011	
SB-11	6.5-7.0	08/13/99	<0.11	<5.7	NA	<0.0011	<0.0011	<0.0011	<0.0011	<0.001	
SB-12	3.5-4.0	08/12/99	<0.10	<5.5	NA	<0.001	<0.001	<0.001	<0.001	<0.0006	
SB-12	4.5-5.0	08/12/99	**496**	**2,900**	NA	**0.07**	**0.032**	**4**	**6.7**	<0.0009	Chlorobenzene: 0.0017 1,2-DCB: 3.1 1,3-DCB: 0.038 1,4-DCB: 0.33 MTBE:
SB-12	6.5-7.0	08/12/99	**2**	**60**		<0.001	<0.001	**0.023**	**0.0098**	<0.0011	MTBE: 0.001
SB-13	3.5-4.0	08/13/99	**1**	**390**	NA	<0.0012	**0.002**	**0.0027**	**0.0027**	**0.0025**	
SB-13	6.5-7.0	08/13/99	**12**	**65**	NA	**0.25**	**0.048**	**0.15**	**0.49**	**0.0014**	
SB-14	3.5-4.0	08/12/99	<0.08	<5.5	NA	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	MTBE: 0.084
SB-14	6.5-7.0	08/12/99	**29**	**450**	NA	**0.56**	**0.29**	**0.33**	**1.7**	**0.0097**	
SB-15	3.5-4.0	08/12/99	<0.51	**140**	NA	<0.0054	<0.0054	<0.0054	<0.0054	<0.0091	
SB-15	6.5-7.0	08/12/99	<0.57	**81**	NA	<0.0061	**0.012**	<0.0061	**0.0085**	<0.0098	
SB-16	6-6.5	05/19/08	<0.22	**30**	<50	<0.0043	<0.0043	<0.0043	<0.0087	<0.0043	
SB-17	8-8.5	05/22/08	**2,500**	**3,600**	**2,900**	**30**	**130**	**27**	**120**	ND	
SB-17	10-10.5	05/22/08	12,000	17,000	13,000	**140**	**580**	**120**	**620**	<8.3	
SB-17	15-15.5	05/22/08	**64**	**1,400**	**1,300**	<0.89	<0.89	<0.89	<1.8	<0.89	
SB-17	20-20.5	05/22/08	<0.21	<0.99	<49	<0.0042	<0.0042	<0.0042	<0.0084	<0.0042	
SB-18	8-8.5	05/21/08	**1,900**	**67**	<49	**41**	**110**	**28**	**130**	<19	
SB-19	8-8.5	05/21/08	<0.25	<0.99	<49	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	
SB-20/ PCB-7	8-8.5	05/22/08	**5,600**	**390**	**51**	**86**	**280**	**54**	**280**	<8.3	
SB-21/ PCB-8	8-8.5	05/21/08	**3,800**	**2,500**	<49	**40**	**210**	**69**	**360**	<19	
SB-22	8-8.5	05/21/08	**3,200**	**1,100**	<500	<47	**140**	<47	**190**	<47	
SB-23	11.5-12	05/22/08	<0.21	**1.2**	<49	<0.0041	<0.0041	<0.0041	<0.0082	<0.0041	
SB-24/ PCB-1	9-9.5	05/20/08	<0.19	**1.6**	<50	<0.0039	<0.0039	<0.0039	<0.0078	<0.0039	
SB-25/ PCB-2	8-8.5	05/20/08	<0.19	**1.1**	<50	<0.0037	<0.0037	<0.0037	<0.0075	<0.0037	
SB-26	8.5-9	05/21/08	<0.23	**10**	<50	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	
SB-27/ PCB-3	8.5-9	05/20/08	<0.27	<0.99	<49	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	
SB-20/ PCB-7 Dup	8-8.5	05/22/08	**4,900**	**610**	<250	**99**	**300**	**64**	**340**	<21	
SB-25/ PCB-2 Dup	8-8.5	05/20/08	NA	<1.0	<50	NA	NA	NA	NA	NA	

Notes:

NA = Not Analyzed
EPA Method 8260 for BTEX and 1,2-DCA analyses of soil
EPA Mentod 8015m for TPH-g, TPH-d, and TPM-mo analyses of soil

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
MW-2	03/23/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	07/27/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	11/05/93	--	--	--	--	--	--	--	--	--	--	--	
	02/25/94	<1	<1	<1	<1	<100	<1,000	--	--	--	--	--	
	06/03/94	<0.5	<0.5	<0.5	<0.5	<50	<20,000	--	--	--	--	--	
	08/31/94	<0.3	<0.3	<0.3	<0.6	<500	<500	--	--	--	--	--	
	12/22/94	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	Non-diesel peak reported.
	03/13/95	0.8	<0.5	<0.5	<0.5	<50	<400	--	--	--	--	--	
	06/09/95	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	09/21/95	0.7	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	
	12/12/95	<0.5	<0.5	<0.5	<1.0	<100	<50	--	--	--	--	--	
	03/12/96	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	06/21/96	--	--	--	--	--	--	--	--	--	--	--	
	08/29/96	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	--	
	01/16/97	<0.5	<0.5	<0.5	<0.5	<50	<150	0.7	<0.5	<0.5	<0.5	--	
	07/07/97	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	<0.5	
	01/27/98	<0.5	<0.5	<0.5	<0.5	100	<150	--	--	--	--	<0.5	
	07/22/98	<0.5	<0.5	<0.5	<0.5	<50	--	--	--	--	--	<0.5	
	07/22/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-3	03/23/93	35	2.9	2	3.2	300	ND	--	--	--	--	--	
	07/27/93	97	1	4	1.1	220	ND	--	--	--	--	--	
	11/05/93	4.9	ND	ND	1.2	170	ND	--	--	--	--	--	
	02/25/94	42	<1	<1	<1	100	<1,000	--	--	--	--	--	
	06/03/94	120	8.2	8.4	4.5	320	<20,000	--	--	--	--	--	
	08/31/94	83	1.1	5.3	2.9	<500	<500	--	--	--	--	--	
	12/22/94	1,460	18	100	50	3,800	270	--	--	--	--	--	
	03/13/95	3,600	260	270	280	14,000	1,700	--	--	--	--	--	
	06/09/95	4,700	58	140	71	3,700	120	--	--	--	--	--	
	09/21/95	9,800	58	600	95	14,000	300	--	--	--	--	--	
	12/12/95	330	2.1	47	5.3	700	<50	--	--	--	--	--	
	03/12/96	350	4.6	23	8.7	600	<50	--	--	--	--	--	
	06/21/96	940	76	98	57	1,900	<50	--	--	--	--	--	
	08/29/96	420	29	44	28	900	<150	--	--	--	--	--	
	01/16/97	1,600	270	120	194	3,600	700	<0.5	9.2	<0.5	<0.5	--	
	04/15/97	1,300	300	180	160	4,300	800	<0.5	16	<0.5	1.1	6.9	
	07/07/97	100	84	100	67	1,900	350	--	--	--	--	3.8	
	10/27/97	1,030	60	54	40	2,200	--	<0.5	2.4	<0.5	<0.5	3.1	
	01/27/98	1,070	98	73	69	3,200	--	--	--	--	--	3.9	
	04/22/98	610	56	49	54	1,800	--	<0.5	3.0	<0.5	<0.5	1.1	
	07/22/98	1,800	230	160	180	3,600	370	--	--	--	--	5.0	
	10/21/98	78	1.0	3.8	0.6	110	<250	<0.5	0.6	<0.5	<0.5	<0.5	
	07/23/99	1,500	140	76.0	260	4,000	790	<0.5	1.0	<0.5	<0.5	5.60	
	10/28/99	1,100	43	58	102	3,000	600	<0.5	0.9	--	<0.5	--	
	02/10/00	690	22	36	49	1,400	520	<0.5	<0.5	<0.5	<0.5	2.20	
	04/27/00	1,100	140	73	163	2,400	250	<0.5	0.6	<0.5	<0.5	<0.5	
	08/03/00	520	7.7	21	27	1,100	750	<0.5	0.6	<0.5	<0.5	<0.5	
	10/23/00	2,000	16	22	46	3,800	760	<0.5	0.7	<0.5	<0.5	<0.5	
	01/31/01	360	8.6	14	28	860	300	<0.5	0.6	<0.5	<0.5	<0.5	
	04/26/01	808	60.6	46.8	115	1,530	280	<0.5	0.8	<0.5	<0.5	<0.5	
	07/30/01	788	23.3	44.6	80.7	1,400	350	<0.5	0.6	<0.5	<0.5	<0.5	
	10/29/01	852	14.3	24.5	38.6	1,730	500	<0.5	0.5	<0.5	<0.5	<0.5	
	01/29/02	1,250	85.3	64.7	95.7	4,240	490	<0.5	1.4	<0.5	<0.5	<0.5	
	04/29/02	1,120	51.5	84.4	117	5,710	700	<0.5	1.1	<0.5	<0.5	<0.5	
MW-5	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-6	03/23/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	07/27/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	11/05/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	02/25/94	<1	<1	<1	3.5	<100	<1,000	--	--	--	--	--	
	06/03/94	2.7	<0.5	<0.5	<0.5	69	<20,000	--	--	--	--	--	
	08/31/94	<0.3	8.7	1.6	3.5	<500	<500	--	--	--	--	--	
	12/22/94	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	Non-diesel peak reported.
	03/13/95	1.2	<0.5	<0.5	<0.5	<50	<400	--	--	--	--	--	
	06/09/95	0.6	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	09/21/95	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	
	12/12/95	<0.5	<0.5	<0.5	<1.0	<100	<50	--	--	--	--	--	
	03/12/96	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	06/21/96	--	--	--	--	--	--	--	--	--	--	--	
	08/29/96	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	--	
	01/16/97	5.5	16	2.9	16	140	220	<0.5	6.3	<0.5	<0.5	--	
	07/07/97	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	<0.5	
	07/22/98	<0.5	<0.5	<0.5	<0.5	<50	<250	--	--	--	--	<0.5	
	10/24/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	7.7	<0.5	<0.5	<0.5	
	01/31/01	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	6.9	<0.5	<0.5	<0.5	

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
MW-6 (cont.)	04/27/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	6.6	<0.5	<0.5	<0.5	
	07/30/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	9.2	<0.5	<0.5	<0.5	
	10/30/01	<0.5	<0.5	<0.5	<1.0	<200	<500	<0.5	10	<0.5	<0.5	<0.5	
	01/29/02	0.54	<0.5	<0.5	<1.0	<200	<250	<0.5	10	<0.5	<0.5	<0.5	
	04/30/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	14	<0.5	<0.5	<0.5	
MW-11	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	<0.5	
MW-12	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	<0.5	
MW-13	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	<0.5	
MW-15	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	430	<0.5	<0.5	<0.5	<0.5	<0.5	
	07/22/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-25	03/23/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	07/27/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	11/05/93	4.2	4.4	2.5	20	170	ND	--	--	--	--	--	
	02/25/94	2.1	<1	<1	<1	<100	<1,000	--	--	--	--	--	
	06/03/94	2.4	14	<0.5	3.4	97	<20,000	--	--	--	--	--	
	08/31/94	0.5	<0.3	<0.3	<0.6	<500	<500	--	--	--	--	--	
	12/22/94	0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	Non-diesel peak reported.
	03/13/95	0.58	<0.5	<0.5	<0.5	150	950	--	--	--	--	--	
	06/09/95	0.8	<0.5	<0.5	<0.5	<100	60	--	--	--	--	--	
	09/21/95	<0.5	<0.5	<0.5	<0.5	50	<50	--	--	--	--	--	
	12/12/95	<0.5	<0.5	<0.5	<1.0	<100	<50	--	--	--	--	--	
	03/12/96	<0.5	<0.5	<0.5	<0.5	120	<50	--	--	--	--	--	
	06/21/96	--	--	--	--	--	--	--	--	--	--	--	
	08/29/96	<0.5	<0.5	<0.5	<0.5	90	<150	--	--	--	--	--	
	01/16/97	0.6	<0.5	<0.5	<0.5	80	<150	25	41	<0.5	<0.5	--	
	07/07/97	<0.5	<0.5	<0.5	<0.5	140	<150	--	--	--	--	11	
	01/27/98	<0.5	<0.5	<0.5	<0.5	<100	--	--	--	--	--	10	
	07/22/98	<0.5	<0.5	<0.5	<0.5	<50	<250	--	--	--	--	24	
	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	340	28	59	<0.5	<0.5	28	1,1-DCE detected, 0.9 µg/L.
	04/07/99	<0.5	<0.5	<0.5	<0.5	<50	<250	27	72	<0.5	<0.5	27	1,1-DCE detected, 1.6 µg/L.
	07/23/99	1.80	<0.5	<0.5	<0.5	<50	<200	30	58	<0.5	<0.5	23.0	
	10/27/99	<0.5	1.4	<0.5	1.0	<100	<200	35	47	--	<0.5	--	
	02/08/00	<0.5	<0.5	<0.5	<0.5	100	<250	39	41	<0.5	<0.5	29.0	1,1-Dichloroethene detected at 3.1 µg/L.
	04/26/00	<0.5	<0.5	<0.5	<0.5	<100	<250	51	38	<0.5	<0.5	18	1,1-Dichloroethene detected at 4.2 µg/L.
	08/03/00	<0.5	<0.5	<0.5	<0.5	<50	<250	40	57	<0.5	<0.5	27	1,1-Dichloroethene detected at 2.6 µg/L.
	10/23/00	<0.5	<0.5	<0.5	<0.5	<50	<250	54	68	<0.5	<0.5	38	1,1-Dichloroethene detected at 3.5 µg/L.
	01/31/01	<0.5	<0.5	<0.5	<0.5	90	<250	52	46	<0.5	<0.5	22	1,1-Dichloroethene detected at 6.5 µg/L.
	04/26/01	<0.5	0.62	<0.5	<0.5	<200	<250	49	37	<0.5	<0.5	15.8	1,1-Dichloroethene detected at 6.0 µg/L.
	07/30/01	<0.5	<0.5	<0.5	<0.5	<200	<250	33	36	<0.5	<0.5	10.9	Chloromethane detected at 0.8 µg/L; 1,1-Dichloroethene detected at 4.6 µg/L.
	10/29/01	<0.5	<0.5	<0.5	<1.0	<200	<500	22	38	<0.5	<0.5	10.5	Chloromethane detected at 0.5 µg/L; 1,1-Dichloroethene detected at 1.8 µg/L.
	01/28/02	<0.5	<0.5	<0.5	<1.0	<200	<250	25	56	<0.5	<0.5	8.90	1,1-Dichloroethene detected at 2.8 µg/L.
	04/29/02	<0.5	<0.5	<0.5	<1.0	<200	<250	14	44	<0.5	<0.5	6.92	1,1-Dichloroethene detected at 1.7 µg/L; 1,1,2,2-Tetrachloroethane detected at 0.5 µg/L.
	10/22/02	7.64	248	133	843	4,790	1,240	9.6	34	<0.5	<0.5	1,410	1,1-Dichloroethene detected at 0.9 µg/L.
	11/15/02	<0.5	<0.5	<0.5	<1.0	<200	<250	11	35	<0.5	<0.5	7.3	Chloroethane detected at 22 µg/L.
	05/06/03	<0.5	<0.5	<0.5	<1.0	<200	<250	8.5	34	<0.5	<0.5	5.7	1,1-Dichloroethene detected at 0.8 µg/L.
	10/14/03	<0.5	<0.5	<0.5	<1.0	<200	<250	7.6	27	<0.5	<0.5	6.3	
	04/27/04	<0.5	<0.5	<0.5	<1.0	<200	<250	5.1	18	<0.5	<0.5	5.2	
	11/17/04	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<50**	**190**	**6.7**	**25**	**<0.50**	**<0.50**	**6.1**	1,1-Dichloroethene detected at 0.51 µg/L.
MW-26	03/23/93	180	190	55	330	7,000	1,300	ND	ND	ND	ND	--	
	07/27/93	470	96	30	80	1,800	ND	ND	140	ND	ND	--	
	11/05/93	4,700	1,300	9	1,400	19,000	ND	ND	120	ND	ND	--	
	02/25/94	4,800	570	200	860	14,000	<1,000	<1	28	<1	<1	--	
	06/03/94	4,100	300	120	230	12,000	<20,000	1.7	140	<0.5	<0.5	--	Bromodichloromethane detected, 0.84 µg/L.
	08/31/94	4,100	360	170	450	93,000	1,400	<4.0	<4.0	<4.0	<4.0	--	
	12/22/94	1,030	170	85	290	5,000	560	<2.0	<2.0	<2.0	<2.0	--	8 other volatiles detected by 8260.
	03/13/95	320	19	23	66	3,000	810	53	5.8	<0.5	<0.5	--	
	06/09/95	14,000	64	31	230	10,800	310	240	3.1	1	<0.5	--	
	09/21/95	1,900	160	160	330	8,000	200	1.3	120	<0.5	<0.5	--	
	12/12/95	13,000	38	36	120	25,000	0.6	1.4	180	<0.5	<0.5	--	No diesel pattern detected; result due to high gasoline concentration.
	03/12/96	9,000	33	30	65	4,400	<50	<0.5	180	<0.5	<0.5	--	
	06/21/96	14,000	27	16	66	5,400	<50	3.2	170	<0.5	<0.5	--	
	08/29/96	8,500	26	28	74	19,000	<150	<0.5	160	<0.5	<0.5	--	
	01/16/97	6,500	21	31	47	4,600	--	4.3	>50	<0.5	<0.5	26	
	04/15/97	16,000	33	40	160	26,000	2,200	3.5	97	<0.5	2.4	40	cis-1,2-DCE detected, 0.7 µg/L.
	07/07/97	22,000	44	170	200	28,000	1,100	<5.0	<5.0	<5.0	<5.0	95	
	10/27/97	16,000	26	100	37	30,000	--	3.6	92	<0.5	<0.5	38	
	01/27/98	23,600	<5.0	<5.0	<5.0	26,000	420	8.3	100	<0.5	<0.5	100	
	04/22/98	5,000	4.3	9.2	16	14,000	--	13	130	<0.5	<0.5	27	

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
MW-26	07/22/98	3,800	5.7	6.9	11	5,200	750	10	110	--	<1.0	33	
(cont.)	10/21/98	420	<0.5	2.1	2.7	820	<250	24	82	<0.5	<0.5	31	
	02/05/99	20	<0.5	0.60	0.80	230	230	10	51	<0.5	<0.5	29	
	04/07/99	<0.5	<0.5	<0.5	<0.5	80	<250	15	54	<0.5	<0.5	25	
	07/23/99	7.10	<0.5	<0.5	0.80	180	<200	12	32	<0.5	<0.5	12.0	
	10/27/99	14	1.4	2.9	7.8	400	<200	13	30	--	<0.5	--	
	02/08/00	<0.5	<0.5	<0.5	<0.5	80	<250	13	32	<0.5	<0.5	28.0	
	04/26/00	0.7	<0.5	0.6	<0.5	200	340	7.5	39	<0.5	<0.5	22	
	08/03/00	6.8	<0.5	0.6	1.4	<50	<250	7.4	19	<0.5	<0.5	19	
	10/23/00	10	0.8	1.7	1.7	80	<250	5.1	37	<0.5	<0.5	26	
	01/31/01	26	0.70	2.4	2.2	390	320	5.7	51	<0.5	<0.5	33	
	04/26/01	10.6	<0.5	0.70	1.04	400	350	16	39	<0.5	<0.5	28.5	
	07/30/01	107	<0.5	1.42	1.06	1,920	380	22	44	<0.5	<0.5	31.4	
	10/29/01	31.6	<0.5	<0.5	<1.0	2,020	500	26	25	<0.5	<0.5	27	
	01/28/02	30.0	<0.5	0.70	<1.0	450	380	43	<0.5	<0.5	<0.5	14.5	1,1-Dichloroethene detected at 1.8 µg/L.
	04/29/02	394	<0.5	<0.5	<1.0	1,870	550	50	23	<0.5	<0.5	8.62	1,1-Dichloroethene detected at 2.5 µg/L.
	10/22/02	1,440	25.7	6.60	20.4	4,440	890	53	26	<0.5	<0.5	168	1,1-Dichloroethene detected at 3.7 µg/L.
	11/15/02	1,630	0.56	3.22	3.86	5,590	780	18	33	<0.5	<0.5	49.2	1,1-dichloroethene detected at 1.0 µg/L.
	05/06/03	1,250	<0.5	2.42	<1.0	3,730	380	46	24	<0.5	<0.5	13.1	1,1-Dichloroethene detected at 3.1 µg/L.
	10/14/03	51	<0.5	1.38	<1.0	3,100	<250	83	28	<0.5	<0.5	23.8	1,1-Dichloroethene detected at 3.3 µg/L.
	04/27/04	467	<0.5	1.24	<1.0	1,380	<250	82	33	<0.5	<0.5	<0.5	1,1-Dichloroethene detected at 5.2 µg/L.
	11/17/04	**120**	**<1.0**	**2.50**	**1.3**	**740**	**820**	**31**	**44**	**<0.50**	**<0.50**	**120**	1,1-Dichloroethene detected at 1.1 µg/L.
MW-27	06/21/96	<0.5	<0.5	<0.5	<0.5	<50	<50	<0.5	6.8	<0.5	<0.5	--	
	08/29/96	--	--	--	--	--	--	--	--	--	--	--	
	01/16/97	12	5.0	<0.5	2.6	70	<150	<0.5	5.7	<0.5	<0.5	--	
	07/22/98	<0.5	<0.5	<0.5	<0.5	<50	<250	<1.0	1.4	--	<1.0	<0.5	
	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	<0.5	0.7	<0.5	<0.5	<0.5	
	07/23/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	0.7	<0.5	<0.5	<0.5	
	10/27/99	<0.5	<0.5	<0.5	<0.5	<100	<200	<0.5	<0.5	--	<0.5	--	
	02/08/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/00	<0.5	<0.5	<0.5	<0.5	<100	250	<0.5	<0.5	<0.5	<0.5	<0.5	
	08/16/00	<0.5	<0.5	<0.5	<0.5	<50	--	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/23/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	01/31/01	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/26/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	07/30/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/29/01	<0.5	<0.5	<0.5	<1.0	<200	<500	<0.5	<0.5	<0.5	<0.5	<0.5	
	01/28/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	0.5	<0.5	<0.5	<0.5	
	04/29/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/22/02	8.56	56.2	9.37	59.3	650	600	<0.5	<0.5	<0.5	<0.5	331	
	11/15/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	05/06/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/14/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/04	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	11/17/04	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<50**	**64**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<5.0**	
MW-28	03/23/93	ND	ND	ND	ND	110	ND	--	--	--	--	--	
	07/27/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	11/05/93	ND	ND	ND	2.1	ND	ND	--	--	--	--	--	
	02/25/94	<1	<1	<1	<1	<100	<1	--	--	--	--	--	
	06/03/94	3.1	<0.5	<0.5	<0.5	<50	<20,000	--	--	--	--	--	
	08/31/94	1.4	<0.3	<0.3	<0.6	<500	<500	--	--	--	--	--	
	12/22/94	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	Non-diesel peak reported.
	03/13/95	0.91	<0.5	<0.5	<0.5	<50	<400	--	--	--	--	--	
	06/09/95	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	09/21/95	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	
	12/12/95	<0.5	<0.5	<0.5	<1.0	<100	<50	--	--	--	--	--	
	03/12/96	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	06/21/96	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	08/29/96	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	--	
	01/16/97	18	20	2.2	13	220	<150	5.1	85	<0.5	<0.5	8.2	
	04/15/97	<0.5	<0.5	<0.5	<0.5	120	<150	1.1	150	<0.5	<0.5	7.1	
	07/07/97	<0.5	<0.5	<0.5	<0.5	110	<150	<5.0	170	<5.0	<5.0	7.2	
	10/27/97	3.6	<0.5	<0.5	<0.5	300	--	6.2	120	<0.5	<0.5	36	
	01/27/98	7.6	<0.5	<0.5	<0.5	500	<150	--	--	--	--	56	
	04/22/98	<0.5	<0.5	<0.5	<0.5	<50	--	1.0	89	<0.5	<0.5	8.6	
	07/22/98	<0.5	<0.5	<0.5	<0.5	<50	--	<1.0	85	--	<1.0	18	
	10/21/98	<0.5	<0.5	<0.5	<0.5	<50	<250	0.5	80	<0.5	<0.5	12	
	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	32	29	<0.5	<0.5	5.0	1,1-DCE detected, 0.9 µg/L.
	04/07/99	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	62	<0.5	<0.5	4.5	
	07/23/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	50	<0.5	<0.5	1.80	
	10/27/99	--	--	--	--	--	<200	--	--	--	--	--	
	11/02/99	0.7	<0.5	<0.5	<0.5	<100	--	<0.5	32	--	<0.5	--	
	02/08/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	39	<0.5	<0.5	4.30	
	04/26/00	<0.5	<0.5	<0.5	<0.5	<100	<250	<0.5	50	<0.5	<0.5	1.5	
	08/03/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	47	<0.5	<0.5	3.7	

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
MW-28	10/23/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	57	<0.5	<0.5	4.7	
(cont.)	01/31/01	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	46	<0.5	<0.5	4.4	
	04/26/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	26	<0.5	<0.5	1.98	
	07/30/01	0.5	<0.5	0.64	2.58	<200	<250	<0.5	38	<0.5	<0.5	3.0	Chloromethane detected at 3.3 µg/L.
	10/29/01	<0.5	<0.5	<0.5	<1.0	<200	<500	<0.5	29	<0.5	<0.5	3.74	
	01/28/02	6.20	<0.5	<0.5	<1.0	<200	<250	2.8	50	<0.5	<0.5	6.00	
	04/29/02	1.64	<0.5	<0.5	<1.0	<200	<250	3.7	44	<0.5	<0.5	4.81	
	10/22/02	25.0	<0.5	<0.5	<1.0	750	<250	2.0	59	<0.5	<0.5	<0.5	
	11/15/02	13.4	<0.5	1.29	<1.0	610	<250	1.3	54	<0.5	<0.5	<0.5	Chloromethane detected at 1.0 µg/L.
	05/06/03	3.1	<0.5	<0.5	<1.0	390	<250	0.8	70	<0.5	<0.5	9.29	Chloroethane detected at 0.8 µg/L.
	10/14/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	38	<0.5	<0.5	6.44	
	04/27/04	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	9.29	
	11/17/04	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<50**	**<50**	**<0.50**	**4.7**	**<0.50**	**<0.50**	**<5.0**	
MW-29	03/23/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	07/27/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	11/05/93	ND	ND	2.1	11	ND	ND	--	--	--	--	--	
	02/25/94	<1	<1	<1	<1	<100	<1,000	--	--	--	--	--	
	06/03/94	<0.5	<0.5	<0.5	<0.5	<50	<20,000	--	--	--	--	--	
	08/31/94	<0.3	<0.3	<0.3	<0.6	<500	<500	--	--	--	--	--	
	12/22/94	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	Non-diesel peak reported.
	03/13/95	0.59	<0.5	<0.5	<0.5	<50	<400	--	--	--	--	--	
	06/09/95	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	09/21/95	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	
	12/12/95	<0.5	<0.5	<0.5	<1.0	<100	<50	--	--	--	--	--	
	03/12/96	<0.5	<0.5	<0.5	<1.0	<100	<50	--	--	--	--	--	
	06/21/96	--	--	--	--	--	--	--	--	--	--	--	
	08/29/96	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	--	
	01/16/97	6.6	8.9	0.6	9.3	120	<150	47	24	<0.5	<0.5	1.8	
	07/07/97	<0.5	<0.5	<0.5	<0.5	<50	<150	52	21	<5.0	<5.0	1.2	
	01/27/98	<0.5	<0.5	<0.5	<0.5	100	<150	--	--	--	--	8.0	
	07/22/98	<0.5	<0.5	<0.5	<0.5	<50	<250	12	29	--	<1.0	7.8	
	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	<0.5	68	<0.5	<0.5	8.5	
	04/07/99	<0.5	<0.5	<0.5	<0.5	<50	<250	30	38	<0.5	<0.5	4.9	1,1-DCE detected, 1.4 µg/L.
	07/23/99	<0.5	<0.5	<0.5	<0.5	<50	<200	44	33	<0.5	1.9	4.70	1,1-Dichloroethene detected at 2.3 µg/L; cis-1,2-Dichloroethene detected at 2.3 µg/L.
	10/27/99	<0.5	<0.5	<0.5	<0.5	<100	<200	36	23	--	<0.5	--	
	02/08/00	<0.5	<0.5	<0.5	<0.5	<50	<250	87	25	<0.5	<0.5	18.0	1,1-Dichloroethene detected at 9.6 µg/L.
	04/26/00	<0.5	<0.5	<0.5	<0.5	<100	<250	61	38	<0.5	<0.5	12	1,1-Dichloroethene detected at 5.2 µg/L.
	08/16/00	<0.5	<0.5	<0.5	<0.5	<50	--	49	21	<0.5	<0.5	17	1,1-Dichloroethene detected at 6.0 µg/L.
	10/23/00	<0.5	<0.5	<0.5	<0.5	<50	<250	94	40	<0.5	<0.5	34	1,1-Dichloroethene detected at 14 µg/L.
	01/31/01	<0.5	<0.5	<0.5	<0.5	60	<250	100	35	<0.5	<0.5	26	1,1-Dichloroethene detected at 13 µg/L.
	04/26/01	<0.5	<0.5	<0.5	<0.5	<200	270	87	38	<0.5	<0.5	39.1	1,1-Dichloroethene detected at 12 µg/L.
	07/30/01	1.25	1.28	1.1	5.99	220	<250	120	42	<0.5	<0.5	42.3	1,1-Dichloroethene detected at 13 µg/L.
	10/29/01	<0.5	<0.5	<0.5	<1.0	<200	<500	120	34	<0.5	<0.5	28.0	1,1-Dichloroethene detected at 14 µg/L.
	01/28/02	<0.5	<0.5	<0.5	<1.0	<200	<250	120	44	<0.5	<0.5	28.9	1,1-Dichloroethene detected at 26 µg/L.
	04/29/02	4.95	<0.5	<0.5	<1.0	<200	<250	130	29	<0.5	<0.5	20.9	1,1-Dichloroethene detected at 23 µg/L.
	10/22/02	<0.5	<0.5	<0.5	<1.0	<200	<250	140	26	<0.5	<0.5	18.1	1,1-Dichloroethene detected at 19 µg/L.
	11/15/02	<0.5	<0.5	<0.5	<1.0	<200	<250	120	26	<0.5	<0.5	13.9	1,1-dichloroethene detected at 15 µg/L.
	05/06/03	<0.5	<0.5	<0.5	<1.0	<200	<250	140	31	<0.5	<0.5	13.1	1,1-Dichloroethene detected at 24 µg/L.
	10/14/03	<0.5	<0.5	<0.5	<1.0	<200	<250	110	22	<0.5	<0.5	11.9	Chloromethane detected at 0.9 µg/L.
	04/27/04	<0.5	<0.5	<0.5	<1.0	<200	<250	160	28	<0.5	<0.5	15.3	1,1-Dichloroethene detected at 31 µg/L.
	11/17/04	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**120**	**<50**	**33**	**6.5**	**<0.50**	**<0.50**	**120**	1,1-Dichloroethene detected at 5.5 µg/L.
MW-30	03/23/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	07/27/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	11/05/93	ND	ND	ND	2.8	ND	ND	--	--	--	--	--	
	02/25/94	1.3	<1	<1	<1	<100	<1,000	--	--	--	--	--	
	06/03/94	1.1	<0.5	<0.5	<0.5	<50	<20,000	--	--	--	--	--	
	08/31/94	0.8	<0.3	<0.3	<0.6	<500	<500	--	--	--	--	--	
	12/22/94	0.6	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	Non-diesel peak reported.
	03/13/95	0.98	<0.5	<0.5	<0.5	<50	<400	--	--	--	--	--	
	06/09/95	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	09/21/95	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	
	12/12/95	<0.5	<0.5	<0.5	<1.0	<100	<50	--	--	--	--	--	
	03/12/96	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	06/21/96	--	--	--	--	--	--	--	--	--	--	--	
	08/29/96	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	--	
	01/16/97	<0.5	<0.5	<0.5	0.6	80	<150	<0.5	<0.5	<0.5	0.9	--	
	07/07/97	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	<0.5	
	01/27/98	5.4	<0.5	<0.5	<0.5	100	--	--	--	--	--	<0.5	
	07/22/98	<0.5	<0.5	<0.5	<0.5	<50	--	--	--	--	--	<0.5	
	04/07/99	<0.5	<0.5	<0.5	<0.5	<50	<250	--	--	--	--	<0.5	
	07/22/99	<0.5	<0.5	<0.5	<0.5	<50	--	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/28/99	<0.5	<0.5	<0.5	<0.5	<100	<200	<0.5	<0.5	--	<0.5	--	
	02/08/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/00	<0.5	<0.5	<0.5	<0.5	<100	250	<0.5	<0.5	<0.5	<0.5	<0.5	

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
MW-30	08/04/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
(cont.)	10/24/00	5.4	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	01/31/01	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	07/30/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/29/01	<0.5	<0.5	<0.5	<1.0	<200	<500	<0.5	<0.5	<0.5	<0.5	<0.5	Chloroethane detected at 1.3 µg/L.
	01/29/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/30/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/22/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	05/06/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/14/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/04	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	11/17/04	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<50**	**140**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<5.0**	
MW-32	03/23/93	391	6.2	3.1	9	440	ND	ND	60	ND	ND	--	
	07/27/93	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	--	
	11/05/93	20	ND	1.8	2.1	170	ND	ND	7.9	ND	ND	--	
	02/25/94	5.6	<1	<1	<1	<100	<1,000	<1	<1	<1	<1	--	
	06/03/94	120	1.3	<0.5	1.4	350	<20,000	<0.5	11	<0.5	<0.5	--	
	08/31/94	39	0.5	2.2	1.2	<500	<500	<4.0	10	<4.0	<4.0	--	
	12/22/94	4.8	<0.5	<0.5	<0.5	<50	<50	<2.0	4.6	<2.0	<2.0	--	Non-diesel peak reported.
	03/13/95	220	3.6	6.5	5.8	1,100	<400	<0.5	16	<0.5	<0.5	--	
	06/09/95	1,500	7.9	43	14	2,200	180	0.7	<0.5	0.5	<0.5	--	
	09/21/95	1,200	2.4	72	4.5	2,300	60	<0.5	6.7	<0.5	1.4	--	
	12/12/95	230	<0.5	8.9	<1.0	500	<50	<0.5	28	<0.5	<0.5	--	
	03/12/96	40	<0.5	1.7	<0.5	110	<50	<0.5	6.8	<0.5	<0.5	--	
	06/21/96	--	--	--	--	--	--	--	--	--	--	--	
	08/29/96	150	<0.5	49	<0.5	700	<150	<0.5	27	<0.5	<0.5	--	
	01/16/97	14	<0.5	1.9	<0.5	150	<150	<0.5	10	<0.5	0.7	--	cis-1,2-DCE detected, 0.8 µg/L.
	07/07/97	370	11	110	21	1,600	190	--	--	--	--	11	
	01/27/98	13	<0.5	1.0	<0.5	300	--	<0.5	7.5	<0.5	<0.5	2.5	
	07/22/98	700	55	88	66	2,300	--	--	--	--	--	14	
	07/22/99	59.0	0.80	1.80	<0.5	900	220	<0.5	5.9	<0.5	<0.5	8.70	
	10/28/99	95	2.5	2.1	1.6	500	<200	<0.5	12	--	<0.5	--	
	02/10/00	7.0	<0.5	<0.5	<0.5	120	<250	<0.5	4.3	<0.5	<0.5	1.10	
	04/27/00	240	7.0	12	18.8	800	250	<0.5	9.8	<0.5	<0.5	<0.5	
	08/03/00	620	3.0	14	4.1	1,300	<250	<0.5	3.0	<0.5	<0.5	<0.5	
	10/23/00	430	4.30	5.50	8.80	1,200	260	<0.5	7.8	<0.5	<0.5	<0.5	
	01/31/01	42	1.5	0.90	2.8	280	<250	<0.5	5.7	<0.5	<0.5	3.6	
	04/26/01	268	13.0	22.1	22.0	780	<250	<0.5	6.3	<0.5	<0.5	<0.5	
	07/30/01	29.4	<0.5	0.52	0.51	320	<250	<0.5	6.6	<0.5	<0.5	<0.5	
	10/29/01	16.1	2.01	1.14	3.96	<200	<500	<0.5	5.4	<0.5	<0.5	<0.5	
	01/29/02	12.0	<0.5	0.70	<1.0	<200	<250	<0.5	4.9	<0.5	2.0	<0.5	cis 1,2-Dichloroethene detected at 1.3 µg/L.
	04/29/02	188	5.52	9.70	13.0	680	<250	<0.5	6.0	<0.5	<0.5	<0.5	
	10/22/02	4.84	<0.5	<0.5	<1.0	<200	<250	<0.5	4.8	<0.5	<0.5	<0.5	
	05/06/03	20.72	0.76	0.86	2.08	<200	<250	<0.5	5.8	<0.5	<0.5	<0.5	
	10/14/03	6.02	<0.5	<0.5	<1.0	<200	<250	<0.5	3.2	<0.5	<0.5	<0.5	
	04/27/04	23.60	1.68	0.67	3.91	<200	<250	<0.5	3.0	<0.5	<0.5	<0.5	
	11/17/04	**2.0**	**<0.50**	**<0.50**	**<0.50**	**<50**	**<50**	**<0.50**	**2.1**	**<0.50**	**<0.50**	**<5.0**	
MW-33	04/07/99	0.60	<0.5	0.90	<0.5	<50	<250	--	--	--	--	<0.5	
	07/22/99	8.90	<0.5	1.00	<0.5	<50	<200	0.6	0.7	<0.5	<0.5	<0.5	
	10/28/99	40	0.9	21	3.8	200	<200	0.8	1.3	--	<0.5	--	
	02/10/00	20	0.7	12	10.0	380	<250	0.9	0.6	<0.5	<0.5	1.30	
	04/27/00	6.9	<0.5	6.4	<0.5	<100	250	4.3	0.9	<0.5	<0.5	<0.5	
	08/03/00	31	0.5	20	1.0	150	550	<0.5	0.6	<0.5	<0.5	<0.5	
	10/23/00	89	1.5	36	3.9	350	<250	<0.5	2.1	<0.5	<0.5	<0.5	
	01/31/01	6.8	<0.5	2.0	<0.5	<50	<250	1.9	0.6	<0.5	<0.5	0.7	
	04/26/01	6.61	0.56	1.63	0.61	<200	<250	2.6	<0.5	<0.5	<0.5	<0.5	
	07/30/01	4.43	2.61	1.34	6.6	<200	<250	2.2	0.5	<0.5	<0.5	<0.5	Dichlorodifluoromethane detected at 0.6 µg/L.
	10/29/01	14.2	<0.5	0.63	<1.0	<200	<500	1.3	0.7	<0.5	<0.5	<0.5	
	01/28/02	<0.5	<0.5	<0.5	<1.0	<200	<250	1.1	0.5	<0.5	3.8	<0.5	Dichlorodiflouromethane detected at 1.9 µg/L.; cis 1,2-Dichloroethene detected at 8.9 µg/L.
	04/29/02	14.6	<0.5	1.41	<1.0	<200	<250	0.8	0.9	<0.5	<0.5	<0.5	Dichlorodiflouromethane detected at 1.9 µg/L.
MW-100	07/06/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	07/30/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	Chloromethane detected at 1.8 µg/L.
	10/30/01	<0.5	<0.5	<0.5	<1.0	<200	<500	<0.5	<0.5	<0.5	<0.5	<0.5	
	01/28/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/29/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/22/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	05/06/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/14/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/04	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	11/17/04	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<5.0**	

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
MW-?	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	430	--	--	--	--	<0.5	
PR-26	07/26/99	20,000	15,000	1,100	7,250	82,500	11,000	--	--	--	--	33.0	
	10/26/99	28,000	25,000	2,300	8,400	110,000	60,000	<0.5	24	--	<0.5	--	
PR-45	07/26/99	13,200	8,200	2,600	15,600	82,500	39,000	--	--	--	--	35.0	
	10/28/99	12,000	8,200	1,700	8,500	45,000	25,000	<0.5	<0.5	--	<0.5	--	
	02/09/00	24,000	25,000	10,000	53,000	360,000	82,000	<0.5	4.0	<0.5	<0.5	1,000	
	04/27/00	17,000	9,500	16,000	92,000	1,300,000	20,300	<5.0	<5.0	<5.0	<5.0	<5.0	
	08/04/00	20,000	8,800	2,600	16,000	73,000	54,500	<0.5	1.0	<0.5	<0.5	<0.5	
	10/23/00	26,000	12,000	4,000	20,000	96,000	36,000	<0.5	1.2	<0.5	<0.5	<5.0	Chloroethane detected at 6.0 µg/L.
	04/27/01	16,200	8,600	3,220	19,000	178,000	22,700	<0.5	14	<0.5	<0.5	<25	Chloroethane detected at 4.6 µg/L.
	07/30/01	14,500	8,900	4,400	24,700	132,000	29,700	<0.5	11	<0.5	<0.5	<50	Chloromethane detected at 0.6 µg/L; Chloroethane detected at 11 µg/L; Methylene chloride detected at 0.5 µg/L.
	10/29/01	12,600	6,650	2,260	12,400	86,100	50,000	<0.5	7.8	<0.5	<0.5	<25	Chloroethane detected at 6.0 µg/L.
	01/29/02	8,930	4,860	2,640	12,700	114,000	19,400	<0.5	30	<0.5	<0.5	<0.5	Chloroethane detected at 7.5 µg/L.
	05/16/02	14,300	2,630	1,580	7,780	125,000	15,600	<0.5	1.0	<0.5	<0.5	<0.5	Chloroethane detected at 7.3 µg/L.
PR-52	07/26/99	12,000	1,720	750	12,400	172,000	40,000	<0.5	1.8	<0.5	<0.5	217	Methylene chloride detected at 7.9 µg/L.
	10/28/99	19,000	530	1,800	5,800	40,000	450,000	<0.5	<0.5	--	<0.5	--	
	02/09/00	22,000	1,600	4,100	15,800	200,000	140,000	<0.5	1.3	<0.5	<0.5	430	
	04/28/00	20,000	2,200	4,700	18,600	270,000	88,000	<1.0	<1.0	<1.0	<1.0	<5.0	
	08/04/00	26,000	1,600	2,900	15,000	150,000	110,000	<0.5	2.3	<0.5	<0.5	<0.5	
	10/24/00	52,000	13,000	41,000	180,000	650,000	280,000	<5.0	<5.0	<5.0	<5.0	<5.0	
	01/31/01	81,000	840	57,000	210,000	5,300,000	276,000	<0.5	1.0	<0.5	<0.5	500	Chloroethane detected at 2.4 µg/L; Methylene chloride detected at 0.6 µg/L.
	04/27/01	25,000	16,300	14,700	55,000	886,000	134,000	<0.5	<0.5	<0.5	<0.5	1,040	Chloroethane detected at 1.5 µg/L.
	07/30/01	31,100	2,480	13,500	51,700	340,000	185,000	<0.5	1.3	<0.5	<0.5	2,510	Chloromethane detected at 13 µg/L; Chloroethane detected at 46 µg/L; Methylene chloride detected at 0.6 µg/L.
	10/29/01	22,700	1,630	3,070	11,500	126,000	140,000	<0.5	0.9	<0.5	<0.5	<50	Chloromethane detected at 0.6 µg/L; Chloroethane detected at 4.0 µg/L; Methylene chloride detected at 0.7 µg/L.
	01/29/02	21,500	1,840	4,540	16,800	517,000	272,000	<0.5	<0.5	<0.5	<0.5	44.1	Chloroethane detected at 1.5 µg/L.
	05/16/02	31,600	53,600	43,800	216,000	2,020,000	75,000	<5.0	<5.0	<5.0	<5.0	63.5	Chloroethane detected at 8.3 µg/L.
PR-53	07/26/99	31,000	12,000	1,900	8,800	110,000	98,000	<0.5	43	<0.5	<0.5	43.0	Methylene chloride detected at 6.2 µg/L.
	10/27/99	17,000	3,900	890	3,320	54,000	16,000	<0.5	18	--	<0.5	--	
	02/09/00	21,000	5,000	1,200	5,300	65,000	9,400	0.6	20	<0.5	<0.5	67.0	Methylene chloride detected at 0.8 µg/L.
	04/28/00	34,000	30,000	9,300	51,000	730,000	104,000	<1.0	<1.0	<1.0	<1.0	340	
	08/04/00	35,000	17,000	3,800	24,000	180,000	69,500	<0.5	1.7	<0.5	<0.5	110	
	10/24/00	99,000	110,000	80,000	640,000	580,000	380,000	<5.0	5.0	<5.0	<5.0	380	
	01/31/01	66,000	15,000	28,000	140,000	2,400,000	960,000	<0.5	1.5	<0.5	<0.5	660	Chloroethane detected at 1.7 µg/L; Methylene chloride detected at 0.9 µg/L.
	04/27/01	55,500	10,000	23,700	137,000	4,240,000	806,000	<0.5	<0.5	<0.5	<0.5	<5,000	Chloroethane detected at 1.7 µg/L; Methylene chloride detected at 1.1 µg/L.
	10/29/01	46,500	9,520	12,900	74,000	1,630,000	130,000	<0.5	0.8	<0.5	<0.5	<500	Chloroethane detected at 3.0 µg/L; Methylene chloride detected at 0.9 µg/L.
	01/29/02	33,000	7,340	10,300	41,800	495,000	462,000	<0.5	1.8	<0.5	<0.5	122	Chloroethane detected at 3.2 µg/L.
	05/16/02	35,800	10,500	18,700	130,000	3,280,000	113,000	<5.0	<5.0	<5.0	<5.0	242	
PR-54	07/26/99	32,000	22,000	1,500	21,800	170,000	28,000	<0.5	3.0	<0.5	<0.5	56.0	Methylene chloride detected at 2.5 µg/L.
	10/26/99	27,000	10,000	3,700	19,500	190,000	350,000	<0.5	<0.5	--	<0.5	--	
	02/09/00	27,000	23,000	9,900	50,000	960,000	110,000	<0.5	3.9	<0.5	<0.5	1,000	
	04/28/00	24,000	14,000	1,200	9,000	76,000	80,000	<1.0	1.6	<1.0	<1.0	300	
	08/04/00	27,000	7,600	1,400	11,000	120,000	54,500	<0.5	2.0	<0.5	<0.5	200	
	10/24/00	23,000	4,400	2,000	13,000	140,000	96,000	<0.5	2.3	<0.5	<0.5	<100	Chloroethane detected at 5.3 µg/L; Methylene chloride detected at 2.3 µg/L.
	01/31/01	30,000	8,300	3,300	21,000	220,000	236,000	<0.5	2.6	<0.5	<0.5	480	Chloroethane detected at 2.8 µg/L; Methylene chloride detected at 1.7 µg/L.
	04/27/01	26,100	8,650	2,120	15,900	51,300	108,000	<0.5	<0.5	<0.5	<0.5	<500	Chloroethane detected at 3.0 µg/L.
	07/30/01	31,700	18,000	9,880	58,400	320,000	71,200	<0.5	3.9	<0.5	<0.5	2,750	Chloromethane detected at 2.2 µg/L; Chloroethane detected at 22 µg/L; Methylene chloride detected at 2.6 µg/L.
	10/30/01	25,400	11,300	3,500	18,800	222,000	530,000	<0.5	1.2	<0.5	<0.5	276	Chloroethane detected at 7.4 µg/L; Methylene chloride detected at 2.0 µg/L.
	01/29/02	13,300	9,850	4,240	33,100	108,000	48,000	<0.5	7.5	<0.5	<0.5	51.3	Chloroethane detected at 6.2 µg/L.
	05/16/02	27,900	34,500	5,630	36,400	324,000	172,000	<5.0	43	<5.0	<5.0	251	Chloroethane detected at 9.8 µg/L.
PR-64	07/26/99	22,000	18,000	1,700	10,300	110,000	--	<0.5	130	<0.5	<0.5	35.0	Methylene chloride detected at 1.4 µg/L.
	10/27/99	11,000	7,400	1,200	3,900	66,000	50,000	<0.5	110	--	<0.5	--	
	02/09/00	22,000	20,000	6,000	17,000	120,000	40,000	<0.5	>50	<0.5	<0.5	110	
	04/28/00	19,000	16,000	1,800	13,900	130,000	78,000	<1.0	67	<1.0	<1.0	300	
	05/16/02	18,300	40,100	10,400	104,000	30,600,000	419,000	<5.0	<5.0	<5.0	<5.0	<500	
PR-65	07/26/99	12,000	1,400	1,300	13,000	68,000	16,500	<0.5	2.6	<0.5	<0.5	20.0	
	10/26/99	14,000	2,300	1,800	11,000	65,000	50,000	<0.5	<0.5	--	<0.5	--	
PR-68	07/26/99	1,900	24.0	27.0	62.0	4,900	11,000	<0.5	1.2	<0.5	<0.5	4.40	
	10/26/99	2,800	36	86	62	8,000	2,800	<0.5	<0.5	--	<0.5	--	

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
PR-76	04/07/99	<0.5	<0.5	<0.5	<0.5	<50	<250	--	--	--	--	<0.5	
	10/22/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	05/06/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/14/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/04	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	11/17/04	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<50**	**85**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<5.0**	
V-24	04/07/99	<0.5	<0.5	<0.5	<0.5	120	<250	--	--	--	--	0.5	
V-31	07/26/99	7,000	600	550	1,370	17,500	5,350	--	--	--	--	19.0	
	10/26/99	7,000	120	850	950	18,000	3,000	<0.5	<0.5	--	<0.5	--	
V-46	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	270	<0.5	<0.5	<0.5	<0.5	<0.5	
V-55	07/22/99	8,000	480	740	2,880	30,000	2,100	<0.5	<0.5	<0.5	<0.5	13.0	
	10/28/99	11,000	59	1,200	317	28,000	38,000	<0.5	<0.5	--	<0.5	--	
	02/09/00	2,200	59	760	350	7,900	10,000	<0.5	<0.5	<0.5	<0.5	9.70	
	04/28/00	2,900	510	440	2,340	14,000	26,500	<5.0	<5.0	<5.0	<5.0	<5.0	
	08/03/00	9,400	380	720	2,200	28,000	70,000	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/23/00	11,000	140	900	1,300	30,000	51,000	<0.5	<0.5	<0.5	<0.5	<12	
	01/31/01	4,600	57	550	1,200	34,000	88,500	<0.5	<0.5	<0.5	<0.5	44	
	04/26/01	6,400	61.5	250	336	34,200	227,000	<0.5	<0.5	<0.5	<0.5	<25	
	10/30/01	5,360	70.0	1,090	1,450	32,700	78,000	<0.5	<0.5	<0.5	<0.5	<25	
	01/29/02	1,660	140	492	818	12,000	4,100	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/29/02	5,170	95.1	572	523	30,600	35,100	<0.5	<0.5	<0.5	<0.5	1.06	
V-72	07/26/99	13,500	6.80	1.10	3.90	3,900	12,900	<0.5	11	<0.5	<0.5	<0.5	
	10/28/99	2,900	58	21	47.7	6,000	48,000	<0.5	3.4	--	<0.5	--	
	02/09/00	670	8.2	<0.5	17.8	890	6,100	<0.5	3.0	<0.5	<0.5	<0.5	
	04/28/00	130	<0.5	<0.5	<0.5	200	5,950	<0.5	0.7	<0.5	<0.5	<0.5	
	08/04/00	460	0.8	<0.5	0.6	440	4,120	<0.5	2.8	<0.5	<0.5	<0.5	
	10/24/00	2,700	3.2	0.5	2.3	3,500	17,000	<0.5	4.0	<0.5	<0.5	<0.5	
	04/27/01	1,240	2.05	<0.5	2.78	1,310	6,290	<0.5	5.1	<0.5	<0.5	<0.5	Dichlorodifluoromethane detected at 0.8 µg/L.
	07/30/01	1,790	69.8	1.22	2.50	1,490	4,290	<0.5	6.2	<0.5	<0.5	<0.5	Chloromethane detected at 1.5 µg/L.
	10/29/01	1,330	4.38	0.55	3.32	1,960	--	<0.5	5.6	<0.5	<0.5	<0.5	Chloromethane detected at 1.1 µg/L.
	01/29/02	655	6.40	<0.5	8.00	1,840	2,250	<0.5	3.9	<0.5	<0.5	<0.5	Chloromethane detected at 1.8 µg/L.
	05/16/02	43.8	1.09	<0.5	4.36	230	5,120	<0.5	<0.5	<0.5	<0.5	<0.5	Chloromethane detected at 1.8 µg/L.
V-84	07/26/99	2,400	440	80.0	340	8,700	2,350	<0.5	2.4	<0.5	<0.5	6.40	
	10/26/99	1,100	130	46	108	4,000	700	<0.5	<0.5	--	<0.5	--	
	02/09/00	300	30	8.9	53	2,300	1,100	<0.5	1.2	<0.5	<0.5	<0.5	
	04/28/00	30	1.9	<0.5	<0.5	100	550	<5.0	<5.0	<5.0	<5.0	<0.5	
	08/04/00	900	110	34	120	2,700	1,380	<0.5	1.0	<0.5	<0.5	<0.5	
	10/24/00	2,000	480	24	110	48,000	1,900	<0.5	1.0	<0.5	<0.5	<0.5	
	01/31/01	68	1.3	5.3	8.2	970	1,820	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/26/01	925	97.0	45.4	59.7	2,360	1,180	<0.5	0.8	<0.5	<0.5	<0.5	
	07/30/01	1,720	282	50	359	8,100	7,040	<0.5	1.5	<0.5	<0.5	<0.5	
	10/30/01	870	250	27.6	167	8,960	--	<0.5	1.0	<0.5	<0.5	<0.5	
	01/29/02	197	4.90	1.70	3.60	640	500	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/29/02	318	34.4	15.4	18.4	1,070	400	<0.5	<0.5	<0.5	<0.5	<0.5	
29 (CC-1)	07/23/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/28/99	<0.5	<0.5	<0.5	<0.5	<100	<200	<0.5	<0.5	--	<0.5	--	
	02/08/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/26/00	<0.5	<0.5	<0.5	<0.5	<100	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	08/03/00	1.4	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/23/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	01/31/01	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/26/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	07/30/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/30/01	1.12	0.56	<0.5	<0.5	<200	<500	<0.5	<0.5	<0.5	<0.5	<0.5	
	01/28/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/29/02	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/22/02	1.38	14.6	2.44	16.4	220	<250	<0.5	<0.5	<0.5	<0.5	92.0	Chloromethane detected at 1.3 µg/L, Chloroform detected at 4.7 µg/L.
	11/15/02	<0.50	<0.50	<0.50	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	Chloroform detected at 2.6 µg/L.
	05/06/03	<0.50	<0.50	<0.50	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/14/03	<0.50	<0.50	<0.50	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	Chloroform detected at 0.7 µg/L.
	04/27/04	<0.50	<0.50	<0.50	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	11/17/04	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<5.0**	
30 (CC-2)	07/22/99	0.90	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/28/99	<0.5	<0.5	<0.5	<0.5	<100	<200	<0.5	<0.5	--	<0.5	--	
	02/08/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/26/00	<0.5	<0.5	<0.5	<0.5	<100	<250	<0.5	0.7	<0.5	<0.5	<0.5	
	08/03/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/23/00	<0.5	<0.5	<0.5	<0.5	<50	340	<0.5	0.9	<0.5	<0.5	<2.5	
	01/31/01	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/26/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	07/30/01	<0.5	1.43	<0.5	1.63	<200	<250	<0.5	1.6	<0.5	<0.5	<0.5	Dichlorodifluoromethane detected at 2.8 µg/L.

Revised Site Conceptual Model
Former Nestlé USA, Inc. Facility-Oakland, CA
1310 14th Street, Oakland, CA

Table 3: Historical Groundwater Sample Results (1993 - 2008)

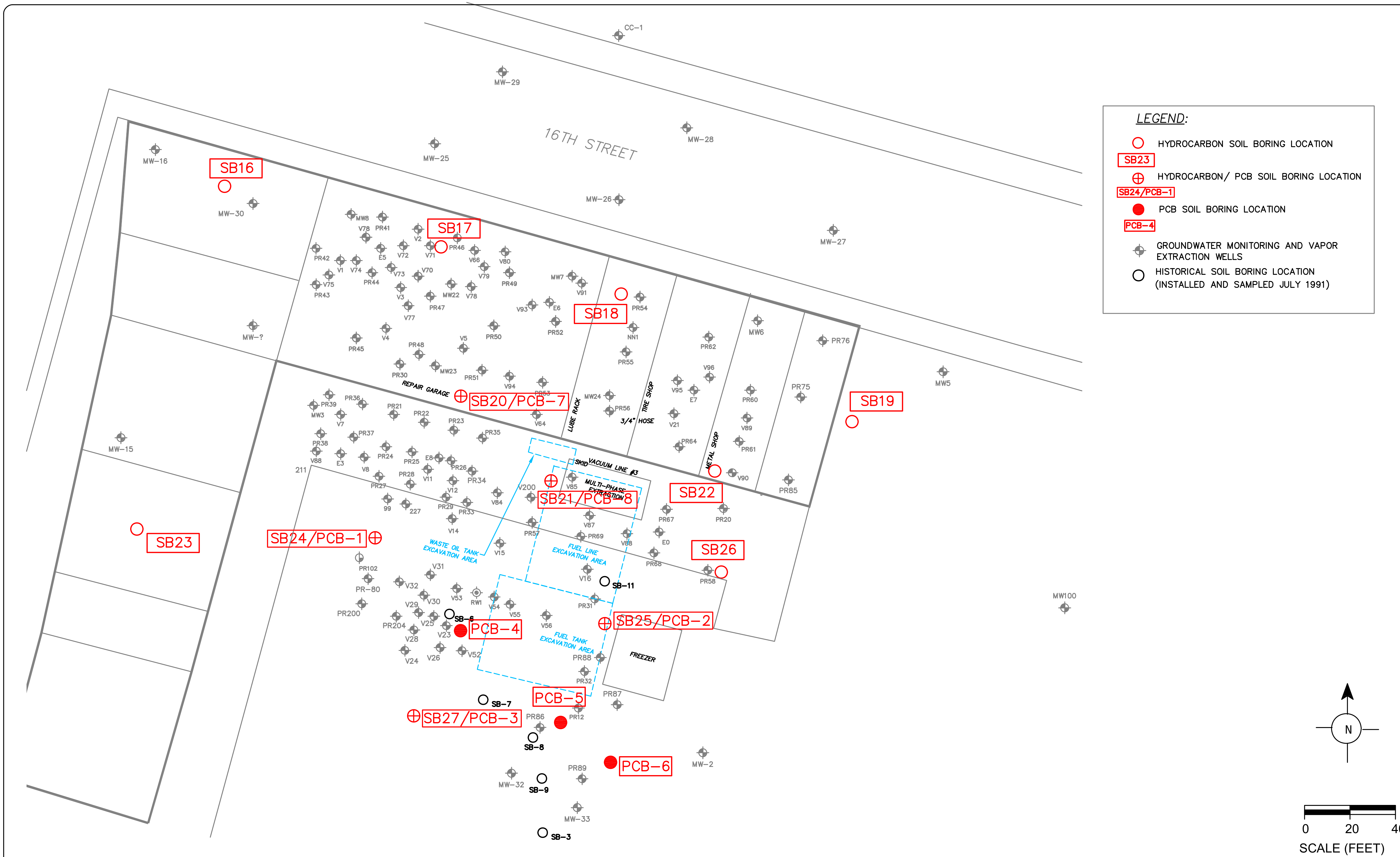
Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
30 (CC-2)	10/29/01	<0.5	<0.5	<1.0	<0.5	<200	<500	<0.5	<0.5	<0.5	<0.5	<0.5	
(cont.)	01/28/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	1.9	<0.5	<0.5	<0.5	Dichlorodifluoromethane detected at 3.8 µg/L.
	04/29/02	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	2.5	<0.5	<0.5	0.86	Dichlorodifluoromethane detected at 3.6 µg/L.
	10/10/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	Chloroform detected at 0.6 µg/L.
	11/15/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	Chloroform detected at 0.5 µg/L.
	05/06/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
81	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	<0.5	<0.5	<0.5	<0.5	<0.5	
	07/22/99	0.70	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
94	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	170	--	--	--	--	<0.5	
	07/22/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
210	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	960	--	--	--	--	<0.5	
223	10/26/99	<0.5	<0.5	<0.5	<0.5	<100	<200	<0.5	<0.5	--	<0.5	--	
	02/10/00	<0.5	<0.5	<0.5	<0.5	<50	640	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/00	<0.5	<0.5	<0.5	<0.5	<100	250	<0.5	<0.5	<0.5	<0.5	<0.5	
	08/03/00	<0.5	<0.5	<0.5	<0.5	<50	680	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/23/00	1.30	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	Chlorobenzene detected at 0.9 µg/L.
	01/31/01	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/26/01	<0.5	<0.5	<0.5	<0.5	<200	390	<0.5	<0.5	<0.5	<0.5	<0.5	1,2-Dichlorobenzene detected at 0.5 µg/L.
	07/30/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	Dichlorodifluoromethane detected at 0.5 µg/L.
	10/30/01	<0.5	<0.5	<0.5	<1.0	<200	<500	<0.5	<0.5	<0.5	<0.5	<0.5	Chloromethane detected at 0.8 µg/L.
	01/29/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/29/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
224	07/26/99	<0.5	<0.5	<0.5	<0.5	<50	640	<0.5	<0.5	<0.5	<0.5	<0.5	
239	07/26/99	55,000	85.0	1,500	190	30,000	--	<0.5	<0.5	<0.5	<0.5	5.30	
	10/26/99	23,000	53	1,500	103.2	28,000	10,000	<0.5	<0.5	--	<0.5	--	
	02/10/00	40,000	48	1,900	52	44,000	21,000	<0.5	1.0	<0.5	<0.5	14.0	
	04/28/00	25,000	540	2,000	710	36,000	12,500	<5.0	<5.0	<5.0	<5.0	<5.0	
	08/04/00	25,000	220	1,900	920	45,000	32,500	<0.5	0.6	<0.5	<0.5	<0.5	
	10/24/00	24,000	100	1,500	390	50,000	50,000	<0.5	<0.5	<0.5	<0.5	<5.0	
	01/31/01	23,000	84	1,900	200	52,000	112,000	<0.5	0.9	<0.5	<0.5	<0.5	
	04/26/01	23,900	113	1,990	590	298,000	143,000	<0.5	<0.5	<0.5	<0.5	<25	
	07/30/01	30,200	384	2,000	966	66,500	19,100	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/30/01	41,200	273	1,470	215	54,300	120,000	<0.5	<0.5	<0.5	<0.5	<50	
	01/28/02	24,500	228	1,670	352	112,000	6,900	<0.5	<0.5	<0.5	<0.5	<0.5	Chloroethane detected at 0.6 µg/L.
	04/29/02	25,900	280	1,380	491	71,600	9,400	<0.5	<0.5	<0.5	<0.5	<0.5	
241	04/07/99	<0.5	<0.5	<0.5	<0.5	<50	<250	--	--	--	--	<0.5	
249	07/22/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-16	05/20/08	<0.50	<0.50	<0.50	530	<50	530	NA	<0.50	NA	NA	NA	
SB-17	05/22/08	12,000	3,200	17,000	560,000	120,000	560,000	NA	<0.50	NA	NA	NA	
SB-18	05/22/08	50,000	2,300	46,000	23,000	190,000	23,000	NA	2,200	NA	NA	NA	
SB-19	05/22/08	<12	220	<12	1,600	8,200	1,600	NA	<12	NA	NA	NA	
SB-20/ PCB-7	05/22/08	41,000	3,000	30,000	47,000	170,000	47,000	NA	930	NA	NA	NA	
SB-21/ PCB-8	05/23/08	12,000	2,600	20,000	3,500	110,000	3,500	NA	<250	NA	NA	NA	
SB-22	05/22/08	27,000	13,000	39,000	73,000	870,000	73,000	NA	<2,500	NA	NA	NA	
SB-24/ PCB-1	05/21/08	1.1	<0.50	<0.50	360	<50	360	NA	<0.50	NA	NA	NA	
SB-25/ PCB-2	05/21/08	<0.50	<0.50	<0.50	140	<50	140	NA	<0.50	NA	NA	NA	
SB-26	05/22/08	<0.50	<0.50	<0.50	270	<50	270	NA	<0.50	NA	NA	NA	
SB-27/ PCB-3	05/20/08	<0.50	<0.50	<0.50	NA	NA	NA	NA	<0.50	NA	NA	NA	

Notes:

ND	Not detected.
NA	Not analyzed or not sampled.
µg/L	Micrograms per liter.
TPH-G	Total Petroleum Hydrocarbons as gasoline.
TPH-D	Total Petroleum Hydrocarbons as diesel.
1,1-DCA	1,1-Dichloroethane.
1,1-DCA	1,2-Dichloroethane.
cis-1,1-DCE	1,1-Dichloroethene.
1,1,1-TCA	1,1,1-Trichloroethane.
1,2-DCE	cis 1,2-Dichloroethylene.
TCE	Trichloroethene.
MTBE	Methyl tertiary butyl ether.

10/22/02 Data was confirmed anomalous by resampling on 11/15/02.

Project: Former Nestle Oakland Facility
Proj. Manager B. Acharya
Date drafted: 7/2/08
Chkd by: T. Loof
Drafter: J. Plummer
File Path:



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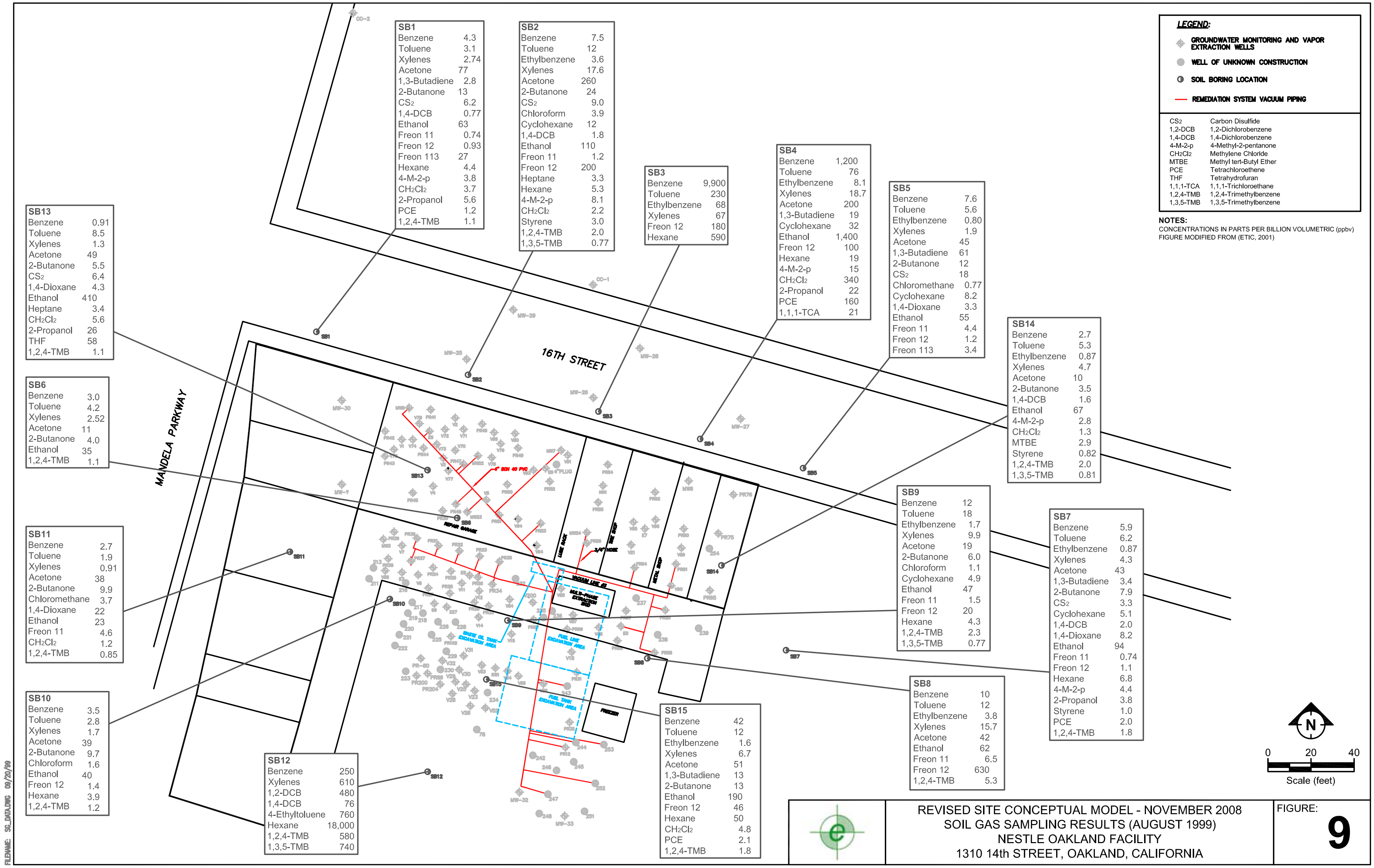
SUPPLEMENTAL SOIL, SOIL GAS AND GROUNDWATER INVESTIGATION
Soil Boring Locations
May 2008

Figure
2



REVISED SITE CONCEPTUAL MODEL - NOVEMBER 2008
SOIL GAS SAMPLING RESULTS (AUGUST 1999)
NESTLE OAKLAND FACILITY
1310 14th STREET, OAKLAND, CALIFORNIA

FIGURE: 9