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## REMEDIAL ACTION COMPLETION REPORT

### COMMERCIALY-ZONED WAREHOUSE PROPERTY



**SITE:**

**COMMERCIALY-ZONED  
WAREHOUSE PROPERTY**

25 E. FIFTH STREET  
WATSONVILLE, CA

APN: 018-151-39

*GeoTracker I.D.: T10000008129*

**PROJECT #:** 2X404.B

**JANUARY 5, 2018**

*For Submittal to:*

**SANTA CRUZ COUNTY  
ENVIRONMENTAL HEALTH SERVICES (SCC-EHS)**

**SITE MITIGATION**

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*Prepared for:*

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## **1.0 EXECUTIVE SUMMARY**

The following report documents the implementation and completion of a regulatory approved *Remedial Action Plan (RAP)* for the commercially-zoned warehouse property located at 25 East Fifth Street in Watsonville (the "Site", Figure 1). The *RAP* was designed to reduce elevated soil contaminant concentrations at the Site with the overall goal of reducing potential future exposure to humans (workers/visitors) to prevent potential ingestion or dermal contact to underlying soils impacted by elevated concentrations of Manufactured Gas Plant (MGP) contaminants.

The completed remedial action also requires that the property be restricted for commercial use only through a *Covenant and Environmental Deed Restriction of Property* (environmental deed restriction) and that a *Site Environmental Management Plan* be prepared as a standalone document that provides a description of the residual soil impacts and protective cap such that the long-term stewardship of the protective cap can be maintained. Draft versions of these documents have been prepared under separate cover for submittal to the County of Santa Cruz Environmental Health Division (Environmental Health) and will be finalized following their review and approval. The environmental deed restriction will ultimately be recorded in the Official Records of the County of Santa.

The following Executive Summary subsections summarize the remedial action goals, the selected remedial alternative identified through a completed *Feasibility Study*, and the completed remedial action.

### **1.1 REMEDIAL ACTION GOALS**

The results of extensive Site characterization analysis indicated that corrective actions completed at the adjacent Jalisco Restaurant property (i.e., adjoining, historic MGP site), which included focused shallow soil removal/capping and institutional controls (i.e., deed restriction) would similarly be appropriate for reducing risk at the subject commercial Site.

It has been more than 100 years since the MGP ceased operations and ongoing groundwater and soil gas monitoring at the adjacent Jalisco Restaurant property indicates that residual contaminants in these media generally appear to be in equilibrium. Based on the extensive data collected to date, it is very unlikely that residual soil or groundwater impacts will create a soil vapor intrusion issue, and conversely, residual soil impacts are not a leachable source that will impact shallow groundwater in any significant way. **Because residual contaminants in groundwater and soil vapor media do not pose a threat to human health or the environment, they were not considered for remedial action.**

Residual contaminant concentrations in shallow soils could potentially pose a threat to human health during construction/maintenance (e.g., future utility trench installations or planter area maintenance) where workers could be directly exposed to the impacted soils. **Therefore, the overall goal of remedial action was to reduce potential future exposure of humans (workers/visitors) to prevent potential**



ingestion or dermal contact to underlying soils impacted by elevated concentrations of MGP contaminants.

## 1.2 SELECTED REMEDIAL ACTION

Weber, Hayes and Associates completed a *Feasibility Study*<sup>1</sup> for evaluating remedial action alternatives and screened three (3) remedial action options/remedial alternatives for reducing soil concentrations at the Site. *Remedial Alternative No. 2* - focused excavation of shallow soil impacts with capping and institutional control (i.e., environmental deed restriction) was determined to be the most cost effective and practical remedial action for the Site. This alternative removes the majority of the most significant, well defined shallow soil impacts from the subsurface while effectively reducing potential future exposure to on-site workers and visitors (see Figure 2). The protective cap (i.e. imported clean fill/base rock and asphalt pavement) prevents direct contact with contaminants by property users. Because of the relatively immobile nature of the Site contaminants of concern, it was our opinion that there would be no increased overall benefit to removing deeper soil impacts as it would pose an incredible fiscal hardship on the property owners who innocently purchased the subject Site in 1987 with assurances the property was not impacted (Appendix F).

## 1.3 REMEDIAL EXCAVATION OF SHALLOW IMPACTED SOILS & INSTALLATION OF A PROTECTIVE CAP

Extensive soil characterization completed at the Site defined the areal extent of soil impacts within the parking lot to be approximately 6,000 square feet (see Figure 2). These areas include: 1) a smaller, approximate 895 ft<sup>2</sup> area at the northwestern corner of the property, and 2) a larger, approximate 5,160 ft<sup>2</sup> area within the central portion of the parking lot.

- Remedial excavation to a depth of 1.5 feet below the ground surface (bgs) and off-site disposal of these well-defined soil impacts was completed by a Haz-certified licensed excavation contractor (Randazzo Enterprises, Inc.) between October 2 and 6, 2017.
  - **Regulatory Approved RAP Deviation:** several large, intact concrete slabs (~6-inches thick) with good integrity were unexpectedly encountered beneath the parking lot within the approved remedial excavation areas. As these intact slabs effectively create a solid, clean barrier above the residual soil impacts and achieve the goal of reducing direct exposure contact with current and future site users (i.e., a protective cap), they were left in-place with approval from Environmental Health (see Figure 3).
- Approximately 250 yds<sup>3</sup> (348.52 tons) of non-hazardous soils and 60 yds<sup>3</sup> (81.11 tons) of soil classified as a California hazardous waste were directly loaded for transport and disposal at John Smith Road Landfill and Kettleman Hills Landfill, respectively.

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<sup>1</sup> Weber, Hayes & Associates: *Feasibility Study & Remedial Action Plan*, dated June 21, 2017

- Following impacted soil removal, a delineation geotextile material (Mirafi 500X) was installed across the entire footprint of the excavation areas to serve as a visual separator between the clean cap material and the residual soil impacts.

Additional details of remedial excavation and off-site disposal are described in Section 5.0.

Following completion of the prescribed remedial excavation, a licensed grading and paving company (Watsonville Grading & Excavation, Inc.) restored the parking lot between October 9 and November 8, 2017, as follows:

- Emplaced and compacted 15-inches of clean, imported base rock into the excavation areas and resurfaced the parking lot with 3-inches of asphaltic concrete
- Two existing planter areas that were removed as part of remedial excavation efforts were not replaced, but were also capped (as described above) in order to eliminate future contact with impacted soils beneath these locations.

Additional details of Site capping and restoration activities are described in Section 5.4.

#### 1.4 CONFIRMATION SOIL SAMPLING & RESIDUAL SOIL IMPACTS

The extensive Site soil characterization data set provides adequate documentation of residual soil impacts that remain at the Site following remedial excavation activities. Therefore, confirmation soil sampling following remedial excavation was not planned, nor conducted.

The following represent the highest concentrations of residual soil impacts exceeding applicable commercial screening thresholds that have been left in-place beneath the protective cap (see Figure 4):

- **Benzo(a)pyrene Equivalent:** 89.89 mg/kg detected at boring B-9 at a depth of 1.5 feet bgs
- **TPH-diesel:** 4,980 mg/kg detected at boring B-9 at a depth of 4 feet bgs
- **TPH-motor oil:** 12,350 mg/kg detected at boring B-9 at a depth of 4 feet bgs
- **Lead:** 356 mg/kg detected at boring B-7 at a depth of 1.5 feet bgs

#### 1.5 CONCLUSIONS & RECOMMENDATIONS

In addition to documenting the successful completion of regulatory approved remedial actions in this completion report, we have prepared the following draft documents for Environmental Health review and approval:

1. An *Environmental Site Management Plan* documenting the location of residual soil impacts and protective cap, including requirements for annual cap inspections, such that the long-term stewardship of the protective cap can be maintained, and



2. A *Covenant and Environmental Deed Restriction of Property* documenting the residual soil impacts and restricting the property for commercial use only, which will ultimately be recorded in the Official Records of the County of Santa Cruz

As required by Environmental Health, we recommend completing one more round of soil vapor and groundwater monitoring in general accordance with our regulatory approved *Proposed Semi-Annual Groundwater and Soil Vapor Monitoring*, dated March 6, 2017 (post-remedial action sampling schedule to be determined following consultation with Environmental Health). **If results of soil vapor and groundwater concentrations continue to confirm no significant risk to site receptors or to the environment, we will recommend cessation of monitoring followed by soil vapor monitoring well destruction and No Further Action for the Site.**

This concludes the Executive Summary.

## 2.0 SITE BACKGROUND & SUMMARY OF PREVIOUSLY COMPLETED ENVIRONMENTAL ASSESSMENTS

The following subsections provide a brief overview of previously completed soil, groundwater and soil vapor sampling that has been conducted at the property. A more comprehensive overview along with Tables and Figures of previously collected data and analytical results is presented as Appendix A.

### 2.1 SITE BACKGROUND

Historic land use maps document that a manufactured gas plant (MGP) operated on the adjacent parcel to the west (618 Main St) from the late 1800's to the early 1900's, and gasification infrastructure extended onto the subject Site. Since 1986, PG&E has conducted detailed subsurface assessment investigations and remedial actions on the adjoining 618 Main St. property but has stated it is not responsible for relic gasification wastes that extend across the property line based on their review of successor corporations and property sales<sup>2</sup>. A description of MGP operators and successors is described in Appendix A.

PG&E issued a letter on June 20, 1986 offering to test soils on the 25 East Fifth Street property "to determine if gas plant residues are present"<sup>3</sup>. The current property owners took PG&E up on the offer and subsequently purchased the property in 1986 after obtaining notification that "there were no

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<sup>2</sup>: Sedgwick, Detert, Moran & Arnold (PG&E's legal counsel): Opinion on why PG&E believes it is only responsible for the property where it formerly had a customer service center is not responsible for the entire area formerly occupied by the MGP.  
- [http://www.envirostor.dtsc.ca.gov/regulators/deliverable\\_documents/2907193839/Sedgwick%20Letter%2016\\_2007.PDF](http://www.envirostor.dtsc.ca.gov/regulators/deliverable_documents/2907193839/Sedgwick%20Letter%2016_2007.PDF)

<sup>3</sup>: PG&E Co. letter (Gayle Hamilton) to the owner of the 25 E. Fifth Street property: *Summary of PG&E's Gas Plant Identification and Evaluation Program*, June 20, 1986. Copy included in Appendix F.



contaminant detections that were greater than anything found in any city street<sup>4</sup>. We have not been able to locate results of PG&E's sampling of the subject Site. Approximately six months later (January 1987) the owner of the adjoining 618 Main St. property was provided this letter showing elevated levels of gas plant type wastes in surface soils (PNAs = 11 mg/kg)<sup>5</sup>. A *Preliminary Soil and Groundwater Assessment*<sup>6</sup> completed for the subject Site in 2010 confirmed the presence of MGP waste similar to that detected at the adjacent parcel to the west (618 Main St). For reference, a summary of characterization and corrective actions completed at this adjacent property is included in Appendix B and historical documentation and land use maps are included as Appendix F.

## 2.2 PRELIMINARY SOIL AND GROUNDWATER ASSESSMENT

The results of a previously completed *Preliminary Soil and Groundwater Assessment* revealed the following:

### 2.2.1 Soil

Laboratory results of two (2) 4-point composite samples collected across the parking lot area confirmed that shallow soils / fill material consistently contained elevated levels of Polynuclear Aromatic Hydrocarbon (PAHs) compounds at sampling depths of 1 and 4 feet below the ground surface (bgs). In addition to the detection of PAHs, there were also some low-level detections of motor oil range total petroleum hydrocarbons. No elevated concentrations of metals were detected in shallow soils / fill material during this preliminary assessment.

Deeper soils (to 30 feet bgs) were examined at four (4) exploratory boring locations on the Site (DP-3, -4, -6 & -8). Soil discoloration and chemical odors were observed only in the soil core collected at DP-7, positioned just south of the former MGP's infrastructure. "Black oily gobs" and strong hydrocarbon odor were observed to be limited to a relatively thin lens at 22 to 23 feet bgs, just above first encountered groundwater at 24 feet bgs. No other obvious soil impacts were observed in any of the other seven shallow or deeper borings. The results show that PAH and motor oil range total petroleum hydrocarbons was limited to the visually impacted lens, at concentrations exceeding regulatory threshold limits.

Laboratory results of shallow soil testing from: 1) within the fill soils, and 2) in native soils immediately below the fill materials, confirmed both zones are impacted with concentrations of "aged" petroleum hydrocarbons and PAHs in soil that exceed regulatory screening levels.

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<sup>4</sup>: Personal communication from PG&E staff (Loren Ingols) to current property owner (Martha Oneto) prior to the purchase of the property.

<sup>5</sup> PG&E Co. letter (Genemarie Gawthorp) to the owner of the 618 Main Street property: Summary of PG&E's Gas Plant surface soil sampling results, January 19, 1987. Copy included in Appendix F.

<sup>6</sup>: WHA report: *Preliminary Soil and Groundwater Assessment*, 25 East Fifth Street, Watsonville, dated July 29, 2010.

### 2.2.2 Grab Groundwater

Grab groundwater samples were collected and analyzed from the 4 deeper exploratory borings (DP-3, -4, -6 & -8). None of the tested groundwater contained elevated concentrations of chemicals of potential concern that exceeded Water Quality Goals (including TPH, VOCs, and PAHs). The laboratory results did note, however, a low-level detection of TPH in the range of gasoline (TPH-gasoline) in the groundwater sample collected from the aforementioned soil-impacted boring (DP-7). Specifically, the State-certified laboratory detected 150 µg/L of weathered TPH-gasoline.

### 2.3 ADDITIONAL SITE ASSESSMENT - 2016

A recently completed *Additional Site Assessment* was designed to provide sufficient characterization of subsurface conditions with the goal of quantifying potential human health risks for commercial land use, and ultimately to propose a plan that effectively separates any residual soil impacts from current and future tenants leasing the property.

The scope of work completed for the ASA included:

- **Soil Characterization:** Installation of fifteen (15) shallow (i.e., 4-foot deep) soil borings throughout the Site to provide sufficient vertical and lateral definition of shallow soil chemical impacts previously detected beneath the Site (B-1 through B-15). Five (5) of these borings extended to depths of 20 to 30 feet below the ground surface (bgs) to collect data on deeper soil chemical impacts (B-3, B-5, B-8, B-11, and B-14). Five (5) shallow (i.e., 0.5 and 1.5 feet deep) soil samples were also collected from native soils within all tree well / planter areas (P-1 through P-4 and P-7). In addition, following receipt of initial soil sample analytical results, we installed four (4) "data gap" soil borings (DG-1 through DG-4) to depths of 8 feet bgs and advanced borings B-9 and P-2 to depths of 8 and 18 feet, respectively, in order to provide better vertical and lateral definition of detected soil impacts.
- **Groundwater Characterization:** Collected grab groundwater samples from five (5) locations throughout the Site (GW-1 through GW-5) in order to provide additional data on previously detected low-level chemical impacts to groundwater.
- **Soil Vapor Characterization:** Installed and sampled five (5) permanent dual-depth (i.e., 5 and 10 feet bgs) soil vapor sample points (SV-1 through SV-5) to assess potential soil vapor intrusion concerns.

#### 2.3.1 Results of Soil Characterization

In general, the extensive soil characterization identified relatively shallow (i.e., approximately 2-4 feet below grade) polynuclear aromatic hydrocarbons (PAHs), and to a much lesser extent Total Petroleum Hydrocarbons as diesel/motor oil (TPH-d/mo) and/or lead concentrations exceeding applicable commercial screening thresholds which correlate with the historic MGP infrastructure footprint (i.e.,



central to northwestern portion of the parking lot), with deeper PAH and TPH-d/mo soil impacts that appear to originate in the vicinity of boring P-2 (adjacent to the former MGP generator room) as evidenced by black soil discoloration and associated strong hydrocarbon-like odors persisting from approximately 6.5 feet to 15 feet below the ground surface (bgs). The impacts observed at boring P-2 appear to migrate laterally and deeper to borings B-8, B-11 and DP-7 (DP-7 installed in 2010) as evidenced by a lens of soil discoloration/odor at progressively deeper depths to the west-southwest of boring P-2. Boring B-9 (near impacted boring P-2) also exhibited deeper PAH impacts to at least 8 feet bgs. The most significant soil impacts are observed at borings B-9 and P-2.

**The well-defined areal extent of soil impacts within the parking lot is approximately 6,000 square feet (see Figure 2).**

### **2.3.2 Results of Groundwater Characterization**

Concentrations of PAHs (including naphthalene), TPH-diesel and cyanide (GW-3 only) exceeding conservative groundwater ESLs were limited to borings GW-1 and GW-3 (along the western property line with Jalisco Restaurant), with only a slight exceedance of naphthalene detected in upgradient boring GW-2. Similar order of magnitude groundwater concentrations detected in the Jalisco Restaurant property monitoring well network correlate with these detections, indicating a relatively small, low-concentration groundwater plume.

#### **2.3.2.1 Semi-Annual Groundwater Monitoring**

Follow up groundwater sampling at previous grab-groundwater sampling locations GW-1, GW-2 and GW-3 completed in accordance with a regulatory approved *Proposed Semi-Annual Groundwater and Soil Vapor Monitoring*, dated March 6, 2017, was conducted on March 22, 2017. Results confirmed the following:

Concentrations of PAHs (including naphthalene), TPH-gas and diesel, and cyanide (GW-3 only) exceeding conservative groundwater ESLs continued to be limited to borings GW-1 and GW-3 (along the western property line with Jalisco Restaurant), with no exceedances in upgradient boring GW-2.

**We note that nearly 25 years of groundwater monitoring at the hydraulically downgradient Jalisco Restaurant property has confirmed that the dissolved plume is stable and not migrating.**

### **2.3.3 Results of Soil Vapor Characterization**

VOC sample analytical results revealed no exceedance above applicable commercial screening thresholds, and were several orders of magnitude below the *Risk Based Soil Gas Screening Levels* (RBSLs) developed for the adjacent Jalisco Restaurant property, with the exception of 1,2-Dibromoethane (a.k.a EDB) detected at a concentration of 99  $\mu\text{g}/\text{m}^3$  in sample SV-3 at 10 feet below grade, which is above the California DTSC Modified Soil Gas Screening level ("near-source") set at 20  $\mu\text{g}/\text{m}^3$ . The sample collected at 5 feet bgs at this location was non-detect for this compound.



### 2.3.3.1 Semi-Annual Soil Vapor Monitoring

Follow up soil vapor sampling of existing dual-depth soil vapor monitoring wells SV-1 through SV-5 completed in accordance with a regulatory approved *Proposed Semi-Annual Groundwater and Soil Vapor Monitoring*, dated March 6, 2017, was conducted on March 30, 2017. However, “no flow” conditions were encountered at the following sample locations and depths, and no samples were obtained:

- **SV-1 at 10 feet** (water observed in sample tubing during purge)
- **SV-2 at 10 feet** (down hole vacuum > 7.5 inches Hg)
- **SV-3 at 5 and 10 feet** (down hole vacuum > 7.5 inches Hg)
- **SV-4 at 10 feet** (down hole vacuum > 7.5 inches Hg)

Results of samples that were obtained on March 30, 2017 confirmed the following:

Results continued to confirm no exceedance above applicable commercial screening thresholds, with the exception of benzene detected at SV-1 (shallow), which was slightly above the US EPA Regional Screening Level. Benzene was previously not detected at this location, nor was it previously detected in nearby shallow soil samples (B-3 and B-6 positioned ~15-20 feet away). All detected concentrations were several orders of magnitude below the Risk Based Soil Gas Screening Levels (RBSLs) developed for the adjacent Jalisco Restaurant property. A previous detection of 1,2-Dibromoethane (a.k.a EDB) at a concentration of 99  $\mu\text{g}/\text{m}^3$  in sample SV-1 at 10 feet below grade during the May 2016 sampling event was the only slightly elevated VOC concentration detected at the Site, which was above the California DTSC Modified Soil Gas Screening level (“near-source”) set at 20  $\mu\text{g}/\text{m}^3$ .

Soil vapor sampling at locations that were not collected during the first semi-annual sampling event of 2017 (March 30, 2017) due to no flow conditions were sampled on August 8, 2017, with the exception of well SV-3 at 10 feet, which again exhibited no flow conditions. Results of samples that were obtained on August 8, 2017 confirmed the following:

VOCs were not detected above laboratory Method Detection Limits in any of the collected samples. These results are very similar the initial, non-detectable concentrations of VOCs observed for these locations in May 2016, with the following exceptions:

- The elevated concentration of 1,2-Dibromoethane detected at SV-1 @ 10 feet (99  $\mu\text{g}/\text{m}^3$ ) was not detected (<2.9  $\mu\text{g}/\text{m}^3$ ) during the August 8, 2017 sampling event.
- Relatively low-level concentrations of BTEX (below CA DTSC-Modified Soil Gas Levels) were detected in May 2016 at SV-3 at 10 feet. To date we have not been able to confirm these initial detections due to no flow conditions. However, we note that two rounds of sampling from the 5 foot depth at this location has confirmed trace to non-detectable concentrations of VOCs below commercial CA DTSC-Modified Soil Gas Levels.

**Based on all Site soil vapor sample results to date there does not appear to be a soil vapor intrusion risk for the Site.**

## **2.4 SITE ASSESSMENT CONCLUSIONS**

The extensive soil, soil vapor and groundwater data set obtained during the *Additional Site Assessment, Semi-Annual Grab Groundwater and Soil Vapor Monitoring*, and previous 2010 *Preliminary Soil and Groundwater Assessment* confirm that the Site has been well characterized with no significant data gaps. Specifically:

- The relatively dense soil sampling grid across the Site parking lot (i.e., ~20 foot on center sample locations) with soil sample analysis at depths of at least 0.5, 1.5 and 4 feet bgs provided high resolution characterization of shallow soil impacts across this Site. Contaminants that could pose a potential direct exposure risk to commercial receptors (only if handling of impacted soils were to occur) include PAHs, and to a much lesser extent TPH-d/mo and lead. The areal extent of these well-defined soil impacts across the parking lot area is approximately 6,000 square feet (see Figure 2).
- Shallow groundwater impacts are limited to the northwestern portion of the Site (i.e., elevated concentrations of PAHs, cyanide and/or TPH-diesel detected in two of the nine on-Site grab groundwater sample borings) and are similar to concentrations observed at the adjacent Jalisco Restaurant property. Nearly twenty-five (25) years of groundwater monitoring at the hydraulically downgradient Jalisco Restaurant property has confirmed that the dissolved plume is stable and not migrating.
- The very low-level soil vapor concentrations detected in the dual depth vapor wells positioned in front of the on-Site warehouse building indicate that there is no soil vapor intrusion concern for the building occupants. We note that soil vapor sample points SV-2 and SV-3, which are positioned in the immediate vicinity of the most significant Site soil impacts (i.e., detected at borings P-2 and B-9) have yielded no elevated concentrations of VOCs.

## **3.0 REMEDIAL ACTION GOALS**

The results of extensive Site characterization analysis indicate that corrective actions completed at the adjacent Jalisco Restaurant property (i.e., adjoining, historic MGP site), which included focused shallow soil removal/capping and institutional controls (i.e., deed restriction) would similarly be appropriate for reducing risk at the subject commercial Site.

It has been more than 100 years since the MGP ceased operations and ongoing groundwater and soil gas monitoring at the Jalisco Restaurant property indicates that residual contaminants in these media generally appear to be in equilibrium. Based on the extensive data collected to date, it is very unlikely that residual soil or groundwater impacts will create a soil vapor intrusion issue, and conversely, residual



soil impacts are not a leachable source that will impact shallow groundwater in any significant way. **Because residual contaminants in groundwater and soil vapor media do not pose a threat to human health or the environment, they are not being considered for remedial action.**

Residual contaminant concentrations in shallow soils could potentially pose a threat to human health during construction/maintenance (i.e., future utility trench installations or planter area maintenance) where workers could be directly exposed to the impacted soils. **Therefore, the overall goal of remedial action was to reduce potential future exposure of humans (workers/visitors) to prevent potential ingestion or dermal contact to underlying soils impacted by elevated concentrations of MGP contaminants.**

#### **4.0 FEASIBILITY STUDY & SELECTED REMEDIAL ACTION ALTERNATIVE**

We screened three (3) remedial action options/remedial alternatives for reducing soil concentrations at the Site, which included:

1. No Action (with institutional control)
2. Focused excavation with offsite disposal and capping with institutional control
3. Removal of all accessible soil impacts with institutional control

Each remedial alternative was evaluated for technical feasibility, cost and effectiveness. Details of this Feasibility Study are provided in our regulatory approved *Feasibility Study and Remedial Action Plan*, dated June 21, 2017.

##### **4.1 SELECTED REMEDIAL ACTION - FOCUSED EXCAVATION WITH OFFSITE DISPOSAL AND CAPPING WITH INSTITUTIONAL CONTROL**

The most cost effective and practical remedial action for the Site was *Remedial Alternative No. 2* - focused excavation of shallow soil impacts with capping and institutional control (i.e., deed restriction). This alternative removes the majority of the most significant, well defined shallow soil impacts from the subsurface while effectively reducing potential future exposure to on-site workers and visitors (see Figure 2). The cap (i.e. imported clean fill/base rock and asphalt pavement) prevents direct contact with contaminants by property users. Because of the relatively immobile nature of the Site contaminants of concern, it is our opinion that there would be no increased overall benefit to removing deeper soil impacts as it would pose an incredible fiscal hardship on the property owners who innocently purchased the subject Site in 1987 with assurances the property was not impacted (Appendix F).

The advantages of implementing the selected remedial action included a significant reduction in:

- overall cost - an estimated \$120K vs. \$850K
- worker exposure to contaminants during soil removal efforts (approximately 5 days vs. 25 days)



- increased traffic and stress to local roadways from import/export of soil and fill material
- off-site migration of impacted soils via (i.e., via potential tire tracking or dust)
- dust and potential nuisance odor to on-site workers and nearby community
- overall disturbance to the on-site tenants that require the parking lot area for numerous shipments of product during the week and customer access

The following section describe in detail the remedial action implementation field activities including impacted soil removal and off-site disposal and cap emplacement / parking lot restoration.

## 5.0 REMEDIAL EXCAVATION OF SHALLOW IMPACTED SOILS

Based on results of the extensive soil characterization completed at the Site, we defined the areal extent of soil impacts within the parking lot to be approximately 6,000 square feet (see Figure 2). The lateral extent of impacted areas proposed for removal were defined to the north and south by surrounding soil samples that revealed no elevated impacts (i.e., less than applicable commercial screening levels, at a minimum), to the west by adjacent property boundaries, and to the east by a 5-foot wide concrete walkway that runs parallel to the on-site warehouse building. The impacted areas that were proposed for removal include: 1) a smaller, approximate 895 ft<sup>2</sup> area at the northwestern corner of the property, and 2) a larger, approximate 5,160 ft<sup>2</sup> area within the central portion of the parking lot.

The most significant PAH, lead and TPH soil impacts were defined to be generally limited to the 1.5 foot sample depth across these impacted areas, with the exception of a few sample locations (i.e., B-8, B-9, DG-1 and P-2) that exhibit deeper soil impacts of similar magnitude. Previously collected soil sample analytical data is presented in Appendix A.

Two (2) of the existing planters situated within the proposed excavation footprints were completely removed as part of the removal effort and were not replaced.

Field notes and photo sheets documenting remedial excavation and Site restoration activities are included for reference in Appendix C.

### 5.1 PRE-EXCAVATION ACTIVITIES

Pre-excavation tasks included the following:

- Obtained regulatory approved of the *Remedial Action Plan*
- Preparation of an Environmental Site Health & Safety Plan in accordance with State and Federal hazardous waste operations regulations (California Code of Regulations, Title 8, Section 5192 and 29 Code of Federal Regulations 1910.120)
- Pre-Profiling soils for disposal at appropriate landfills

- Obtaining a Grading Permit through the City of Watsonville Public Works Department (included in Appendix C)
- Obtaining an Encroachment Permit through the City of Watsonville Public Works Department for parking lane encroachment adjacent to the Site for truck loading (also included in Appendix C)
- Obtaining a Building Permit through the City of Watsonville Public Works Department for parking lot restriping plan review and approval (also included in Appendix C)
- Issuing a Public Notification to property owners with an approximate 200-foot radius of the Site describing the proposed remedial actions
- Properly destroying existing soil vapor monitoring wells SV-2, SV-3, and SV-5 under permit issued by Santa Cruz County Environmental Health Services as these wells were situated within the proposed remedial excavation footprint
- Prior to beginning excavation activities, Underground Service Alert (USA) was contacted at least 48 hours in advance to identify the location of utilities that enter the property. The perimeter of the entire Site was clearly marked with white paint as required by USA.

## 5.2 SOIL VAPOR MONITORING WELL DESTRUCTIONS

In order to facilitate the logistics of the approved remedial excavations, we completed the permitted destruction of three (3), dual-depth soil vapor monitoring wells (SV-2, SV-3 and SV-5; see Figure 5) that were situated within the prescribed excavation areas. Prior to destruction, permit applications for well destruction were procured with Environmental Health and are included in Appendix C. Field notes and photo sheets documenting well destruction are also included in Appendix C.

On September 6, 2017, we contracted with a licensed C-57 drilling contractor (Environmental Control Associates) to properly destroy soil vapor monitoring wells SV-2, SV-3 and SV-5 as follows:

- Completely removing the sample tubing from the subsurface, intact
- Drilling out the well annulus via 6-inch diameter solid flight augers to the original borehole depth (i.e., 10.5 feet bgs)
- Completely filling the subsequent borehole with neat cement grout after confirming the borehole remained open to the original completion depth
- Completely removing the well box, and patching the surface with concrete

Soil cuttings generated during well destruction were containerized in one 55-gallon drum at the Site and were subsequently added to soils being disposed of at Kettleman Hills Landfill during subsequent remedial excavation activities (see section 5.3.5 for details).

Department of Water Resources (DWR) Well Completion Reports documenting the well destructions were prepared and submitted to the DWR and Environmental Health on September 8, 2017.



### 5.3 REMEDIAL EXCAVATION ACTIVITIES

Between October 2 and 6, 2017 we contracted with a Haz-certified licensed excavation contractor (Randazzo Enterprises, Inc.) to excavate and load the impacted soils on to end dump trucks for transport to the designated landfills. Details regarding landfill pre-approval and disposal are included in Section 5.3.5 of this report. The soil was removed using standard earthmoving equipment (e.g., excavator and front-end loader).

Prior to soil removal efforts, the following existing surface features / coverings within the prescribed excavation areas were removed and hauled to appropriate recycling and/or disposal facilities:

- A cinderblock trash enclosure and associated concrete pad
- Two planter areas / tree wells including the associated landscaping
- A concrete swale
- Asphalt

All soils / base material beneath these surface features / coverings to a depth of 1.5 feet below the existing parking lot grade within the prescribed excavation areas were removed and hauled to appropriate landfills for proper disposal.

Following impacted soil removal, a delineation geotextile material (Mirafi 500X) was installed across the entire footprint of the excavation areas to serve as a visual separator between the clean cap material and the residual soil impacts. This material will serve as an indicator for potential future workers who may inadvertently penetrate the cap and expose the underlying, contaminated soils. This cap feature is described in the *Site Environmental Management Plan*.

#### 5.3.1 *Deviation from RAP*

During the course of remedial excavation activities, the excavation contractor encountered a few large, intact concrete slabs beneath the parking lot within the approved remedial excavation areas. The concrete slabs are rather extensive and have good integrity (see Figure 3 and photo sheets in Appendix C documenting their locations). These concrete slabs include:

- An approximate 24 foot wide, ~6-inch thick slab spanning the southwestern portion of the remedial excavation. The slab is encountered at approximately 8-inches below existing parking lot grade at the western limits of the excavation and shallows to about 2-inches below grade from west to east as the parking lot grade slopes downward to the east. A review of historic aerial photos indicates that this concrete slab has existed at the Site since at least the 1930's and appears to have been a parking area for the adjacent business to the west (now La Rosa Supermercado).
- A large, circular foundation that matches the location of the former MGP Gas Holder at the norther portion of the parking lot (as observed in historic Sanborn Maps). This concrete slab is at



least 6-inches thick and spans a good portion of the northwestern most excavation footprint and across a portion of the larger, southern excavation footprint. The slab is encountered at depths of approximately 16-inches below existing grade, shallowing to about 8-inches below existing grade, as the grade of the existing parking lot slopes downward to the south and east.

In an email to Environmental Health dated October 4, 2017 (*Proposed Deviation from Remedial Action Plan*), we proposed leaving these large, good integrity concrete slabs in place as part of the protective cap, and to restore the parking lot over these areas to the existing grade elevation. It is our opinion that no additional benefit would have been achieved by removing these concrete slabs only to remove a few additional inches of impacted soils beneath, as they effectively create a solid, clean barrier above the residual soil impacts and achieve the goal of reducing direct exposure contact with current and future site users. All other accessible soils within the prescribed excavation areas were removed to 1.5 feet below grade as planned and approved.

Environmental Health approved this proposed deviation in their email dated October 4, 2017.

### **5.3.2      *Surveying Activities***

Prior to soil removal activities, we clearly marked out the proposed excavation footprints as shown on Figure 2 in order to accurately guide the soil removal effort. The final depth of the proposed remedial excavations (i.e., 1.5 feet below the respective Site grade) was confirmed by using standard elevation control equipment (laser transit level and string-lines).

### **5.3.3      *Dust Control***

The following dust control measures were employed to protect on-Site and off-site receptors from chemicals in soil and nuisance dust.

- Dust suppression was performed by lightly spraying or misting the work areas with water.
- During soil load-out, efforts were made to minimize the soil drop height from the excavator's bucket into the transport trucks. Misting was also used on soil placed in the transport trucks as needed. After the soil was loaded into the transport trucks, the truck beds were covered with fabric tarp to prevent soil from spilling out of the truck during transport to the disposal facility.
- All trucks were loaded at the curb side to avoid sediment being inadvertently tracked off-site via tire tracking.

### **5.3.4      *Dust Monitoring***

Dust monitoring strategies and methodologies were implemented during soil excavation activities to achieve several goals:

1. Construction Worker Health & Safety

- Minimize dust generated in the work zone during the soil removal efforts to reduce particulate inhalation and provide feedback to site personnel regarding the effectiveness of dust control measures

## 2. Off-Site Health & Safety

- Measure particulates at the down-wind perimeter of the Site. Air monitoring was conducted to monitor the effectiveness of dust control measures implemented during excavation and soil removal activities, and ensure that unacceptable levels of off-Site migration of airborne particulates was not occurring.

Effective dust control in the work zone was monitored by visual observation. If dust was visually observed, then dust suppression measures (i.e., wetting) were increased. In addition, particulate monitoring equipment (i.e., DustTrak 8533 Dust Monitor) was set up at the Site for continuous monitoring of particulate concentrations throughout each workday. Specifically, we deployed one monitor at the downwind perimeter of the Site to monitor potential off-site migration of dust. Predominant wind direction was determined to be to the north by deploying and observing a small windsock at the Site and the dust monitor was positioned atop the fence line along the norther property line accordingly. A Dust Action Level of 2.5 mg/m<sup>3</sup> for respirable fraction of nuisance dust was the “not to exceed” threshold for evaluating effective dust control at the Site<sup>7</sup>.

Dust monitor data collected throughout each day of remedial excavation / contaminated soil removal activities (i.e., October 2 through 6, 2017) was reviewed at the end of each work day to evaluate whether or not the Dust Action Level was exceeded, and if so increased efforts were to be employed to reduce concentrations. Histograms of the collected data (i.e., one data point per minute) have been plotted for each day which are presented in Appendix D. **The data confirms that the Dust Action Level was never exceeded throughout the duration of remedial excavation activities, with the exception of one sporadic, and momentary spike above the Dust Action Level during the morning of October 5, 2017. The data confirms that dust control measures were adequate in suppressing the migration of potential nuisance dust.**

### 5.3.5 *Off-Site Soil Disposal*

Soils planned for removal were pre-profiled with the following landfills based on the existing Site characterization data such that soil could be loaded directly onto transport trucks during excavation activities and eliminate stockpiling:

#### **Class III Landfill Disposal Facility – John Smith Road Landfill, Hollister, CA**

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<sup>7</sup> The Dust Action Level is defined as ½ the OSHA Permissible Exposure Limit of the respirable fraction for particulates which is set at 5 µg/m<sup>3</sup>



- The estimated 310 yds<sup>3</sup> (~434 tons) of non-hazardous soils was approved for disposal at this facility as Petroleum Contaminated Soils.

#### **Class I Disposal Facility - Kettleman Hills Landfill, Kettleman Hills, CA**

- The estimated 48 yds<sup>3</sup> (~68 tons) of soils with STLC lead concentrations exceeding 5 mg/L was approved for disposal at this facility as a State hazardous waste.

Waste acceptance forms for each landfill are provided in Appendix E.

Soils were directly loaded onto end dump trucks for direct transport to the approved landfill facilities. All hazardous waste material was hauled by a licensed hazardous waste hauler.

Approximately 250 yds<sup>3</sup> (348.52 tons) of non-hazardous soils and 60 yds<sup>3</sup> (81.11 tons) of soil classified as a California hazardous waste were directly loaded for transport and disposal at John Smith Road Landfill and Kettleman Hills Landfill, respectively. The discrepancy in the estimated volume of non-hazardous soils (310 yds<sup>3</sup>) vs the actual volume removed (250 yds<sup>3</sup>) is a result of large concrete slabs that were encountered within the prescribed excavations as described in section 5.3.1.

Documentation of proper soil disposal (i.e., manifests and landfill receipts) are included in Appendix E.

#### **5.3.6 Confirmation Soil Sampling & Residual Soil Impacts**

The extensive Site soil characterization data set provides adequate documentation of residual soil impacts that remain at the Site following remedial excavation activities. Therefore, confirmation soil sampling following remedial excavation was not planned.

The following represent the highest concentrations of residual soil impacts exceeding applicable commercial screening thresholds that have been left in-place beneath the protective cap (see Figure 4):

- **Benzo(a)pyrene Equivalent:** 89.89 mg/kg detected at boring B-9 at a depth of 1.5 feet bgs
- **TPH-diesel:** 4,980 mg/kg detected at boring B-9 at a depth of 4 feet bgs
- **TPH-motor oil:** 12,350 mg/kg detected at boring B-9 at a depth of 4 feet bgs
- **Lead:** 356 mg/kg detected at boring B-7 at a depth of 1.5 feet bgs

#### **5.4 SOIL CAP / SITE RESTORATION**

Following completion of the prescribed remedial excavation, we subcontracted with a licensed grading and paving company (Watsonville Grading and Excavation, Inc.) to restore the parking lot as follows:

- Emplaced 15 inches of compacted base rock into the excavation areas (i.e., recycled concrete sourced from Buena Vista Landfill, Watsonville), with the exception of areas where concrete foundations were encountered, and the thickness of base rock was emplaced accordingly to meet the prescribed sub-grade elevation

- Paved the excavation areas with 3 inches of asphaltic concrete
- Replaced a concert swale that channels parking lot surface water to a storm drain inlet along E. Fifth Street
- Replaced a concrete pad for the trash enclosure that is situated at the northwestern corner of the site
- Applied a slurry seal to the unaffected areas of the parking lot to improve asphalt pavement integrity and minimize surface water infiltration
- Replaced parking blocks and striped parking spaces
- As previously noted, two existing planter areas that were removed as part of remedial excavation activities were not replaced, but were paved over in order to eliminate future contact with impacted soils beneath these locations.

## 6.0 CONCLUSIONS

In addition to documenting the successful completion of regulatory approved remedial actions in this completion report, we have prepared the following draft documents for Environmental Health review and approval:

1. An *Environmental Site Management Plan* documenting the location of residual soil impacts and protective cap, including requirements for annual cap inspections, such that the long-term stewardship of the protective cap can be maintained, and
2. A *Covenant and Environmental Deed Restriction of Property* documenting the residual soil impacts and restricting the property for commercial use only, which will ultimately be recorded in the Official Records of the County of Santa Cruz

## 7.0 RECOMMENDATIONS

As required by Environmental Health, we recommend completing one more round of soil vapor and groundwater monitoring in general accordance with our regulatory approved Proposed Semi-Annual Groundwater and Soil Vapor Monitoring, dated March 6, 2017 (post-remedial action sampling schedule to be determined following consultation with Environmental Health). **If results of soil vapor and groundwater concentrations continue to confirm no significant risk to site receptors or to the environment, we will recommend cessation of monitoring followed by soil vapor monitoring well destruction and No Further Action for the Site.**



## 8.0 LIMITATIONS

Our service consists of professional opinions and recommendations made in accordance with generally accepted geologic and engineering principles and practices. This warranty is in lieu of all others, either express or implied. The analysis and conclusions in this report are based on sampling and testing which are necessarily limited. Additional data from future work may lead to modification of the opinions expressed herein.

All work related to this investigation and remediation at this Site is done under the direct supervision of a Professional Geologist or Engineer, registered in California, and experienced in environmental assessment and remediation.

Thank you for this opportunity to participate in the environmental assessment of this Site. If you have any questions or comments regarding this project, please contact us at our offices.

Sincerely yours,

WEBER, HAYES AND ASSOCIATES

A California Corporation



By:

Handwritten signature of Jered Chaney in blue ink.

Jered Chaney, PG  
Project Geologist



And:

Handwritten signature of Pat Hoban in blue ink.

Pat Hoban PG  
Senior Geologist

## 9.0 REFERENCES

### PREVIOUS ENVIRONMENTAL REPORTS PREPARED FOR:

#### Former Watsonville-1 Manufactured Gas Plant – 618 Main Street, Watsonville

*Draft Screening Levels for Chemicals in Soil Gas, Sub-Slab Soil Gas, and Indoor Air*, Iris Environmental, dated September 29, 2009.

*Contingency Plan for Soil Gas Sampling*, Terra Pacific Group, dated September 30, 2009.

*Final Removal Action Completion Report*, Terra Pacific Group, dated October 27, 2011.

*Vapor Extraction Pilot Study Results*, Terra Pacific Group, dated December 21, 2011.

*April 2015 Groundwater and Soil Gas Monitoring Report*, Terra Pacific Group, dated June 20, 2015.

#### 25 East Fifth Street, Watsonville

*Preliminary Assessment of Potential Historic Land Use Impacts*, Weber, Hayes and Associates, dated December 10, 2009.

*Preliminary Soil and Groundwater Assessment*, Weber, Hayes and Associates, dated July 29, 2010

*Work Plan for Additional Site Assessment*, Weber, Hayes and Associates, dated January 13, 2016

*Proposed Semi-Annual Groundwater and Soil Vapor Monitoring*, dated March 6, 2017

*Feasibility Study & Remedial Action Plan (includes Results of Semi-Annual Grab Groundwater and Soil Vapor Monitoring – First Half 2017)*, dated June 21, 2017

### REGULATORY CORRESPONDENCE FOR 25 EAST FIFTH STREET, WATSONVILLE:

Letter Directive: *Response to Preliminary Soil and Groundwater Assessment* (Request for Work Plan), County of Santa Cruz Health Services Agency, dated December 15, 2016

Email Correspondence: Request for additional soil analysis and Work Plan approval, County of Santa Cruz Health Services Agency and Weber, Hayes and Associates, dated April 7, 2016

Email Correspondence: Testing for Ammonia as Nitrogen (response to regulatory concerns that this may be a contaminant of potential concern), County of Santa Cruz Health Services Agency and Weber, Hayes and Associates, dated May 4, 2016

Email Correspondence: Results update and Request to install Soil Data Gap Borings, Weber, Hayes and Associates, dated July 6, 2016 (request approved by County of Santa Cruz Health Services Agency on July 26, 2016)

Letter Directive: *Response to Additional Site Assessment* (Request for Feasibility Study & Remedial Action Plan), County of Santa Cruz Health Services Agency, dated February 24, 2017



Letter Directive: *Response to Proposed Semi-Annual Groundwater and Soil Vapor Monitoring*),  
County of Santa Cruz Health Services Agency, dated March 8, 2017

Email Correspondence: Results update and Results of Follow-up Soil Vapor (SV) Sampling & Request  
to Destroy Three SV Wells to Accommodate Upcoming Remedial Excavation Activities, Weber,  
Hayes and Associates, dated August 23, 2017 (request approved by County of Santa Cruz Health  
Services Agency on August 28, 2017)

Letter Directive: *Response to Feasibility Study and Remedial Action Plan and Associated Documents*,  
County of Santa Cruz Health Services Agency, dated August 31, 2017

Email Correspondence: Proposed Deviation from Remedial Action Plan, Weber, Hayes and  
Associates, dated October 4, 2017 (request approved by County of Santa Cruz Health Services  
Agency on August 4, 2017)

## FIGURES

*FIGURE 1:* Location Map

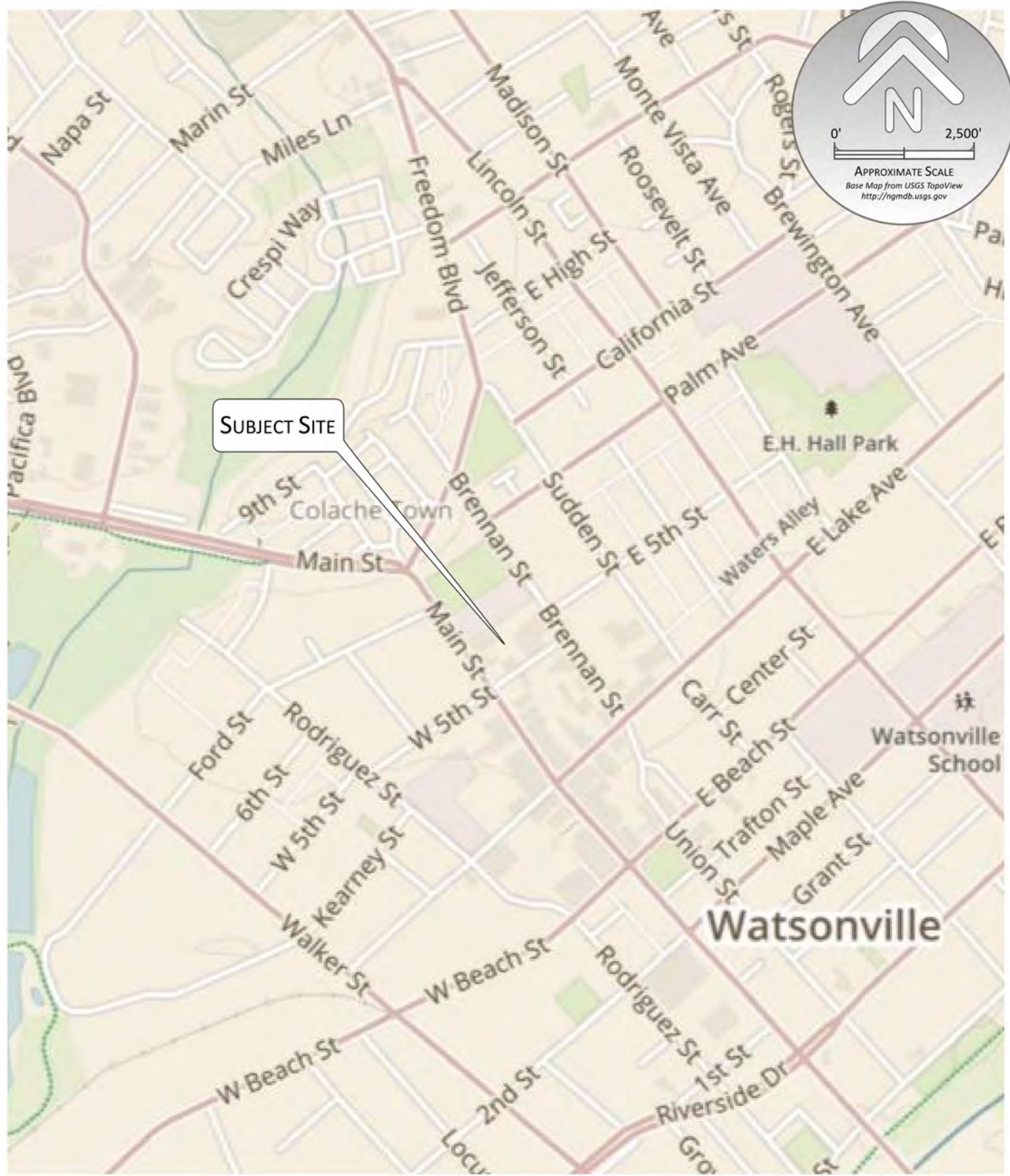
*FIGURE 2:* Site Map showing: 1) Soil Impacts Exceeding Commercial Screening Thresholds, and 2) Completed Remedial Alternative No. 2 – Focused Removal of Shallow Soil Impacts

*FIGURE 3:* Site Map showing Completed Remedial Excavation and Cap Areas & Intact Concrete Slabs Encountered Beneath Parking Lot

*FIGURE 4:* Site Map showing: 1) Protective Soil Cap Areas, and 2) Residual Soil Impacts Exceeding Commercial Screening Thresholds

*FIGURE 5:* Site Map Showing Existing & Destroyed Dual Depth Soil Vapor Monitoring Well Locations






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 Hydrogeology and Environmental Engineering  
 120 Westgate Drive, Watsonville, CA  
 831.722.3580 / www.weber-hayes.com

**LOCATION MAP**  
 SITE: COMMERCIAL-ZONED WAREHOUSE PROPERTY  
 ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

---

DATE: SEPTEMBER 2015      REVISIONS/NOTES:

**FIGURE 1**  
 Project 2X404



EXPLANATION OF SYMBOLS

Completed Removal Action and Cap Areas  
Non-hazardous waste removal to 1.5 feet bgs

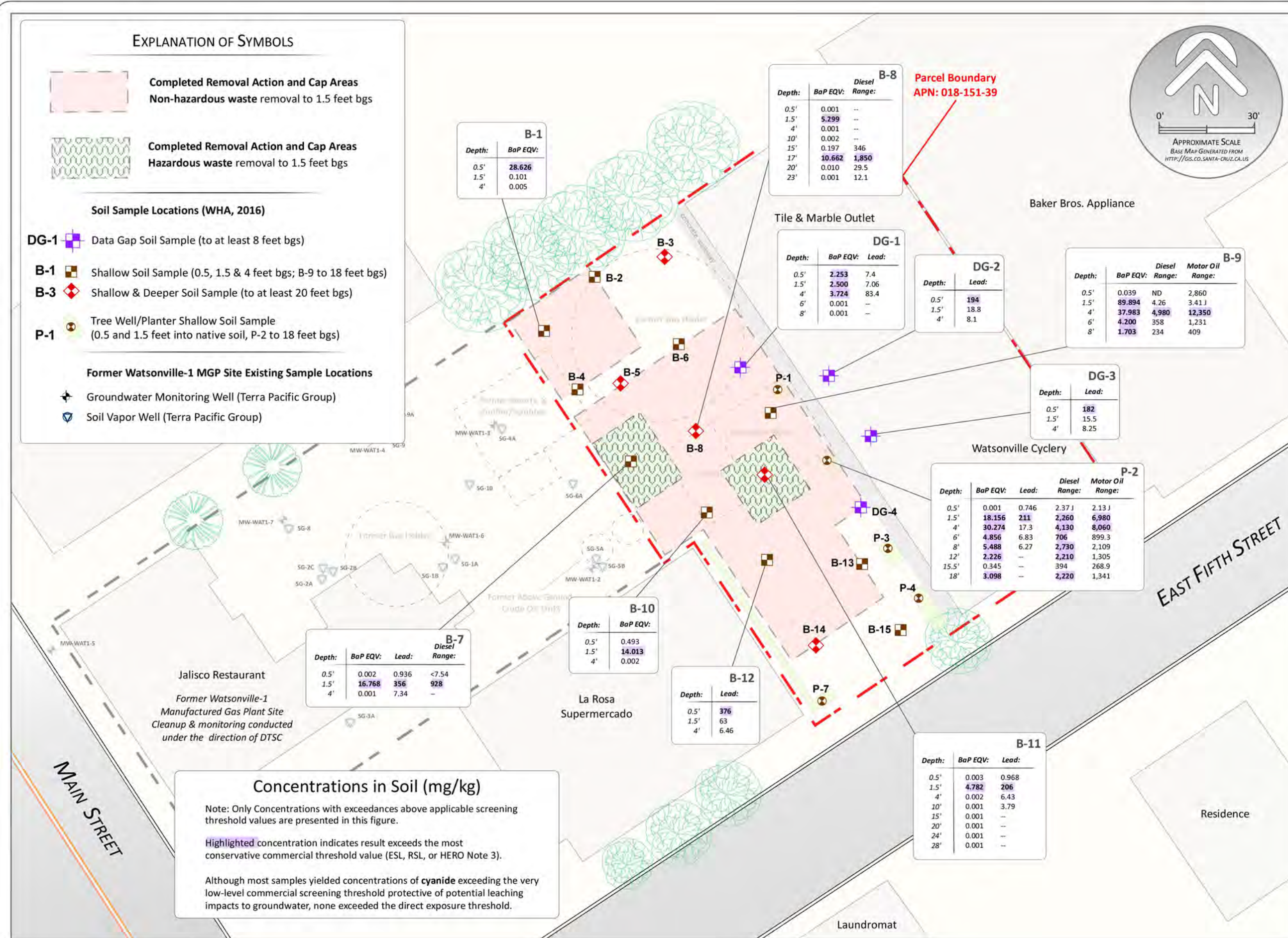
Completed Removal Action and Cap Areas  
Hazardous waste removal to 1.5 feet bgs

Soil Sample Locations (WHA, 2016)

- DG-1 Data Gap Soil Sample (to at least 8 feet bgs)
- B-1 Shallow Soil Sample (0.5, 1.5 & 4 feet bgs; B-9 to 18 feet bgs)
- B-3 Shallow & Deeper Soil Sample (to at least 20 feet bgs)
- P-1 Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs)

Former Watsonville-1 MGP Site Existing Sample Locations

- Groundwater Monitoring Well (Terra Pacific Group)
- Soil Vapor Well (Terra Pacific Group)



Concentrations in Soil (mg/kg)

Note: Only Concentrations with exceedances above applicable screening threshold values are presented in this figure.

Highlighted concentration indicates result exceeds the most conservative commercial threshold value (ESL, RSL, or HERO Note 3).

Although most samples yielded concentrations of cyanide exceeding the very low-level commercial screening threshold protective of potential leaching impacts to groundwater, none exceeded the direct exposure threshold.

FIGURE 2  
Project 2X404.C

SITE MAP SHOWING: 1) SOIL IMPACTS EXCEEDING COMMERCIAL SCREENING THRESHOLDS, AND 2) COMPLETED REMEDIAL ALTERNATIVE NO. 2 - FOCUSED REMOVAL OF SHALLOW SOIL IMPACTS

SITE: COMMERCIAL-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

DATE: JANUARY 2018  
FILE: 2X404\REPORT\2017 RAP COMPLETION\FIGURES

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**EXPLANATION OF SYMBOLS**



**Completed Remedial Excavation & Cap Areas  
(1.5 foot thick protective cap)**



**RAP Deviation: Left In-place, Intact Concrete Slabs Encountered Beneath Asphalt & Base Rock**

These concrete slabs include:

1) An approximate 24 foot wide, ~6-inch thick slab spanning the southwestern portion of the remedial excavation. The slab is encountered at approximately 8-inches below existing parking lot grade at the western limits of the excavation and shallows to about 2-inches below grade from west to east as the parking lot grade slopes downward to the east. A review of historic aerial photos indicates that this concrete slab has existed at the Site since at least the 1930's and appears to have been a parking area for the adjacent business to the west (now La Rosa Supermercado).

2) A large, circular foundation that matches the location of the former MGP Gas Holder at the norther portion of the parking lot (as observed in historic Sanborn Maps). This concrete slab is at least 6-inches thick and spans a good portion of the northwestern most excavation footprint and across a portion of the larger, southern excavation footprint. The slab is encountered at depths of approximately 16-inches below existing grade, shallowing to about 8-inches below existing grade, as the grade of the existing parking lot slopes downward to the south and east.



**SITE MAP SHOWING COMPLETED REMEDIAL EXCAVATION & CAP AREAS & INTACT CONCRETE SLABS ENCOUNTERED BENEATH PARKING LOT**

**FIGURE 3**  
Project 2X404.C

SITE: COMMERCIALY-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA


DATE: JANUARY 2018 FILE: 2X404\REPORT\2017 RAP COMPLETION\FIGURES








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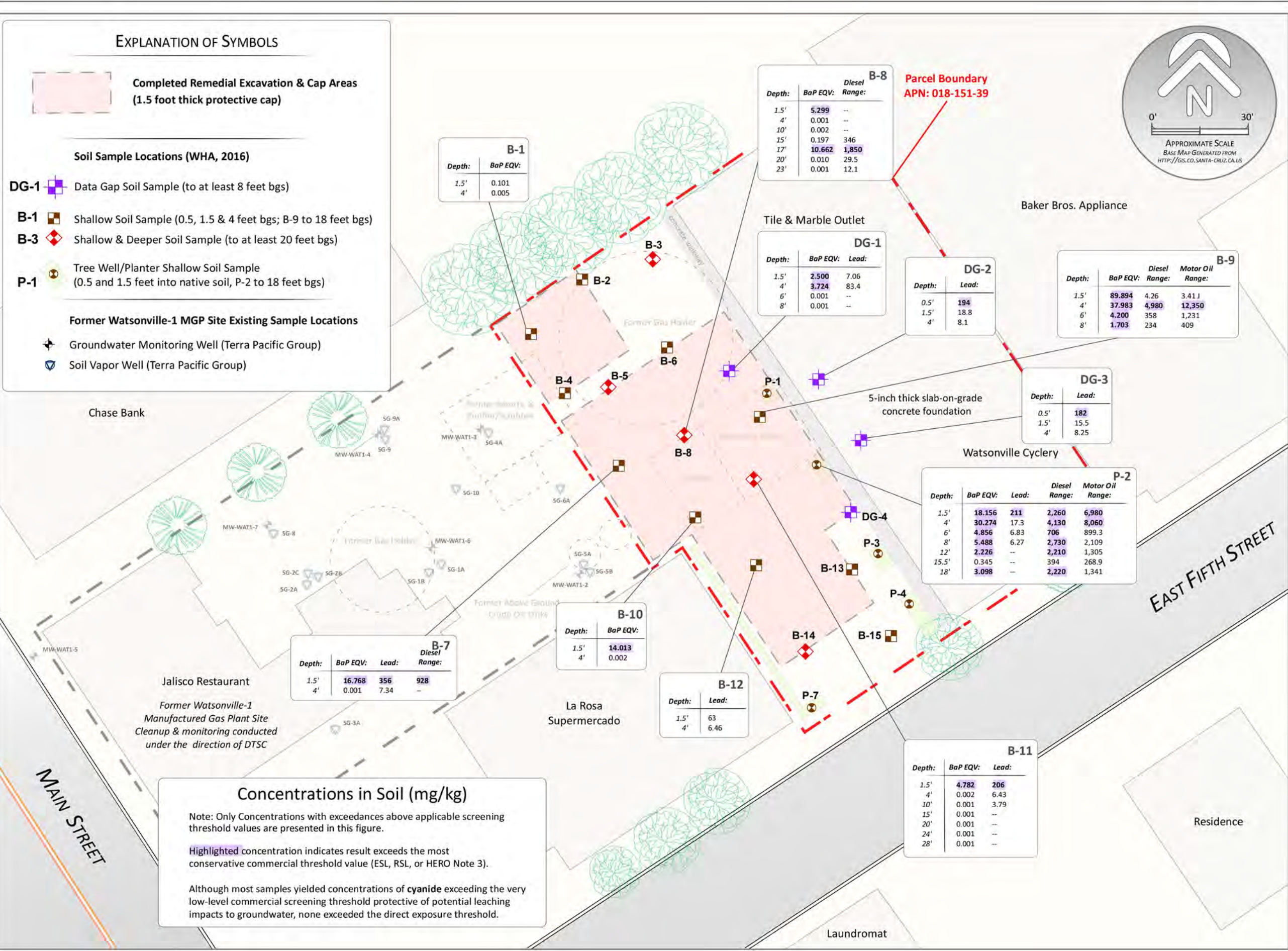


EXPLANATION OF SYMBOLS

 Completed Remedial Excavation & Cap Areas (1.5 foot thick protective cap)

Soil Sample Locations (WHA, 2016)

- DG-1**  Data Gap Soil Sample (to at least 8 feet bgs)
  - B-1**  Shallow Soil Sample (0.5, 1.5 & 4 feet bgs; B-9 to 18 feet bgs)
  - B-3**  Shallow & Deeper Soil Sample (to at least 20 feet bgs)
  - P-1**  Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs)
- Former Watsonville-1 MGP Site Existing Sample Locations
-  Groundwater Monitoring Well (Terra Pacific Group)
  -  Soil Vapor Well (Terra Pacific Group)



**B-7**

Depth:	BaP EQV:	Lead:	Diesel Range:
1.5'	16.768	356	928
4'	0.001	7.34	-

**B-10**

Depth:	BaP EQV:
1.5'	14.013
4'	0.002

**B-12**

Depth:	Lead:
1.5'	63
4'	6.46

**B-8**

Depth:	BaP EQV:	Diesel Range:
1.5'	5.299	--
4'	0.001	--
10'	0.002	--
15'	0.197	346
17'	10.662	1,850
20'	0.010	29.5
23'	0.001	12.1

**DG-1**

Depth:	BaP EQV:	Lead:
1.5'	2.500	7.06
4'	3.724	83.4
6'	0.001	--
8'	0.001	--

**DG-2**

Depth:	Lead:
0.5'	194
1.5'	18.8
4'	8.1

**B-9**

Depth:	BaP EQV:	Diesel Range:	Motor Oil Range:
1.5'	89.894	4.26	3.411
4'	37.983	4,980	12,350
6'	4.200	358	1,231
8'	1.703	234	409

**DG-3**

Depth:	Lead:
0.5'	182
1.5'	15.5
4'	8.25

**P-2**

Depth:	BaP EQV:	Lead:	Diesel Range:	Motor Oil Range:
1.5'	18.156	211	2,260	6,980
4'	30.274	17.3	4,130	8,060
6'	4.856	6.83	706	899.3
8'	5.488	6.27	2,730	2,109
12'	2.226	--	2,210	1,305
15.5'	0.345	--	394	268.9
18'	3.098	--	2,220	1,341

Concentrations in Soil (mg/kg)

Note: Only Concentrations with exceedances above applicable screening threshold values are presented in this figure.

Highlighted concentration indicates result exceeds the most conservative commercial threshold value (ESL, RSL, or HERO Note 3).

Although most samples yielded concentrations of cyanide exceeding the very low-level commercial screening threshold protective of potential leaching impacts to groundwater, none exceeded the direct exposure threshold.

**FIGURE 4**  
Project 2X404.C

**SITE MAP SHOWING: 1) PROTECTIVE SOIL CAP AREAS, AND 2) RESIDUAL SOIL IMPACTS EXCEEDING COMMERCIAL SCREENING THRESHOLDS**

SITE: COMMERCIAL-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

DATE: JANUARY 2018



EXPLANATION OF SYMBOLS

- SV-1** Existing Dual-Depth Soil Vapor Well (5 and 10 feet bgs)
- SV-2** Destroyed Dual-Depth Soil Vapor Well (5 and 10 feet bgs)  
Wells SV-2, -3 & -5 destroyed on 9/6/2017



Parcel Boundary  
APN: 018-151-39

Baker Bros. Appliance

Tile & Marble Outlet

SV-1

SV-2

SV-5

SV-3

SV-4

Watsonville Cyclery

Chase Bank

Jalisco Restaurant  
Former Watsonville-1  
Manufactured Gas Plant Site  
Cleanup & monitoring conducted  
under the direction of DTSC

La Rosa  
Supermercado

EAST FIFTH STREET

Residence

Laundromat

**SITE MAP SHOWING EXISTING & DESTROYED DUAL DEPTH SOIL VAPOR MONITORING WELL LOCATIONS**

SITE: COMMERCIALY-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

DATE: JANUARY 2018

FILE: 2x404\REPORT\2017 RAP COMPLETION\FIGURES



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**FIGURE 5**  
Project  
2X404.C

## **APPENDIX A**

### **SITE DESCRIPTION & SUMMARY OF PREVIOUSLY COMPLETED SOIL & GROUNDWATER ASSESSMENTS**

25 East Fifth Street, Watsonville, CA



## SITE DESCRIPTION & BACKGROUND

The subject property is located in a commercially zoned area near the corner of Main Street and East Fifth Street in the city Watsonville, California (see Site Map, Figure 1). The Site consists of one warehouse structure (currently being leased by Watsonville Cyclery and Tile & Marble Outlet), a parking area and limited landscaping (see Site Map, Figure 2).

### LOCAL HYDROGEOLOGIC SETTING

The Site is located on flood plain deposits, which consists of unconsolidated, fine-grained sand, silt, and clay. Underlying these flood deposits are terrace deposits consisting of semi-consolidated, moderately to poorly sorted silt, sand, silty clay, and gravel. Nearly twenty-five years of water level gauging data collected from the adjacent chemical release investigation site (618 Main Street, Watsonville) indicates groundwater levels have fluctuated widely from approximately 16 to 33 feet bgs<sup>8</sup>.

### HISTORICAL BACKGROUND

In 2010, Weber, Hayes and Associates (WHA) completed a *Preliminary Assessment of Potential Historic Land Use Impacts* for the Site<sup>9</sup>. Historical maps and regulatory documents revealed that the Site was previously used as a Manufactured Gas Plant (MGP) from 1871 to 1908. The Site was part of a larger parcel, which housed the Watsonville-1 MGP, Watsonville-2 MGP, and later owned and subdivided by Coast Counties Gas & Electric Company in 1931. Subsequently, the Site involved a variety of automotive uses including sales, storage, and repair businesses. As noted, the commercial Site currently contains a commercial warehouse and a paved parking lot.

Research of previous investigations at the adjacent commercial zoned restaurant parcel to the west (618 Main Street, Jalisco Restaurant) has documented evidence of soil and groundwater contamination that is associated with the same manufactured gas plant that operated on the subject Site. The adjacent site characterization and cleanup activities have been ongoing since approximately 1986 and investigation is currently under the direction of the California Department of Toxic Substances Control (DTSC). Additional

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<sup>8</sup>: Terra Pacific Group: April 2015 Groundwater and Soil Gas Monitoring Report – Former Watsonville-1 Manufactured Gas Plant, Dated June 20, 2015

<sup>9</sup>: WHA: *Preliminary Assessment of Potential Historic Land Use Impacts*, 25 East Fifth Street, Watsonville, dated December 10, 2009.

details, including electronic copies of previous reports can be obtained at the State GeoTracker database website<sup>10</sup>.

### **SUMMARY OF PREVIOUSLY COMPLETED PRELIMINARY SOIL AND GROUNDWATER ASSESSMENT (2010)**

The results of a previously completed *Preliminary Soil and Groundwater Assessment*<sup>11</sup> have revealed the following:

#### **Soil Results (see Figure 3 & Tables 1 & 2):**

Drilling observations from collected soil cores indicate there is approximately 3-4 feet of non-native fill materials across the Site (fill sand/gravels/base rock). Based on these observations, 4-point composite samples were obtained from the fill (at a depth of 1 feet bgs) and immediately beneath the fill (at a depth of 4 feet bgs) to assess potential impacts. Laboratory results indicate the shallow soils consistently contained elevated levels of Polynuclear Aromatic Hydrocarbon (PAHs) compounds at both sampling elevations (i.e., 1 foot and 4 feet bgs). In addition to the detection of PAHs, there were also some low-level detections of motor oil range total petroleum hydrocarbons.

Deeper soils (to 30 feet bgs) were examined at four (4) exploratory boring locations on the Site. Soil discoloration and chemical odors were observed only in the soil core collected at DP-7, positioned just south of the former MGP's infrastructure (see Figure 3). "Black oily gobs" and strong hydrocarbon odor were observed to be limited to a relatively thin lens at 22 to 23 feet bgs, just above first encountered groundwater at 24 feet bgs. No other obvious soil impacts were observed in any of the other seven shallow or deeper borings. Laboratory-analyzed soil samples were collected from DP-7 at elevations above (@ 20 ft), within (@ 22 ft), and below (@ 24 ft) the lens of dark oily material. The results show that PAH and motor oil range total petroleum hydrocarbons was limited to the visually impacted lens, at concentrations exceeding regulatory threshold limits.

Field observations noted 3-4 feet of fill materials in the majority of the exploratory borings. Laboratory results of shallow soil testing from 1) within the fill soils, and 2) in native soils immediately below the fill materials, indicate both zones are impacted with concentrations of "aged" petroleum hydrocarbons and PAHs in soil that exceed regulatory screening levels. It appears that the upper fill materials are less impacted than the lower native soils (see Tables 1 and 2). Note: there were no obvious chemical odors or soil discoloration noted in shallow soils during soil coring operations.

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<sup>10</sup>: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=SLT3S1091318](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT3S1091318)

<sup>11</sup> WHA report: Preliminary Soil and Groundwater Assessment, 25 East Fifth Street, Watsonville, CA, dated July 29, 2010



These types of contaminant compounds (i.e., PAH and TPH) have also been detected in the adjoining parcel restaurant parcel to the west (618 Main Street), which shared the same MGP footprint. This adjacent site has been undergoing characterization and cleanup activities since approximately 1986.

**Groundwater Results (see Figure 3 & Table 3):**

Grab groundwater samples were collected and analyzed from the 4 deeper exploratory borings. None of the tested groundwater contained elevated concentrations of chemicals of potential concern that exceeded regulatory Water Quality Goals established by the California Regional Water Quality Control Board, Central Coast Region (Water Board). The laboratory results did note, however, a trace detection of Total Petroleum Hydrocarbons in the range of gasoline (TPH-gasoline) in the groundwater sample collected from the aforementioned soil-impacted boring (DP-7). Specifically the State-certified laboratory detected 150 µg/L of weathered TPH-gasoline (see Figure 4 and Table 3). The Water Quality Goal for TPH is 1,000 µg/L. None of the four collected groundwater samples contained concentrations of chemicals of potential concern exceeding established regulatory Water Quality Goals.

**SUMMARY OF PREVIOUSLY COMPLETED ADDITIONAL SITE ASSESSMENT (2016)**

The previously completed *Additional Site Assessment (ASA)*<sup>12</sup> was designed to provide sufficient characterization of subsurface conditions with the goal of quantifying potential human health risks for commercial land use, and ultimately to propose a plan that effectively separates any residual soil/soil vapor impacts from current and future tenants leasing the property.

**COMPLETED SCOPE OF CHARACTERIZATION SAMPLING**

The scope of work completed for the ASA included:

- **Soil Characterization (see Figures 2 through 5):** Installation of fifteen (15) shallow (i.e., 4-foot deep) soil borings throughout the Site to provide sufficient vertical and lateral definition of shallow soil chemical impacts previously detected beneath the Site (B-1 through B-15). Five (5) of these borings extended to depths of 20 to 30 feet below the ground surface (bgs) to collect data on deeper soil chemical impacts (B-3, B-5, B-8, B-11, and B-14). Five (5) shallow (i.e., 0.5 and 1.5 feet deep) soil samples were also collected from native soils within all tree well / planter areas (P-1 through P-4 and P-7). In addition, following receipt of initial soil sample analytical results, we installed four (4) "data gap" soil borings (DG-1 through DG-4) to depths of 8 feet bgs and advanced borings B-9 and P-2 to depths of 8 and 18 feet, respectively, in order to provide better vertical and lateral definition of detected soil impacts.

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<sup>12</sup> WHA report: *Results of Additional Site Assessment*, dated November 23, 2016

- **Groundwater Characterization (see Figure 12):** Collected grab groundwater samples from five (5) locations throughout the Site (GW-1 through GW-5) in order to provide additional data on previously detected low-level chemical impacts to groundwater.
- **Soil Vapor Characterization (see Figure 13):** Installed and sampled five (5) permanent dual-depth (i.e., 5 and 15 feet bgs) soil vapor sample points (SV-1 through SV-5) to assess potential soil vapor intrusion concerns (see Figure 13).

#### **EVALUATION OF COLLECTED SOIL, GROUNDWATER AND SOIL VAPOR MEDIA**

When making human/ecological health and safety risk management decisions, the Santa Cruz County Environmental Health Services Agency (SCC-EHS) defers to the most conservative of multiple screening thresholds (concentrations) established by various State and Federal guidelines. Risk-based screening thresholds vary based on land use (i.e. residential vs. commercial / industrial land-use scenarios). At a minimum, the SCC-EHS requires evaluation of sample media with residential and/or commercial/industrial thresholds, specifically: 1) the Water Board's Tier 1 Environmental Screening Levels (ESLs), 2) the Federal USEPA Region 9 Regional Screening Levels (RSLs), and 3) the State DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment "Note 3" screening values.

In addition, soil vapor sample analytical results were compared with the *Risk Based Soil Gas Screening Levels (RBSLs)* developed for the adjacent Jalisco Restaurant property. Although specific vapor intrusion risk model inputs used to develop the RBSLs for soil vapor at the Jalisco Restaurant property likely vary somewhat from Site specific conditions, these RBSLs provide first blush order of magnitude information regarding potential risks for the commercial receptors at the Site.

#### **RESULTS OF ADDITIONAL SITE ASSESSMENT**

On May 3 through 6, 2016, soil borings B-1 through B-15, P-1 through P-4 and P-7 were installed and soil samples were collected for laboratory analysis in accordance with the approved *Work Plan*. Grab groundwater samples GW-1 through GW-5 were also obtained during this mobilization, and permanent dual depth soil vapor sample points SV-1 through SV-5 were installed. Soil vapor sampling was conducted on May 11 and 12, 2016. In addition, on August 18, 2016, data gap soil borings DG-1 through DG-4 were installed and soil samples were collected for laboratory analysis. Previous sample locations B-9 and P-2 were also advanced to deeper depths during the August 18 mobilization to obtain deeper soil samples for laboratory analysis.

#### **Soil Characterization**

Selected soil analysis and analytical results are presented on Tables 1 through 3 and Figures 2 through 5. In general, the extensive soil characterization identified relatively shallow (i.e., approximately 2-4 feet below grade) polynuclear aromatic hydrocarbons (PAHs), and to a much lesser extent Total Petroleum



Hydrocarbons as diesel/motor oil (TPH-d/mo) and/or lead concentrations exceeding applicable commercial screening thresholds which correlate with the historic MGP infrastructure footprint (i.e., central to northwestern portion of the parking lot), with deeper PAH and TPH-d/mo soil impacts that appear to originate in the vicinity of boring P-2 (adjacent to the former MGP generator room) as evidenced by black soil discoloration and associated strong hydrocarbon-like odors persisting from approximately 6.5 feet to 15 feet below the ground surface (bgs). The impacts observed at boring P-2 appear to migrate laterally and deeper to borings B-8, B-11 and DP-7 (DP-7 installed in 2010) as evidenced by a lens of soil discoloration/odor at progressively deeper depths to the west-southwest of boring P-2 (see Figure 7; Geologic Cross Sections). Boring B-9 (near impacted boring P-2) also exhibited deeper PAH impacts to at least 8 feet bgs. The most significant soil impacts are observed at borings B-9 and P-2.

**The well-defined areal extent of soil impacts within the parking lot is approximately 6,000 square feet (see Figure 11).**

### ***Groundwater Characterization***

Grab groundwater sample analysis and analytical results are presented on Tables 4 and 5 and Figure 12. Concentrations of PAHs (including naphthalene), TPH-diesel and cyanide (GW-3 only) exceeding conservative groundwater ESLs were limited to borings GW-1 and GW-3 (along the western property line with Jalisco Restaurant), with only a slight exceedance of naphthalene detected in upgradient boring GW-2. Similar order of magnitude groundwater concentrations detected in the Jalisco Restaurant property monitoring well network correlate with these detections, indicating a relatively small, low-concentration groundwater plume.

**We note that nearly 25 years of groundwater monitoring at the hydraulically downgradient Jalisco Restaurant property has confirmed that the dissolved plume is stable and not migrating.** Semi-annual grab groundwater sampling is currently being conducted to confirm this.

### ***Soil Vapor Characterization***

Soil vapor sample analysis and analytical results are presented on Table 6 and Figure 13. VOC sample analytical results revealed no exceedance above applicable commercial screening thresholds, and were several orders of magnitude below the *Risk Based Soil Gas Screening Levels* (RBSLs) developed for the adjacent Jalisco Restaurant property, with the exception of 1,2-Dibromoethane (a.k.a EDB) detected at a concentration of 99  $\mu\text{g}/\text{m}^3$  in sample SV-3 at 10 feet below grade, which is above the California DTSC Modified Soil Gas Screening level ("near-source") set at 20  $\mu\text{g}/\text{m}^3$ . The sample collected at 5 feet bgs at this location was non-detect for this compound.

**Based on these initial results there does not appear to be a soil vapor intrusion risk for the Site.** Semi-annual sampling is currently being conducted to confirm this.

## RESULTS OF SEMI-ANNUAL GROUNDWATER & SOIL VAPOR MONITORING

### **Groundwater Monitoring**

Based on the localized extent of observed groundwater impacts at the Site, grab groundwater samples were obtained on March 22, 2017 from previous sample locations GW-1, GW-2 and GW-3 by installing temporarily cased boreholes ranging in depth from 27 to 29 feet bgs. The sample obtained from GW-2 serves as a “clean” upgradient monitoring point and samples obtained from GW-1 and GW-3 serve as downgradient, property line monitoring points. The grab groundwater samples were submitted to a State-certified laboratory for the following analysis:

- PAHs by EPA Method 8270SIM
  - TPH-diesel and TPH-motor oil by EPA Method 8015B
  - TPH-gas and BTEX/MTBE and 1,2-dibromoethane by EPA Method 8260B
  - Total cyanide by EPA Method 9012
  - Ammonia as nitrate by EPA Method 350.2
- Results are tabulated on Tables 4 & 5 of this Appendix. In general, results are fairly similar to the May 2016 sample results. There were limited exceedances in the groundwater samples, specifically from borings GW-1 and GW-3 obtained from along the western property line adjoining the Jalisco Restaurant property. Contaminant compounds exceeding the conservative *Environmental Screening Levels (ESLs)* included PAHs (including naphthalene), TPH-gas and -diesel, and cyanide (GW-3 only) there were no current exceedances in upgradient boring GW-2. Note: there have been similar order of magnitude groundwater concentrations detected in the Jalisco Restaurant property monitoring well network, indicating a relatively small and stable, low-concentration groundwater plume (see Figure 2).

### **Soil Vapor Monitoring**

A second round of soil vapor sampling was attempted on March 30, 2017 at all five (5) Site soil vapor wells (SV-1 through SV-5; see Figure 3); however, “no flow” conditions were encountered at most of the deeper sample ports (10-ft) and one shallow port (5-ft)<sup>13</sup>. Specifically:

- **SV-1 at 10 feet** (water observed in sample tubing during purge)
- **SV-2 at 10 feet** (down hole vacuum > 7.5 inches Hg)
- **SV-3 at 5 and 10 feet** (down hole vacuum > 7.5 inches Hg)

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<sup>13</sup> These sample locations were checked again for flow conditions on May 17, 2017. A peristaltic pump was connected to the sample tubing at each location to gauge flow and check for the potential presence of water and it was confirmed that each sample point contained small volumes of water (~100 +/- mL).



- **SV-4 at 10 feet** (down hole vacuum > 7.5 inches Hg)

Soil vapor monitoring ports having flow were collected on March 30, 2017, and submitted to a State-certified laboratory for volatile organic compound air analysis (VOC analysis by EPA Method Results are tabulated in Table 6 of this Appendix. The VOC sample analytical results from these soil vapor monitoring points continued to confirm no exceedance above applicable commercial screening thresholds, with the exception of benzene detected in sample SV-1 (5-foot depth) at a concentration of 69  $\mu\text{g}/\text{m}^3$ , which is slightly above the US EPA Regional Screening Level set at 53  $\mu\text{g}/\text{m}^3$ . Benzene was previously not detected at this location (<5.9  $\mu\text{g}/\text{m}^3$ ), nor was it previously detected in nearby shallow soil samples (B-3 and B-6 positioned ~15-20 feet away). All detected concentrations were several orders of magnitude below the *Risk Based Soil Gas Screening Levels (RBSLs)* developed for the adjacent Jalisco Restaurant property (details presented on Table 6). A previous detection of 1,2-Dibromoethane (aka: EDB) at a concentration of 99  $\mu\text{g}/\text{m}^3$  in sample SV-1 at 10 feet below grade during the May 2016 sampling event has been the only slightly elevated VOC concentration detected at the Site, which was above the California DTSC-Modified Soil Gas Screening level (“near-source”) set at 20  $\mu\text{g}/\text{m}^3$ . **We note that grab groundwater samples collected and analyzed for 1,2-Dibromoethane during the current monitoring period revealed no detections of this compound indicating there is no significant source of this compound present at the Site.**

Soil vapor sampling at locations that were not collected during the first semi-annual sampling event of 2017 (March 30, 2017) due to no flow conditions were sampled on August 8, 2017. Specifically, sampling was conducted at the following locations:

- **SV-1 at 10-feet:** Well had good flow – no issues during sample collection
- **SV-2 at 10-feet:** Well had good flow. A water droplet was observed in the sample tubing 4 minutes into sampling. Peristaltic pump used in an attempt to evacuate the water droplet with no success. Sampling continued and sampling canister successfully filled.
- **SV-3 at 5-feet:** Well had low flow – “milked” volume required by allowing down hole vacuum to equilibrate, the reapplying canister vacuum to obtain adequate sample volume. This was repeated 7 times over the course of ~1.5 hours
- **SV-3 at 10-feet:** Unable to obtain sample due to “no flow” conditions – water observed in sample tubing.
- **SV-4 at 10-feet:** Well had good flow – no issues during sample collection

VOCs were not detected above laboratory Method Detection Limits in any of the collected samples (see Table 6). Quantitative leak detection monitoring confirms no detectable leaks during sample collection. These results are very similar the initial, non-detectable concentrations of VOCs observed for these locations in May 2016, with a few exceptions:

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- The elevated concentration of 1,2-Dibromoethane detected at SV-1 @ 10 feet (99 ug/m<sup>3</sup>) was not detected (<2.9 ug/m<sup>3</sup>) during the current sampling event.
- Relatively low-level concentrations of BTEX (below CA DTSC-Modified Soil Gas Levels) were detected in May 2016 at SV-3 at 10 feet. To date we have not been able to confirm these initial detections due to no flow conditions. However, we note that two rounds of sampling from the 5 foot depth at this location has confirmed trace to non-detectable concentrations of VOCs below commercial CA DTSC-Modified Soil Gas Levels.



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## **Tables and Figures**

*Preliminary Soil and Groundwater Assessment,*  
**Weber, Hayes and Associates, dated July 29, 2010**

Table 1: Soil Sample Analytical Results - June 29, 2010  
 Polynuclear Aromatic Hydrocarbons  
 Phase II Environmental Site Assessment  
 25 East Fifth Street, Watsonville, California

Sample Identification	Sample Type	Sample Depth (ft, bgs)	Polynuclear Aromatic Hydrocarbons (PAHs)																		
			ALL ANALYTICAL RESULTS ARE IN PARTS PER MILLION (ppm, mg/kg)																		
			Naphthalene	2-Methyl naphthalene	1-Methyl naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(g,h,i) perylene	Benzo(a) anthracene	Chrysene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Benzo(a) pyrene	Indeno(1,2,3-cd) pyrene	Dibenzo(a,h) anthracene	Benzo(a)pyrene Equivalent <sup>(2)</sup>
DP-7	discrete	20.5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.032	< 0.065	< 0.032	< 0.032	< 0.032	< 0.032	< 0.032	0.037
		22'	150	100	86	38	15	68	85	52	50	43	13	29	20	29	7.5	17	17	9.3	33.05
		24'	0.29	0.13	0.27	0.16	0.068	0.33	0.32	0.26	0.29	0.25	0.075	0.18	0.12	0.17	0.045	0.10	0.091	0.049	0.190
DP-(1,2,3,4)	composite	1'	0.11	0.049	0.039	ND	ND	0.039	0.059	0.033	0.063	0.059	0.089	0.048	< 0.065	0.10	< 0.032	0.054	0.089	0.038	0.109
	composite	4'	0.043	0.037	0.029	0.15	0.030	0.053	0.51	0.41	3.2	2.8	1.5	2.3	1.7	3.2	0.95	1.6	1.9	0.54	2.802
DP-(5,6,7,8)	composite	1'	< 0.06	0.051	< 0.04	< 0.04	< 0.04	0.046	< 0.05	< 0.06	< 0.06	< 0.05	0.35	< 0.08	< 0.05	0.084	< 0.03	0.064	< 0.03	0.12	0.102
	composite	4'	< 0.06	0.12	0.099	0.25	0.083	0.089	0.15	0.33	3.0	3.8	2.9	4.1	3.0	5.9	1.2	3.4	3.2	0.94	5.475
Practical Quantitation Limit (PQL)			0.0327	0.0327	0.0327	0.0327	0.0327	0.0327	0.0327	0.0327	0.0327	0.0327	0.0327	0.0327	0.0657	0.0327	0.0327	0.0327	0.0327	0.0327	--
Environmental Screening Levels for SHALLOW Soils (< 10 ft) <sup>(1)</sup> : (Residential / Commercial)			1.2 / 1.2	0.25 / 0.25	0.25 / 0.25	13 / 13	16 / 16	8.9 / 8.9	11 / 11	2.8 / 2.8	40 / 40	85 / 85	27 / 27	0.38 / 1.3	3.8 / 13	0.38 / 1.3	0.38 / 1.3	0.038 / 0.13	0.38 / 1.3	0.11 / 0.38	0.038 / 0.13*
Environmental Screening Levels for DEEP Soils (> 10 ft) <sup>(1)</sup> : (Residential / Commercial)										60 / 60											
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(3)</sup> : (Residential / Commercial)			3.8 / 17	--	--	--	360 / 4,500	240 / 3,000	--	1,800 / 23,000	240 / 3,000	180 / 2,300	--	0.16 / 2.9	16 / 290	0.16 / 2.9	1.6 / 29	0.016 / 0.29	0.16 / 2.9	0.016 / 0.29	0.016 / 0.29*
DTSC - Human and Ecological Risk Office (HERO) Human Health Risk Assessment - Note 3			--	--	--	--	--	--	--	--	--	--	--	--	3.9 / 13	--	0.39 / 1.3	--	--	--	--
																				DTSC PAH Study (2009) <sup>(4)</sup> Northern California 95th Percentile BaP Equivalent	0.9

**FOOTNOTES & NOTES:**

1: Environmental Screening Levels (ESLs): from California Regional Water Quality Control Board - San Francisco Bay Region guidance document: *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater (interim Final, November 2007, Revised May 2008)*. The ESLs are intended to provide guidance on whether or not remediation of detected contamination is warranted. The ESLs used for this table were obtained from Table A. Shallow Soils (<3m) & Table C. Deep Soils (>3m), Groundwater is a current or potential source of Drinking Water, the above referenced document. The ESL document categorizes TPH as either gasoline, middle distillates, or residual fuels. "Middle distillates" are considered to include diesel fuel, kerosene, stoddard solvent, heating fuel, and jet fuel, whereas "residual fuels" include fuel oil (bunker fuel), lubricating oils (motor oil, oil and grease, waste oils) and asphalts.

Residential / Commercial = Residential / ESLs for Residential or Commercial land uses: ESL screening limit concentration are presented in BROWN for Residential land uses and in Green for Commercial/Industrial land uses. One number indicated the ESL is the same for both Residential and Commercial.

2: Seven of the PAHs are recognized to by the US EPA to cause cancer. The most potent carcinogen of these seven is benzo[a]pyrene. The toxicity of each of the other six PAHs is compared to that of benzo[a]pyrene, giving a toxicity-equivalent factor. This factor describes how carcinogenic it is relative to benzo[a]pyrene. In calculating benzo[a]pyrene-equivalent (BaP-equiv) concentrations, the concentration of each PAH is multiplied by its toxicity equivalent factor. The resulting weighted concentrations are summed to calculate the BaP-equiv carcinogenic PAH value.

3: Regional Screening Levels (RSLs): from the USEPA Region 9 RSL Tables (updated January 2015), and the User's Guide (November 2014). The RSLs are risk-based screening levels used for screening sites, calculating risk factors and potentially as cleanup goals once a site has been characterized.

4: DTSC Advisory - Use of the Northern and Southern California Polynuclear Aromatic Hydrocarbon (PAH) Studies in the Manufactured Gas Plant Site Cleanup Process (July 1, 2009): Page 8, Establishing a Practical Target to Guide Soil Excavation/Remediation: A value of 0.9 milligrams per kilogram (mg/Kg) in BaP equivalents can be used as a pragmatic target for guiding soil excavation/remediation. This value corresponds to upper bounds of the ambient data sets. Experience at various MGP site has shown that removal/remediation of soil areas and hotspots exceeding 0.9 mg/Kg BaP equivalents is a reasonably conservative guide for the main phase of excavation/remediation activities.

\* = There is no screening value for BaP equivalent. Results compared against screening values for Benzo(a)pyrene for reference only.

--: Sample(s) not analyzed for this constituent and/or method because the soil sample immediately above it was either non detect for the same compound or was below the residential ESL value established at the time of the investigation.

**BOLD BLUE FONT** = Indicates soil sample concentration exceeds the most conservative of all the screening levels (ESLs).

J: Reporting limits increased due to the nature of the sample matrix (dark color extract). Values detected between the MDL and RL should be considered as estimated and would be flagged with a "J" qualifier.



**Table 2: Soil Sample Analytical Results - June 29, 2010**  
**Total Petroleum Hydrocarbons, Volatile Organic Compounds and Metals**  
 Phase II Environmental Site Assessment  
 25 East Fifth Avenue, Watsonville, California  
 All soil sample results are in parts per million (mg/kg).

Soil Sampling Information			Laboratory Analytical Results												
Sample Identification	Sample Type (discrete or composite)	Sample Depth (feet, bgs)	Total Petroleum Hydrocarbons			Volatile Organic Compounds (VOC's by EPA 8260)						Metals			
			Extractables (w/ silica gel cleanup)		Gasoline	Benzene	Toluene	Ethyl-benzene	Xylene (total)	MTBE	8010 Solvents	Arsenic (As)	Lead (Pb)	Hexavalent Chromium (Cr VI)	Cyanide (CN)
			Motor Oil	Diesel											
DP-7	discrete	20.5'	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
		22'	730**	1,100**	1,100*	< 0.15	< 0.098	1.3	17.8	< 0.26	ND	3.3	4.1	ND	ND
		24'	6.4**	7.4**	1.0 <sup>T</sup>	ND	ND	ND	ND	ND	ND	--	--	--	--
DP-(1,2,3,4)	composite	1'	21	ND	--	--	--	--	--	--	--	ND	1.9	ND	ND
	composite	4'	120 <sup>A</sup>	25 <sup>A</sup>	--	--	--	--	--	--	--	4.1	8.9	ND	ND
DP-(5,6,7,8)	composite	1'	180	< 3.0	--	--	--	--	--	--	--	ND	ND	ND	ND
	composite	4'	73 <sup>A</sup>	20 <sup>A</sup>	--	--	--	--	--	--	--	3.7	7.0	ND	--
Practical Quantitation Limit (PQL)			4.0	2.0	0.10	0.01			0.015	0.01	varies	1.7	1.0	0.1	75
Environmental Screening Levels for SHALLOW Soils (< 10 ft) <sup>(1)</sup> : (Residential / Commercial)			100 / 500	100 / 110	100 / 500	0.044	2.9	3.3	2.3	0.023	varies	0.39 / 1.6	80 / 320	8	0.0036
Environmental Screening Levels for DEEP Soils (> 10 ft) <sup>(1)</sup> : (Residential / Commercial)			500 / 1,000	110	500 / 770									21 / 110	
DTSC - Human and Ecological Risk Office (HERO) Human Health Risk Assessment - Note 3			--	--	--	0.33 / 1.4	1100 / 5,400	--	--	--	--	0.11 / 0.42	--	--	--
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> (Residential / Commercial)			--	--	--	1.2 / 5.1	490 / 4,700	5.8 / 25	65 / 280	--	varies	0.68 / 3.0	400 / 800	0.3 / 6.3	--

**Notes:**

**1 = Environmental Screening Levels (ESLs):** from California Regional Water Quality Control Board - San Francisco Bay Region guidance document; *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final, November 2007, Revised Dec. 2013)*. The ESLs are intended to provide guidance on whether or not remediation of detected contamination is warranted. The ESLs used for this table were obtained from *Table A. Shallow Soils (<3m)* & *Table C. Deep Soil (>3m)*, *Groundwater IS a current or potential Source of Drinking Water*, the above referenced document.

**Residential / Screening levels for Residential or Commercial land uses:** screening limit concentration are presented in **BROWN** for Residential land uses and in **Green** for Commercial/Industrial land uses. One number indicates the screening level is the same for both Residential and Commercial.

**2 = Regional Screening Levels (RSLs):** from the *USEPA Region 9 RSL Tables* (updated January 2015), and the *User's Guide* (November 2014). The RSLs are risk-based screening levels used for screening sites, calculating risk factors and potentially as cleanup goals once a site has been characterized.

**BOLD BLUE FONT** = Indicates soil sample concentration exceeds the most conservative of all the screening levels (ESLs).

**bgs** = below ground surface.

**ND** = Not detected at or above the lab's practical quantitation limit.

**\*** = Laboratory reports not typical gasoline pattern. TPH-Gasoline results includes significant contribution from heavy end hydrocarbons within the C5-C12 range quantified as Gasoline (possibly aged gasoline).

**\*\*** = Laboratory reports not typical of Diesel and motor oil standard pattern (unknown discrete hydrocarbon peaks present).

**T** = Laboratory reports TPH value due to significant contribution from hydrocarbons heavier than requested fuel with the C5-C12 range quantified as Gasoline.

**A** = Laboratory reports not typical of Diesel and motor oil standard pattern (possibly fuel within the motor oil quantification range with discrete hydrocarbon peaks present).

**Table 3: Grab Groundwater Analytical Results - June 29, 2010**

**Phase II Environmental Site Assessment**

25 East Fifth Street, Watsonville, California

All groundwater sample results are in parts per billion (ug/L).

Groundwater Sampling Information			Laboratory Analytical Results										
Sample ID #	* First Encountered Groundwater (feet, TOC)	Temporary Screen Interval (feet, bgs)	Total Petroleum Hydrocarbons			Volatile Organic Compounds (VOC's by EPA 8260)						Polynuclear Aromatic Hydrocarbons (PAHs)	
			Diesel	Motor Oil	Gasoline	Benzene	Toluene	Ethyl-benzene	Xylene (total)	MTBE	8010 Solvents		
			(Micro-extraction)										
DP-1	30'	25 - 30	ND	(a)	ND	ND	ND	ND	ND	ND	ND	ND	ND
DP-2	28'	23 - 28	ND	(a)	ND	ND	ND	ND	ND	ND	ND	ND	ND
DP-5	25.5'	20.5 - 25.5	ND	(a)	ND	ND	ND	ND	ND	ND	ND	ND	ND
DP-7	24'	19 - 24	ND	(a)	150 <sup>X</sup>	ND	ND	ND	4.4	ND	ND	ND	ND
Laboratory Practical Quantitation Limit (PQLs):			100	200	50	0.5			1.5	0.5	varies	4.2	
Maximum Contaminant Levels (MCLs) <sup>(1)</sup>			--	--	--	1	150	300	1750	5	--	--	
Water Quality Goals (WQG) <sup>(2)</sup> Central Coast Region:			1,000 (as Total Petroleum Hydrocarbons)			1	150	300	1,750	5	varies	Not Established	

**NOTES:**

**WQG = Water Quality Goals:** Goals established by the CRWQCB Central Coast Region based on Maximum Contaminant Limits (Department of Health Services) or taste & odor threshold limits.

**BOLD results indicate detected concentrations are above WQG's Threshold limits.**

**1 = Maximum Contaminant Levels (MCLs):** These are the drinking water standards established in Title 22 of the California Code of Regulations.

**2 = Central Coast Regional Water Quality Control Board Basin Plan - Water Quality Goals:** These are the maximum groundwater concentration levels allowed by the CCRWQCB for a site to be considered a low risk to groundwater resources.

**ND = Not detected** at or above the lab's practical quantitation limit.

**bgs = below ground surface**

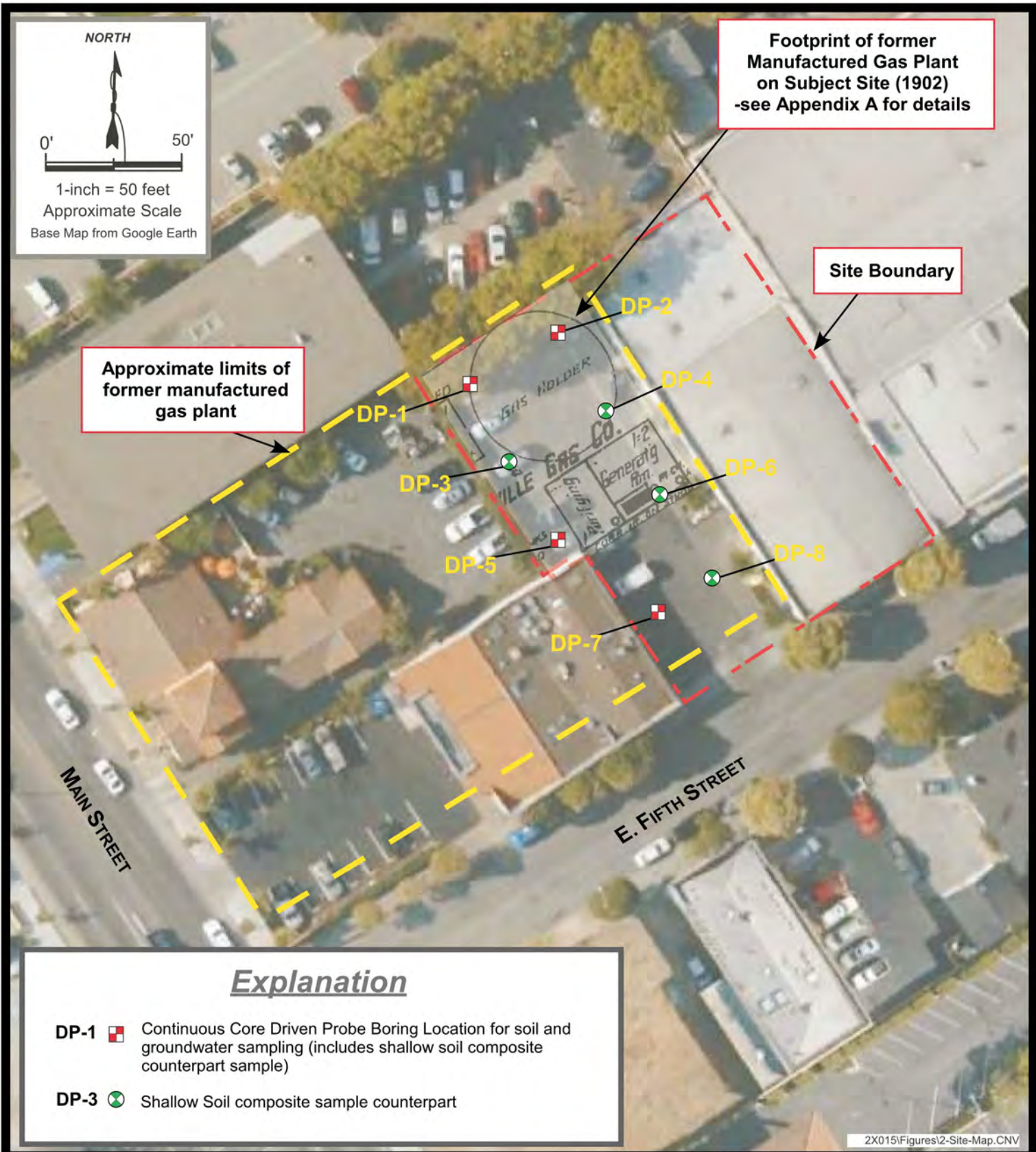
**\* = Depth to groundwater encountered during drilling.**

**MTBE = Methyl-tert-Butyl-Ether**

**X = Laboratory reports TPH value due to heavy end hydrocarbons with range of C5-C12 quantified as gasoline (possibly aged gasoline).**

**(a) = Micro-Extraction -No TPH as Motor Oil pattern present at 200 ug/L.**





Footprint of former  
Manufactured Gas Plant  
on Subject Site (1902)  
-see Appendix A for details

Site Boundary

Approximate limits of  
former manufactured  
gas plant

NORTH

0' 50'

1-inch = 50 feet  
Approximate Scale  
Base Map from Google Earth

**Explanation**

**DP-1** Continuous Core Driven Probe Boring Location for soil and groundwater sampling (includes shallow soil composite counterpart sample)

**DP-3** Shallow Soil composite sample counterpart

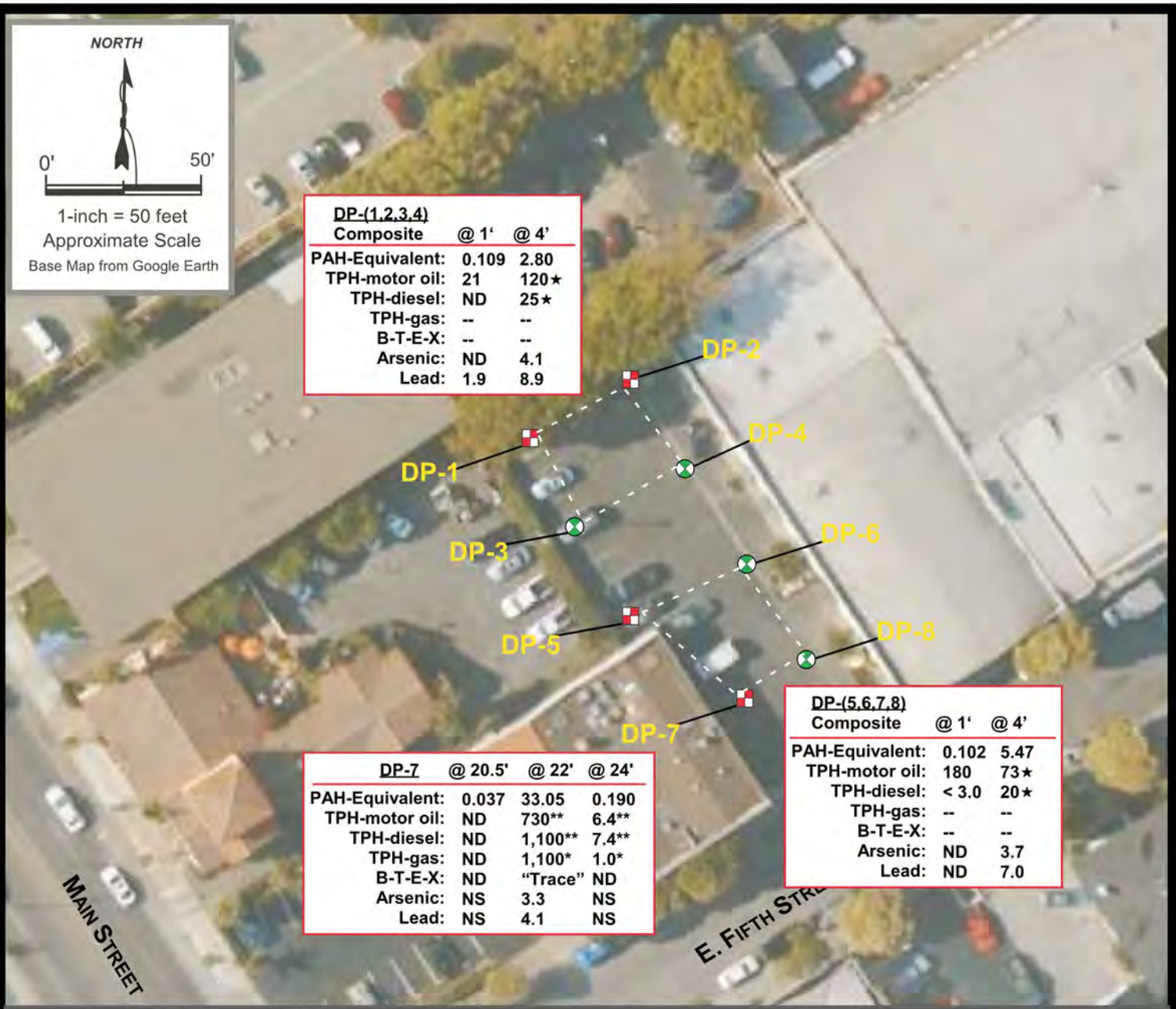
2X015/Figures2-Site-Map.CNV

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**Site Map showing Drilling  
Locations  
Oneto Propety**  
25 East Fifth Street, Watsonville, California

Figure  
2  
Job #  
2X015





DP-(1,2,3,4) Composite		
	@ 1'	@ 4'
PAH-Equivalent:	0.109	2.80
TPH-motor oil:	21	120★
TPH-diesel:	ND	25★
TPH-gas:	--	--
B-T-E-X:	--	--
Arsenic:	ND	4.1
Lead:	1.9	8.9

DP-7	@ 20.5'	@ 22'	@ 24'
PAH-Equivalent:	0.037	33.05	0.190
TPH-motor oil:	ND	730**	6.4**
TPH-diesel:	ND	1,100**	7.4**
TPH-gas:	ND	1,100*	1.0*
B-T-E-X:	ND	"Trace"	ND
Arsenic:	NS	3.3	NS
Lead:	NS	4.1	NS

DP-(5,6,7,8) Composite		
	@ 1'	@ 4'
PAH-Equivalent:	0.102	5.47
TPH-motor oil:	180	73★
TPH-diesel:	< 3.0	20★
TPH-gas:	--	--
B-T-E-X:	--	--
Arsenic:	ND	3.7
Lead:	ND	7.0

### Explanation

DP-7	@ 20.5'	@ 22'	@ 24'
PAH-Equivalent:	0.037	33.05	0.190
TPH-mo:	ND	730**	6.4**
TPH-d:	ND	1,100**	7.4**
TPH-g:	ND	1,100*	1.0*
B-T-E-X:	ND	"Trace"	ND
Arsenic:	NS	3.3	NS
Lead:	NS	4.1	NS

☐ Continuous Core Driven Probe Boring Locations, designation and soil analytical results (June 29, 2010)

DP-3 ○ Shallow Soil composite sample counterpart

All soil sample results are in parts per million (mg/kg, ppm)  
Soil samples were analyzed for the following constituents

- 1) PAH-Equivalent = Polynuclear Aromatic Hydrocarbon (PAH) Toxicity Value - "benzo(a)pyrene equivalent"  
-See Table 1 for details
- 2) TPH-mo = Total Petroleum Hydrocarbons as Motor Oil
- 3) TPH-d = Total Petroleum Hydrocarbons as Diesel
- 4) TPH-g = Total Petroleum Hydrocarbons as Gasoline
- 5) BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
- 6) MTBE = Methyl Tert Butyl Ether & Methylene Chloride

2X015\Figures\3-Soil-Sample-Results.CNV

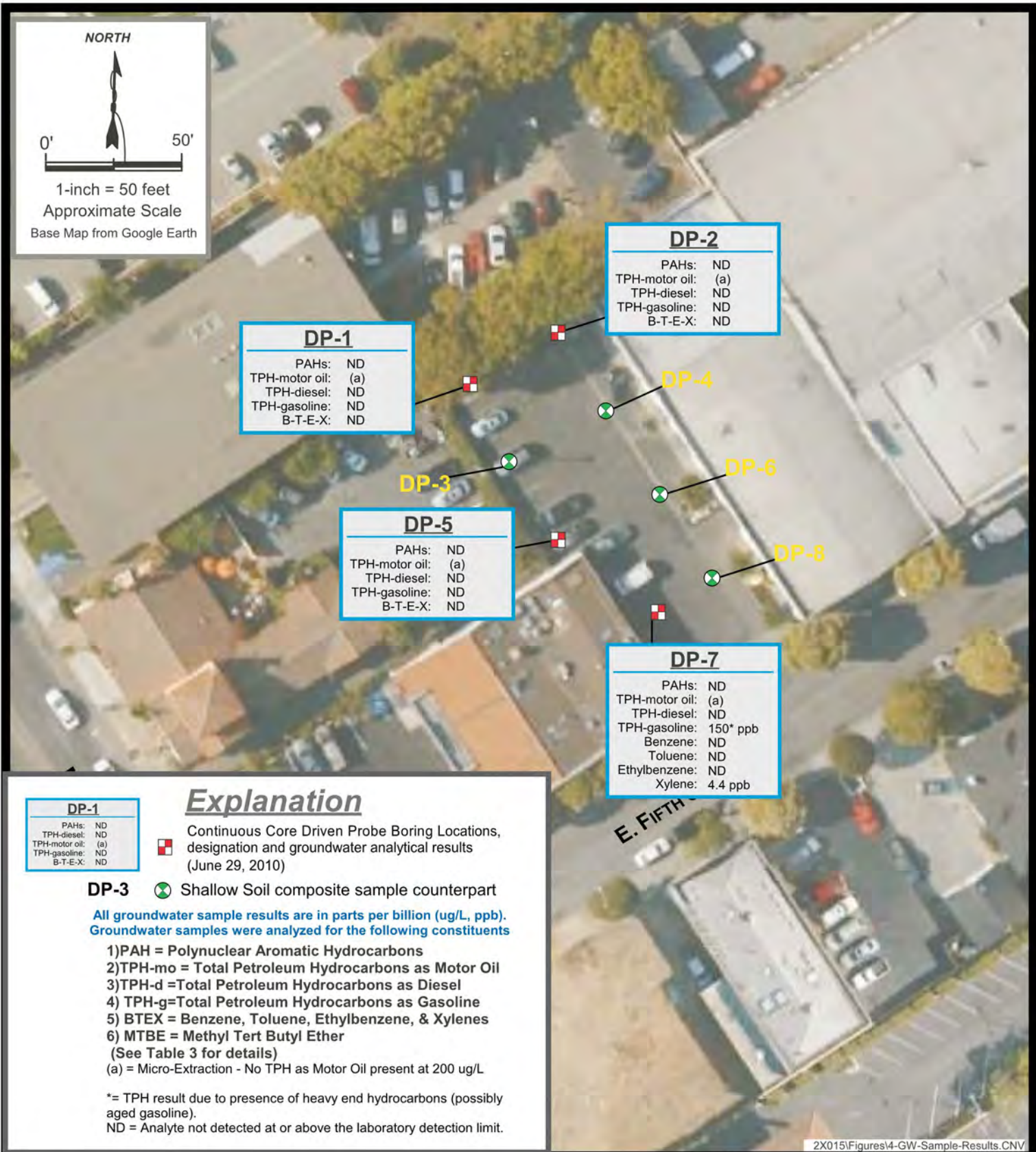


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**Soil Sample Analytical Results**  
June 29, 2010  
Oneto Propety  
25 East Fifth Street, Watsonville, California

Figure  
3  
Job #  
2X015





<b>DP-1</b>	
PAHs:	ND
TPH-diesel:	ND
TPH-motor oil:	(a)
TPH-gasoline:	ND
B-T-E-X:	ND

### Explanation

Continuous Core Driven Probe Boring Locations, designation and groundwater analytical results (June 29, 2010)

**DP-3** Shallow Soil composite sample counterpart

All groundwater sample results are in parts per billion (ug/L, ppb). Groundwater samples were analyzed for the following constituents

- 1) PAH = Polynuclear Aromatic Hydrocarbons
  - 2) TPH-mo = Total Petroleum Hydrocarbons as Motor Oil
  - 3) TPH-d = Total Petroleum Hydrocarbons as Diesel
  - 4) TPH-g = Total Petroleum Hydrocarbons as Gasoline
  - 5) BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
  - 6) MTBE = Methyl Tert Butyl Ether
- (See Table 3 for details)
- (a) = Micro-Extraction - No TPH as Motor Oil present at 200 ug/L

\*= TPH result due to presence of heavy end hydrocarbons (possibly aged gasoline).  
 ND = Analyte not detected at or above the laboratory detection limit.

2X015\Figures\4-GW-Sample-Results.CNV



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**Groundwater Sample Analytical Results**  
 June 29, 2010  
 Oneto Propety  
 25 East Fifth Street, Watsonville, California

**Figure 4**  
 Job # 2X015

## **Tables and Figures**

### ***Additional Site Assessment***

Weber, Hayes and Associates, dated November 23, 2016  
(includes updated Tables 4, 5 & 6 with follow-up Semi-Annual Grab Groundwater and Soil Vapor Sample Results)



**Table 1: Soil - PAH Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**  
*All soil results are in milligrams per Kilogram (mg/Kg)*

Sample Information			Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C-SIM																Benzo[a]pyrene Equivalent		
Sample ID	Sample Date	Depth (ft)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[g,h,i] perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo[a]pyrene	Benzo[a]anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Indeno [1,2,3-cd] pyrene			
B-1	5/3/2016	0.5	1.96	4.7	19.5	6.87	53	7.47	7.21	56.7	48.2	19.4	26.5	22.2	6.47	22.1	2.86	6.28	28.626		
		1.5	0.00152 J	0.00173 J	0.0133	0.0524	0.0587	0.00397 J	0.00688 J	0.0352	0.0747	0.0696	0.0536	0.0688	0.0247	0.0503	0.0126	0.038	0.101		
		4	< 0.000674	< 0.000674	< 0.000674	0.00156 J	0.00155 J	< 0.000674	< 0.00225	0.00256 J	0.00191 J	0.00146 J	0.00157 J	0.00211 J	0.000698 J	0.00167 J	< 0.00674	0.00116 J	0.005		
B-2	5/3/2016	0.5	< 0.000638	0.00165 J	0.00168 J	0.00278 J	0.00746 J	< 0.000638	< 0.00213	0.00246 J	0.00953	0.00568 J	0.00672	0.006 J	0.00199 J	0.00549 J	0.000967 J	0.0022 J	0.008		
		1.5	< 0.000642	< 0.000642	0.00257 J	0.00701	0.0207	< 0.000642	0.00412 J	0.0126	0.0197	0.0135	0.0153	0.0175	0.00455 J	0.0156	0.00244 J	0.00591 J	0.020		
		4	< 0.000687	< 0.000687	0.000733 J	< 0.000687	0.00206 J	< 0.000687	< 0.00229	0.00233 J	0.00225 J	0.000846 J	0.00136 J	0.000857 J	< 0.000687	0.000919 J	< 0.000687	< 0.000687	0.001		
B-3	5/4/2016	0.5	< 0.00631	< 0.00631	< 0.00631	0.00758 J	0.0103 J	< 0.00631	< 0.0210	0.00897 J	0.0125 J	0.00856 J	0.00967 J	0.0107 J	< 0.00631	0.00787 J	< 0.00631	< 0.00631	0.014		
		1.5	0.000810 J	0.00110 J	0.0112	0.00789	0.0367	0.00317 J	0.00727 J	0.0313	0.0426	0.0195	0.0253	0.0182	0.00536 J	0.0212	0.003 J	0.00641 J	0.028		
		4	< 0.000678	< 0.000678	< 0.000678	< 0.000678	< 0.000678	< 0.000678	< 0.00226	< 0.000678	< 0.000678	< 0.00678	< 0.000678	< 0.000678	< 0.000678	< 0.000678	< 0.000678	< 0.000678	< 0.000678	0.004	
		10	< 0.000679	< 0.000679	< 0.000679	< 0.000679	< 0.000679	< 0.000679	0.00227 J	< 0.000679	< 0.000679	< 0.000679	< 0.000679	< 0.000679	< 0.000679	< 0.000679	< 0.000679	< 0.000679	< 0.000679	0.001	
		15	< 0.000687	< 0.000687	< 0.000687	0.000929 J	< 0.000687	< 0.000687	0.00758 J	0.000956 J	< 0.000687	0.000742 J	< 0.000687	0.00096 J	< 0.000687	< 0.000687	< 0.000687	< 0.000687	< 0.000687	0.000689 J	0.001
		20	< 0.000685	< 0.000685	< 0.000685	< 0.000685	< 0.000685	< 0.000685	0.00334 J	< 0.000685	< 0.000685	< 0.000685	< 0.000685	< 0.000685	< 0.000685	< 0.000685	< 0.000685	< 0.000685	< 0.000685	< 0.000685	0.001
B-4	5/3/2016	0.5	< 0.000627	< 0.000627	< 0.000627	0.00107 J	0.00160 J	< 0.000627	0.00311 J	0.000664 J	0.00217 J	0.00141 J	0.00151 J	0.0016 J	< 0.000627	0.00104 J	< 0.000627	0.000771 J	0.002		
		1.5	0.00110 J	0.00324 J	0.0467	0.0699	0.27	0.00477 J	0.0198 J	0.109	0.291	0.169	0.216	0.199	0.067	0.19	0.0323	0.0666	0.258		
		4	< 0.000664	< 0.000664	< 0.000664	< 0.000664	< 0.000664	< 0.000664	0.00270 J	0.00259 J	0.000719 J	< 0.000664	< 0.000664	0.000763 J	< 0.000664	0.000673 J	< 0.000664	< 0.000664	0.001		
Reported Detection Limit (RDL) :			0.006	0.006	0.006	0.006	0.006	0.006	0.02	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	—		
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Shallow Soils < 9.8 ft)			16	13	2.8	2.5	60	8.9	0.033	11	85	0.016	0.16	0.16	1.6	1.6	1.6	0.016	0.16	0.016 / 0.29*	
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Deep Soils > 9.8 ft)			16	13	2.8	2.5	60	8.9	0.033	11	85	0.016	0.16	0.16	1.6	1.6	1.6	0.016	0.16	0.016 / 0.29*	
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> Residential / Commercial			3,600	—	18,000	—	3,400	2,400	3.6	—	1,800	0.016	0.16	0.16	1.6	15	290	0.016	0.16	0.016 / 0.29*	



**Table 1: Soil - PAH Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**  
*All soil results are in milligrams per Kilogram (mg/Kg)*

Sample Information			Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C-SIM															Benzo[a]pyrene Equivalent											
Sample ID	Sample Date	Depth (ft)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[g,h,i] perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo[a]pyrene	Benzo[a]anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene		Indeno [1,2,3-cd] pyrene										
B-5	5/3/2016	0.5	< 0.000632	< 0.000632	0.00360 J	0.00862	0.0194	0.00128 J	0.00356 J	0.0109	0.0257	0.0115	0.0104	0.0112	0.00475 J	0.00969	0.00189 J	0.00615 J	0.017										
		1.5	0.000894 J	0.000661 J	0.0211	0.058	0.127	0.00309 J	0.0100 J	0.0397	0.129	0.126	0.128	0.152	0.0419	0.11	0.0257	0.0546	0.190										
		4	0.000727 J	< 0.000680	0.000868 J	0.00147 J	0.00152 J	< 0.000680	0.00340 J	0.00545 J	0.00169 J	0.00132 J	0.00138 J	0.00218 J	0.000793 J	0.00181 J	< 0.00068	0.00119 J	0.002										
		10	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	0.00336 J	0.00143 J	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	0.001									
		15	< 0.000693	< 0.000693	< 0.000693	< 0.000693	< 0.000693	< 0.000693	0.00297 J	0.000768 J	0.000981 J	< 0.000693	< 0.000693	< 0.000693	< 0.000693	< 0.000693	< 0.000693	< 0.000693	< 0.000693	0.001									
		20	< 0.000749	< 0.000749	< 0.000749	< 0.000749	< 0.000749	< 0.000749	0.00532 J, B	< 0.000749	< 0.000749	< 0.000749	< 0.000749	< 0.000749	< 0.000749	< 0.000749	< 0.000749	< 0.000749	< 0.000749	< 0.000749	0.001								
B-6	5/3/2016	0.5	< 0.000669	0.00102 J	0.0113	0.0274 J3	0.0566 J3, J5	0.00227 J	0.0105 J, B	0.0196 J3, J5	0.0660 J3, J5	0.0471 J3, J5	0.0466 J3, J5	0.047 J3, J5	0.0184	0.0478 J3	0.00961 J3	0.0185 J3	0.070										
		1.5	0.00143 J	0.00214 J	0.0191	0.0422	0.113	0.00523 J	0.0175 J, B	0.0346	0.15	0.124	0.129	0.13	0.0494	0.109	0.0177	0.0426	0.178										
		4	< 0.000684	< 0.000684	< 0.000684	< 0.000684	< 0.000684	< 0.000684	0.00439 J, B	0.000703 J	< 0.000684	< 0.000684	< 0.000684	< 0.000684	< 0.000684	< 0.000684	< 0.000684	< 0.000684	< 0.000684	0.001									
B-7	5/3/2016	0.5	< 0.000618	< 0.000618	< 0.000618	0.00136 J	< 0.000618	< 0.000618	0.0118 J, B	< 0.000618	0.000945 J	0.000794 J	< 0.000618	0.00118 J	< 0.000618	0.000652 J	0.000683 J	< 0.000618	0.002										
		1.5	0.188 J	0.431	3.46	4.49	17.8	1	1.17 J, B	7.77	21.9	11.8	13.7	11	4.53	11.4	1.52	4.11	16.768										
		4	< 0.000655	< 0.000655	< 0.000655	< 0.000655	0.00121 J	< 0.000655	< 0.000655	< 0.00218	0.000923 J	0.00187 J	< 0.000655	0.00112 J	0.00189 J	< 0.000655	0.00287 J	< 0.000655	< 0.000655	0.001									
B-8	5/3/2016	0.5	< 0.000617	< 0.000617	< 0.000617	< 0.000617	< 0.000617	< 0.000617	0.00242 J, B	< 0.000617	< 0.000617	< 0.000617	0.000657 J	< 0.000617	< 0.000617	< 0.000617	< 0.000617	< 0.000617	0.001										
		1.5	0.0705 J	0.0842 J	1.56	1.2	6.83	0.32	0.123 J, B	2.67	7.53	3.69	5.2	3.58	1.47	4.22	0.436	1.06	5.399										
		4	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.00233	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	0.001									
		10	< 0.000633	< 0.000633	0.00162 J	< 0.000633	0.00350 J	< 0.000633	0.00267 J, B	0.00332 J	0.00454 J	0.00143 J	0.00196 J	0.00151 J	0.000711 J	0.00123 J	< 0.000633	< 0.000633	< 0.000633	0.002									
		15	0.273	0.0922	0.441	0.036	0.459	0.199	0.0115 J, B	1.01	0.508	0.138	0.22	0.127	0.0459	0.163	0.0146	0.0355	0.197										
		17	8.42	6.14	21	1.74	27.4	26.5	138	45.4	27	7.44	12.7	6.54	3.04	8.91	0.736	1.69	10.662										
		20	0.0221	0.0452	0.0876	0.000754 J	0.0487	0.0881	0.156	0.14	0.0542	0.00709	0.0177	0.00547 J	0.00357 J	0.00753	< 0.000684	0.000941 J	0.010										
		23	0.0384	0.0366	0.00631 J	< 0.000736	0.00102 J	0.00797	0.0184 J, B	0.027	< 0.000736	< 0.000736	< 0.000736	< 0.000736	< 0.000736	< 0.000736	< 0.000736	< 0.000736	< 0.000736	0.001									
Reported Detection Limit (RDL) :			0.006	0.006	0.006	0.006	0.006	0.006	0.02	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006										
Water Board Environmental Screening Levels (ESL) Residential / Commercial (Shallow Soils < 9.8 ft.)			16	16	13	13	2.8	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*
Water Board Environmental Screening Levels (ESL) Residential / Commercial (Deep Soils > 9.8 ft.)			16	16	13	13	2.8	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*
USEPA Region 9 Regional Screening Levels (RSLs) Residential / Commercial			3,600	45,000	—	—	18,000	230,000	—	—	2,400	30,000	2,400	50,000	3.8	17	—	—	1,800	23,000	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*



**Table 1: Soil - PAH Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**  
*All soil results are in milligrams per Kilogram (mg/Kg)*

Sample Information			Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C-SIM																Benzo[a]pyrene Equivalent												
Sample ID	Sample Date	Depth (ft)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[g,h,i] perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo[a]pyrene	Benzo[a]anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Indeno [1,2,3-cd] pyrene													
B-9	5/3/2016	0.5	< 0.000619	< 0.000619	0.00209 J	0.0188	0.0258	< 0.000619	0.00389 J, B	0.00297 J	0.035	0.0284	0.0207	0.0243	0.0111	0.0195	0.0038 J	0.0141	0.039												
		1.5	0.843 J	1.25 J	22.8	15.1	128	2.81	3.12 J, B	19.3	145	61	106	55.2	26.6	74.4	7.83	15.4	89.894												
		4	0.783	0.464 J	7.73	7.51	69	1.23	0.440 J, B	1.95	76.6	25.3	43.8	26.9	11	31.5	3.45	7.48	37.983												
	8/18/2016	6	0.0764	1.10	0.877	1.00	5.38	0.231	< 0.0226	1.15	7.66	2.81	4.2	2.8	1.19	2.99	0.442	0.989	4.200												
		8	0.0498 J	0.0784	0.545	0.341	2.06	0.35	0.115 J	0.895	2.66	1.15	1.57	1.16	0.48	1.19	0.189	0.308	1.703												
B-10	5/3/2016	0.5	0.00409 J	0.0132 J	0.083	0.21	0.657	0.0162 J	0.0277 J, B	0.34	0.881	0.352	0.34	0.318	0.103	0.315	0.0452	0.167	0.493												
		1.5	0.0471 J	0.0987 J	1.24	3.03	9.82	0.226 J	0.364 J, B	0.97	11.5	9.4	13.5	11.1	3.97	10.8	1.34	3.08	14.013												
		4	< 0.000662	< 0.000662	0.000837 J	0.00154 J	0.00195 J	< 0.000662	< 0.00221	0.00103 J	0.00256 J	0.00133 J	0.00158 J	0.00268 J	0.000946 J	0.00201 J	< 0.000662	0.00132 J	0.002												
B-11	5/4/2016	0.5	< 0.000629	< 0.000629	0.000952 J	0.00136 J	0.00320 J	< 0.000629	< 0.00210	0.00217 J	0.00392 J	0.00203 J	0.00246 J	0.00227 J	0.000721 J	0.00227 J	< 0.000629	0.000803 J	0.003												
		1.5	0.157	0.145	1.69	1.11	5.7	0.567	0.5	4.04	6.69	3.22	4.27	3.63	0.986	3.54	0.535	1.03	4.782												
		4	< 0.000683	< 0.000683	< 0.000683	0.00108 J	0.00124 J	< 0.000683	< 0.00228	0.000703 J	0.00155 J	0.00139 J	0.00148 J	0.00175 J	< 0.000683	0.00108 J	< 0.000683	0.000865 J	0.002												
		10	< 0.000653	< 0.000653	< 0.000653	< 0.000653	0.000891 J	0.00214 J	< 0.00218	0.00175 J	0.00117 J	< 0.000653	0.000973 J	< 0.000653	< 0.000653	0.000734 J	< 0.000653	< 0.000653	< 0.000653	0.001											
		15	0.0137	0.0269	0.0199	< 0.000699	0.00682 J	0.0364	0.00879 J	0.053	0.00564 J	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	< 0.000699	0.001											
		20	0.00650 J	0.0176	0.00173 J	< 0.000734	< 0.000734	0.0124	0.0602	0.00363 J	< 0.000734	< 0.000734	< 0.000734	< 0.000734	< 0.000734	< 0.000734	< 0.000734	< 0.000734	< 0.000734	0.001											
		24	0.0111	0.013	0.00708 J	< 0.000719	0.00571 J	0.0379	0.0116 J	0.0117	0.00654 J	< 0.000719	< 0.000719	< 0.000719	< 0.000719	< 0.000719	< 0.000719	< 0.000719	< 0.000719	0.001											
		28	< 0.000694	< 0.000694	< 0.000694	< 0.000694	< 0.000694	< 0.000694	< 0.00231	< 0.000694	< 0.000694	< 0.000694	< 0.000694	< 0.000694	< 0.000694	< 0.000694	< 0.000694	< 0.000694	< 0.000694	0.001											
Reported Detection Limit (RDL) :			0.006	0.006	0.006	0.006	0.006	0.006	0.02	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006												
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Shallow Soils < 9.8 ft)			16	16	13	13	2.8	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	35	35	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*
Water Board Environmental Screening Levels <sup>(2)</sup> Residential / Commercial (Deep Soils > 9.8 ft)			16	16	13	13	2.8	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	35	35	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(3)</sup> Residential / Commercial			3,600	45,000	--	18,000	230,000	--	3,400	30,000	2,400	30,000	3.8	17	--	1,800	23,000	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*	



**Table 1: Soil - PAH Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**  
*All soil results are in milligrams per Kilogram (mg/Kg)*

Sample Information			Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C-SIM															Benzo[a]pyrene Equivalent															
Sample ID	Sample Date	Depth (ft)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[g,h,i] perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo[a]pyrene	Benzo[a]anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene		Indeno [1,2,3-cd] pyrene														
B-12	5/3/2016	0.5	< 0.00670	< 0.00670	< 0.00670	0.0170 J	0.0102 J	< 0.00670	< 0.0223	0.00830 J	0.0150 J	0.0124 J	0.011 J	0.0166 J	< 0.00067	0.00914 J	< 0.00067	0.00739 J	0.016														
		1.5	< 0.000708	< 0.000708	0.00140 J	0.00435 J	0.007 J	< 0.000708	0.00302 J	0.00510 J	0.00832	0.00765 J	0.00687 J	0.00871	0.00293 J	0.00735	0.00135 J	0.00352 J	0.011														
		4	< 0.000670	< 0.000670	< 0.000670	< 0.000670	< 0.000670	< 0.000670	< 0.000670	< 0.0223	< 0.000670	< 0.000670	< 0.00067	< 0.00067	< 0.00067	< 0.00067	< 0.00067	< 0.00067	< 0.00067	0.001													
B-13	5/3/2016	0.5	< 0.000620	< 0.000620	0.00116 J	0.00994	0.0106	< 0.000620	< 0.00207	0.00166 J	0.0166	0.0109	0.0076	0.0113	0.00403 J	0.00781 J	0.00153 J	0.00699	0.016														
		1.5	< 0.000784	< 0.000784	< 0.000784	< 0.000784	0.00154 J	0.00154 J	< 0.00261	0.00574 J	0.00156 J	< 0.000784	0.00124 J	0.000972 J	< 0.000784	0.00132 J	< 0.000784	< 0.000784	< 0.000784	0.001													
		4	< 0.000675	< 0.000675	< 0.000675	< 0.000675	< 0.000675	< 0.000675	< 0.000675	< 0.00225	< 0.000675	< 0.000675	< 0.000675	< 0.000675	< 0.000675	< 0.000675	< 0.000675	< 0.000675	< 0.000675	0.001													
B-14	5/3/2016	0.5	< 0.0313	< 0.0313	0.0543 J	0.0665 J	0.179 J	< 0.0313	< 0.104	0.136 J	0.215 J	0.11 J	0.144 J	0.115 J	0.0362 J	0.138 J	< 0.0313	0.0362 J	0.160														
		1.5	< 0.000731	< 0.000731	< 0.000731	0.00487 J	0.00244 J	< 0.000731	0.00375 J	0.00634 J	0.00321 J	0.00206 J	0.00181 J	0.00313 J	0.000816 J	0.00355 J	< 0.000731	0.00164 J	0.003														
		4	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.00220	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	< 0.000661	0.001													
		10	< 0.000680	< 0.000680	< 0.000680	< 0.000680	< 0.000680	< 0.000680	< 0.00227	< 0.000680	< 0.000680	< 0.000680	< 0.00068	< 0.00068	< 0.00068	< 0.00068	< 0.00068	< 0.00068	< 0.00068	0.001													
		15	< 0.000705	< 0.000705	< 0.000705	< 0.000705	< 0.000705	< 0.000705	< 0.00235	< 0.000705	< 0.000705	< 0.000705	< 0.000705	< 0.000705	< 0.000705	< 0.000705	< 0.000705	< 0.000705	< 0.000705	0.001													
		20	< 0.000653	< 0.000653	< 0.000653	< 0.000653	< 0.000653	< 0.000653	0.000902 J	0.00518 J	0.00122 J	< 0.000653	< 0.000653	< 0.000653	< 0.000653	< 0.000653	< 0.000653	< 0.000653	< 0.000653	< 0.000653	0.001												
B-15	5/3/2016	0.5	< 0.000719	< 0.000719	< 0.000719	< 0.000719	< 0.000719	< 0.000719	0.00356 J	0.00207 J	0.000796 J	< 0.000719	< 0.000719	< 0.000719	< 0.000719	< 0.000719	< 0.000719	< 0.000719	0.001														
		1.5	< 0.000727	< 0.000727	< 0.000727	< 0.000727	< 0.000727	< 0.000727	< 0.00242	< 0.000727	< 0.000727	< 0.000727	< 0.000727	< 0.000727	< 0.000727	< 0.000727	< 0.000727	< 0.000727	< 0.000727	0.001													
		4	< 0.000691	< 0.000691	< 0.000691	< 0.000691	< 0.000691	< 0.000691	< 0.000691	0.00470 J	0.00102 J	< 0.000691	< 0.000691	< 0.000691	< 0.000691	< 0.000691	< 0.000691	< 0.000691	< 0.000691	0.001													
Reported Detection Limit (RDL) :			0.006	0.006	0.006	0.006	0.006	0.006	0.02	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	--													
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Shallow Soils < 9.8 ft)			16	16	13	13	2.8	2.8	2.8	3.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Deep Soils > 9.8 ft)			16	16	13	13	2.8	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> Residential / Commercial			3,600	45,000	--	--	18,000	230,000	--	--	2,400	30,000	2,400	30,000	3.8	17	--	--	1,800	23,000	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*



**Table 1: Soil - PAH Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**  
*All soil results are in milligrams per Kilogram (mg/Kg)*

Sample Information			Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C-SIM																Benzo[a]pyrene Equivalent										
Sample ID	Sample Date	Depth (ft)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[g,h,i] perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo[a]pyrene	Benzo[a]anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Indeno [1,2,3-cd] pyrene											
P-1	5/5/2016	0.5	< 0.000620	< 0.000620	< 0.000620	< 0.000620	< 0.000620	< 0.000620	< 0.00207	< 0.000620	< 0.000620	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	0.001										
		1.5	< 0.000721	< 0.000721	0.00125 J	0.00198 J	0.00578 J	< 0.000721	0.00274 J	0.00160 J	0.00848	0.00464 J	0.00488 J	0.00529 J	0.00167 J	0.00427 J	< 0.000721	0.00149 J	0.00149 J	0.006									
P-2	5/5/2016	0.5	< 0.000631	< 0.000631	< 0.000631	< 0.000631	0.00102 J	< 0.000631	0.00215 J	0.000732 J	0.00150 J	0.000872 J	0.00108 J	0.001 J	< 0.000631	0.000784 J	< 0.000631	< 0.000631	0.001										
		1.5	0.119 J	0.674	2.52	6.32	13.9	0.705	2.61	3.62	18.9	12.8	12.2	13.2	4.53	10.6	1.73	5.27	18.156										
	8/18/2016	4	0.259	9.1	6.17	7.27	32.7	1.47	10	5.23	47.4	20.3	27.8	19.9	5.43	20.7	3.74	7.14	30.274										
		6	0.134	2.39	2.69	1.07	8.34	0.693	0.683	4.19	7.54	3.3	5.25	3.43	1.04	4.24	0.439	1.03	4.856										
		8	4.68	7.58	14.4	0.988	13.4	16	55.9	26.1	13.5	3.84	6.72	3.33	0.925	4.85	0.409	0.932	5.488										
		12	2.32	2.51	6.46	0.385	5.88	8.12	34.6	11.9	5.14	1.58	2.63	1.31	0.467	1.88	0.152	0.346	2.226										
		15.5	0.262	0.676	0.853	0.0801	0.684	1.01	3.59	1.52	0.778	0.235	0.399	0.221	0.0612	0.297	0.0318	0.071	0.345										
		18	2.26	3.92	6.9	0.694	6.48	8.56	40.8	11.9	6.58	2.09	3.81	1.82	0.723	2.62	0.284	0.628	3.098										
P-3	5/5/2016	0.5	< 0.000629	< 0.000629	< 0.000629	< 0.000629	0.00139 J	< 0.000629	< 0.00210	< 0.000629	0.00216 J	0.0013 J	0.00136 J	0.00154 J	< 0.000629	0.00097 J	< 0.000629	< 0.000629	0.002										
		1.5	< 0.000772	< 0.000772	< 0.000772	< 0.000772	0.00147 J	< 0.000772	0.00388 J	0.00198 J	0.00218 J	0.000937 J	0.00129 J	0.00126 J	< 0.000772	0.00103 J	< 0.000772	< 0.000772	0.002										
P-4	5/5/2016	0.5	< 0.000711	0.00123 J	0.00696 J	0.0223	0.0822	0.00172 J	0.00857 J	0.0296	0.0943	0.0494	0.0478	0.0583	0.0217	0.053	0.00645 J	0.0189	0.071										
		1.5	< 0.000678	< 0.000678	< 0.000678	0.00209 J	0.00479 J	< 0.000678	0.00355 J	0.00432 J	0.00595 J	0.00329 J	0.00324 J	0.00434 J	0.00146 J	0.00406 J	< 0.000678	0.0015 J	0.005										
P-7	5/5/2016	0.5	< 0.000733	< 0.000733	0.000804 J	0.00303 J	0.00452 J	< 0.000733	0.00446 J	0.00797	0.00607 J	0.0045 J	0.00374 J	0.00609 J	0.00138 J	0.00536 J	0.000834 J	0.00214 J	0.007										
		1.5	< 0.000683	< 0.000683	< 0.000683	< 0.000683	0.000687 J	< 0.000683	0.00309 J	0.000713 J	0.000802 J	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	0.001									
Reported Detection Limit (RDL) :			0.006	0.006	0.006	0.006	0.006	0.006	0.02	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	---									
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Shallow Soils < 9.8 ft.)			16	16	13	13	2.8	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*
Water Board Environmental Screening Levels <sup>(2)</sup> Residential / Commercial (Deep Soils > 9.8 ft.)			16	16	13	13	2.8	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(3)</sup> Residential / Commercial			3,600	45,000	--	--	18,000	230,000	--	2,400	30,000	2,400	30,000	3.8	17	--	1,800	23,000	0.036	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*



**Table 1: Soil - PAH Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**  
*All soil results are in milligrams per Kilogram (mg/Kg)*

Sample Information			Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C-S/M																Benzo[a]pyrene Equivalent														
Sample ID	Sample Date	Depth (ft)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[g,h,i] perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo[a]pyrene	Benzo[a]anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Indeno [1,2,3-cd] pyrene															
DG-1	8/18/2016	0.5	0.0395	0.0921	0.194	0.96	1.01	0.0429	0.282	0.423	1.18	1.56	1.16	1.3	0.532	1.02	0.302	0.818	2.253														
		1.5	0.0411 J	0.066	0.61	1.42	2.43	0.181	0.113	1.14	2.26	1.72	1.34	1.6	0.568	1.29	0.312	1.04	2.500														
		4	0.0308 J	0.673	0.621	1.51	2.91	0.122	0.14	0.547	3.28	2.54	2.72	2.42	0.973	2.11	0.43	1.22	3.724														
		6	< 0.000682	< 0.000682	< 0.000682	< 0.000682	< 0.000682	< 0.000682	0.00288 J	0.000714 J	< 0.000682	< 0.000682	< 0.000682	< 0.000682	< 0.000682	< 0.000682	< 0.000682	< 0.000682	< 0.000682	0.001													
		8	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.00226	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	0.001												
DG-2	8/18/2016	0.5	0.0174 J	0.0801	0.152	0.172	0.498	0.0549	0.0366 J	0.334	0.568	0.286	0.325	0.295	0.0899	0.261	0.0482	0.141	0.422														
		1.5	0.00181 J	0.00328 J	0.0104	0.00449 J	0.0242	0.00711 J	0.00927 J	0.0311	0.0203	0.00855	0.0114	0.00974	0.00265 J	0.0112	0.00153 J	0.00342 J	0.013														
		4	< 0.000686	< 0.000686	< 0.000686	< 0.000686	0.00108 J	< 0.000686	0.00347 J	0.00169 J	0.00109 J	< 0.000696	0.000932 J	0.000753 J	< 0.000686	< 0.000686	< 0.000686	< 0.000686	< 0.000686	0.001													
		6	< 0.000665	< 0.000665	0.00229 J	0.00226 J	0.00763	< 0.000665	0.00306 J	0.00524 J	0.0071	0.00381 J	0.00424 J	0.00395 J	0.00171 J	0.00467 J	0.000667 J	0.00166 J	0.00166 J	0.006													
		8	< 0.000659	< 0.000659	0.00209 J	0.00218 J	0.00854	0.00125 J	< 0.00220	0.00458 J	0.00650 J	0.0033 J	0.00368 J	0.00367 J	0.00149 J	0.00261 J	0.000678 J	0.00152 J	0.00152 J	0.005													
Reported Detection Limit (RDL) :			0.006	0.006	0.006	0.006	0.006	0.006	0.02	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	...													
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Shallow Soils < 9.8 ft)			16	16	13	13	2.6	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	3.8	3.8	0.016	0.29	0.16	2.9	0.016 / 0.29*
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Deep Soils > 9.8 ft)			16	16	13	13	2.8	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	3.8	3.8	0.016	0.29	0.16	2.9	0.016 / 0.29*
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> Residential / Commercial			3,600	45,000	...	18,000	230,000	...	2,400	30,000	2,400	30,000	33	17	...	1,800	23,000	0.016	0.29	0.16	2.9	0.16	2.9	16	290	0.016	0.29	0.16	2.9	0.016 / 0.29*			



**Table 1: Soil - PAH Analytical Results  
Additional Site Assessment  
25 East Fifth Street, Watsonville, CA**  
All soil results are in milligrams per Kilogram (mg/Kg)

Sample Information			Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C-S/M															Benzo[a]pyrene Equivalent															
Sample ID	Sample Date	Depth (ft)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[g,h,i] perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo[a]pyrene	Benzo[a]anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene		Indeno[1,2,3-cd]pyrene														
DG-3	8/18/2016	0.5	0.00127 J	0.00249 J	0.0119	0.0325	0.083	0.00514 J	0.00756 J	0.036	0.0663	0.0471	0.0381	0.0553	0.0164	0.0444	0.00869	0.0266	0.070														
		1.5	0.00121 J	0.00299 J	0.00648 J	0.00406 J	0.0184	0.00428 J	0.00487 J	0.0235	0.016	0.00713 J	0.00905	0.00847	0.00232 J	0.0108	0.00134 J	0.00319 J	0.011														
		4	< 0.000667	< 0.000667	< 0.000667	0.000845 J	0.00340 J	< 0.000667	0.00273 J	0.00132 J	0.00297 J	0.00176 J	0.00234 J	0.00201 J	< 0.000667	0.00196 J	< 0.000667	0.000732 J	0.006														
		6	< 0.000664	< 0.000664	< 0.000664	0.000665 J	< 0.000664	< 0.000664	< 0.00221	0.000792 J	0.000954 J	< 0.000664	0.000673 J	< 0.000664	< 0.000664	< 0.000664	< 0.000664	< 0.000664	< 0.000664	0.001													
		8	< 0.000675	< 0.000675	< 0.000675	0.00123 J	0.00184 J	< 0.000675	< 0.00225	0.00151 J	0.00231 J	0.00104 J	0.00137 J	0.00117 J	< 0.000675	0.00127 J	< 0.000675	0.000751 J	0.002														
DG-4	8/18/2016	0.5	< 0.00125	< 0.00125	0.00181 J	0.00250 J	0.00221 J	0.00187 J	< 0.00416	0.00325 J	0.00286 J	0.00194 J	0.00211 J	0.00232 J	< 0.00125	0.00181 J	0.00182 J	0.00146 J	0.004														
		1.5	< 0.000626	< 0.000626	0.00161 J	0.00276 J	0.00722	0.000842 J	0.00344 J	0.00217	0.00766	0.00576 J	0.00575 J	0.00588 J	0.00189 J	0.00464 J	0.000992 J	0.00229 J	0.008														
		4	< 0.000688	< 0.000688	0.00138 J	< 0.000688	0.00200 J	0.00187 J	0.00751 J	0.00355 J	0.00179 J	0.000804 J	0.00142 J	< 0.000688	< 0.000688	0.000967 J	< 0.000688	< 0.000688	0.001														
		6	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.00228	0.000866 J	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	< 0.000683	0.001														
		8	< 0.000678	< 0.000678	< 0.000678	0.00156 J	< 0.000678	< 0.000678	0.00246 J	0.00137 J	0.000970 J	0.000722 J	< 0.000678	0.00131 J	< 0.000678	< 0.000678	0.000797 J	< 0.000678	0.002														
Reported Detection Limit (RDL) :			0.006	0.006	0.006	0.006	0.006	0.006	0.02	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006														
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Shallow Soils < 9.8 ft)			16	16	13	13	2.6	2.8	3.5	3.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*
Water Board Environmental Screening Levels <sup>(1)</sup> Residential / Commercial (Deep Soils > 9.8 ft)			16	16	13	13	2.8	2.8	2.5	2.5	60	60	8.9	8.9	0.033	0.033	11	11	85	85	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*		
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> Residential / Commercial			3,600	45,000	—	—	18,000	230,000	—	—	2,400	30,000	2,400	30,000	3.8	17	—	—	1,800	23,000	0.016	0.29	0.16	2.9	0.16	2.9	0.16	2.9	0.16	2.9	0.016 / 0.29*		
Notes																	DTSC PAH Study (2009) <sup>(3)</sup> Northern California 95th Percentile BaP Equivalent	0.9															

**1 = Environmental Screening Levels (ESLs):** from User's Guide: Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, set by the San Francisco Bay Regional Water Quality Control Board (February 2016). <[http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/ESL/ESL%20Workbook\\_ESLs\\_PDF\\_Rev2.pdf](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/ESL/ESL%20Workbook_ESLs_PDF_Rev2.pdf)> The ESLs are intended to provide quantitative risk-based guidance on whether further assessment or remediation of contamination is warranted. The ESLs used in this table were obtained from the above referenced document, Table A. Shallow Soils (<3m).

**2 = Regional Screening Levels (RSLs):** from the USEPA Region 9 RSL Tables (updated November 2015) <<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-november-2015>>, revised Nov 2015. The RSLs are risk-based screening levels used for screening sites, calculating risk factors and potentially as cleanup goals once a site has been characterized.

**3 = DTSC Advisory - Use of the Northern and Southern California Polynuclear Aromatic Hydrocarbon (PAH) Studies in the Manufactured Gas Plant Site Cleanup Process (July 1, 2009):** Page 8, Establishing a Practical Target to Guide Soil Excavation/Remediation: A value of 0.9 milligrams per kilogram (mg/Kg) in BaP equivalents can be used as a pragmatic target for guiding soil excavation/remediation. This value corresponds to upper bounds of the ambient data sets. Experience at various MGP site has shown that removal/remediation of soil areas and hotspots exceeding 0.9 mg/Kg BaP equivalents is a reasonably conservative guide for the main phase of excavation/remediation activities.

**Benzo(a)pyrene Equivalent** = Sum of detection values for; Benzo(a)pyrene, Benzo(a)anthracene x 0.1, Benzo(b)fluoranthene x 0.1, Benzo(k)fluoranthene x 0.1, Chrysene x 0.01, Dibenzo[a,h]anthracene, and Indeno[1,2,3-cd]pyrene x 0.1

\* = There is no ESL value for B(a)P equivalent. Results compared against screening values for Benzo(a)pyrene for reference only.

< X = Constituent not detected above the laboratory's Method Detection Limit (MDL), X.

J = Laboratory reports that the detection value is between MDL and PQL, and should be considered to be an estimate.

J3 = Laboratory reports that the associated batch QC was outside the established quality control range for precision.

J5 = Laboratory reports that the sample matrix interfered with the ability to make any accurate determination; spike value is high.

B = Laboratory reports that the analyte is found in the associated blank.

^ = Method Detection Limit and Practical Quantitation Limit raised after sample was diluted. Dilutions were necessary due to elevated analyte concentrations or matrix interferences.

**BOLD =** Analytical result for BaP Equivalent exceeds the CA DTSC PAH 2009 Study Limit. Refer to note 3 above.

**BOLD =** Analytical result above Commercial ESL.



**Table 2: Soil - Metal Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**

All soil results are in milligrams per Kilogram (mg/Kg)

Sample Information			CAM-17 Metals by EPA Method 6010 / 7470																		Cyanide by EPA Method 9012		
Sample ID	Sample Date	Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Lead STLC-soluble (mg/L)	Lead TCLP-soluble (mg/L)	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc		
B-1	5/3/2016	0.5	--	--	--	--	--	--	--	--	16.1	--	--	--	--	--	--	--	--	--	--	--	--
		1.5	--	--	--	--	--	--	--	--	--	15.1	--	--	--	--	--	--	--	--	--	--	--
B-2	5/3/2016	0.5	--	--	--	--	--	--	--	--	< 0.202	--	--	--	--	--	--	--	--	--	--	--	--
		1.5	--	--	--	--	--	--	--	--	5.22	--	--	--	--	--	--	--	--	--	--	--	--
B-3	5/4/2016	0.5	< 0.789	< 0.684	26.3	< 0.0736	< 0.0736	1.4	2.63	38.7	1.26	--	--	0.0658	< 0.168	0.765	< 0.778	< 0.295	< 0.684	11.9	9.75 B	0.387	--
		1.5	1.01 J	4.71	247	0.398	0.206 J	15.7	4.68	7.08	11.4	--	--	0.0238	0.87	17.4	< 0.525	< 0.300	< 0.696	22	22.2	< 0.0418	--
		4	< 0.848	1.39 J	121	0.321	0.215 J	18.4	6.75	12.2	4.97	--	--	0.0104 J	< 0.181	15.7	< 0.836	< 0.316	< 0.735	27.4	31.4	0.11	--
B-4	5/3/2016	0.5	< 0.784	< 0.679	38.7	< 0.0732	< 0.0732	1.58	3.66	56.9	1.07	--	--	0.0486	< 0.167	0.998 J	< 0.773	< 0.293	< 0.679	14.9	12.5 B	0.120 J	--
		1.5	< 0.797	2.91	290	0.264	0.151 J	11.5	3.5	5	6.99	--	--	0.0588	0.483 J	13.2	< 0.787	< 0.298	< 0.691	16.2	18.3	0.434	--
B-5	5/3/2016	0.5	--	--	--	--	--	--	--	--	0.834	--	--	--	--	--	--	--	--	--	--	--	--
		1.5	--	--	--	--	--	--	--	--	5.01	--	--	--	--	--	--	--	--	--	--	--	--
		4	< 0.850	2.7	118	0.442	0.267 J	27.6	8.17	15.3	6.77	--	--	0.0222 J	0.302 J	25.2	< 0.839	< 0.318	< 0.737	36.5	44.7	0.105 J	--
		10	< 0.827	1.29 J	1.6	0.438	0.308 J	50.4	6.3	14.7	11.9	--	--	0.0332	< 0.176	38.5	1.61 J	< 0.309	2.02 J	25.2	37.4	< 0.0430	--
		15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.135 J
B-6	5/3/2016	0.5	< 0.836	4.51	206	0.39	0.146 J	17.2	4.46	9.34	8.63	--	--	0.0524	1.41	18.5	< 0.825	< 0.312	< 0.724	23.4	29.4	0.671	--
		1.5	< 0.951	3.97	148	0.588	0.321 J	26.2	11.9	20.8	10.4	--	--	0.0494	< 0.203	41.5	< 0.939	< 0.355	< 0.825	37.6	61.4	0.518	--
B-7	5/3/2016	0.5	< 0.772	< 0.669	33.7	< 0.0720	< 0.0720	2.08	3.47	43.7	0.936	--	--	0.0714	0.213 J	0.929 J	< 0.762	< 0.288	< 0.669	14.6	11.5 B	0.157 J	--
		1.5	< 0.905	5.48	273	0.586	0.642	17.7	11	148	356	6.08	< 0.450	0.163	0.568 J	30.3	1.03 J	< 0.338	< 0.784	28.3	151	5.09	--
		4	< 0.818	4.56	126	0.509	0.296 J	27.5	5.42	12.4	7.34	--	--	0.0437	< 0.175	21.8	< 0.807	< 0.305	< 0.709	32.4	44.7	--	--
Laboratory Reported Detection Limits (RDL):			2	2	0.5	0.2	0.5	1	1	2	0.5	0.0171	0.45	0.02	0.5	2	2	1	2	2	5	0.25	
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Shallow Soils < 9.8 ft, Tier 1 Levels)			31 / 140	0.067 / 0.81 7.48***	2,900 / 3,900	40 / 80	39 / 41	--	11 / 21	3,100 / 34,000	80 / 160	--	--	18 / 42	390 / 1,700	820 / 80	390 / 1,700	380 / 1,700	0.78 / 3.4	860 / 800	23,000 / 100,000	0.0016 / 0.0036	
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Deep Soils > 9.8 ft, Tier 1 Levels)			31 / 140	0.067 / 0.81 7.48***	15,000 / 110,000	150 / 2,000	99 / 680	--	19 / 290	3,100 / 47,000	80 / 160	--	--	18 / 190	390 / 5,800	820 / 11,000	390 / 5,800	390 / 5,800	0.78 / 12	14,000 / 400,000	23,000 / 350,000	0.0016 / 0.0036	
ESLs - Direct Exposure Residential / Industrial																						3.8 / 21	
DTSC - Human and Ecological Risk Office (HERO) Human Health Risk Assessment - Note 3 Residential / Commercial			--	0.067 / 0.81 7.48***	--	15 / 210	5.2 / 7.5	36,000 / 370,000**	--	--	80 / 130	--	--	1.8 / 4.5	--	--	--	390 / 1,500	--	390 / 1,000	--	--	
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> Residential / Commercial			31 / 170	0.58 / 9.0 7.48***	15,000 / 326,000	160 / 5,900	71 / 880	120,000 / 1,800,000**	18 / 450	3,100 / 47,000	80 / 800	--	--	18 / 46	390 / 4,800	--	390 / 5,800	390 / 1,800	--	190 / 4,800	23,000 / 350,000	2.7 / 150	



**Table 2: Soil - Metal Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**

All soil results are in milligrams per Kilogram (mg/Kg)

Sample Information			CAM-17 Metals by EPA Method 6010 / 7470																		Cyanide by EPA Method 9012				
Sample ID	Sample Date	Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Lead STLC-soluble (mg/L)	Lead TCLP-soluble (mg/L)	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc				
B-8	5/3/2016	0.5	--	--	--	--	--	--	--	--	< 0.195	--	--	--	--	--	--	--	--	--	--	--	--		
		1.5	--	--	--	--	--	--	--	--	--	8.47	--	--	--	--	--	--	--	--	--	--	--	--	
		4	--	--	--	--	--	--	--	--	--	7.66	--	--	--	--	--	--	--	--	--	--	--	--	--
		15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	
		17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.318	
		20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0445	
B-9	8/18/2016	0.5	--	--	--	--	--	--	--	--	2.27	--	--	--	--	--	--	--	--	--	--	--	--	--	
		1.5	--	--	--	--	--	--	--	--	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	
		4	--	--	--	--	--	--	--	--	10.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-10	5/3/2016	0.5	--	--	--	--	--	--	--	--	35.9	--	--	--	--	--	--	--	--	--	--	--	--	--	
		1.5	--	--	--	--	--	--	--	--	23.2	--	--	--	--	--	--	--	--	--	--	--	--	--	
		4	--	--	--	--	--	--	--	--	6.77	--	--	--	--	--	--	--	--	--	--	--	--	--	
B-11	5/4/2016	0.5	< 0.786	< 0.681	39.3	< 0.0734	< 0.0734	1.63	3.55	40.7	0.968	--	--	0.0598	< 0.168	0.999 J	< 0.775	< 0.293	< 0.681	19.6	13.5	< 0.0409			
		1.5	< 0.893	5.02	389	0.473	0.825	30.4	9.87	49.1	206	11.4	< 0.450	0.125	0.503 J	36.3	< 0.881	< 0.333	< 0.774	34.6	235	1.11			
		4	< 0.854	2.48	143	0.393	0.228 J	30.1	5.29	12.8	6.43	--	--	0.00944 J	0.263 J	18.6	< 0.843	< 0.319	< 0.740	34.1	40.3	1.58			
		10	< 0.816	2.89	137	0.331	0.242 J	36.8	7.72	6.78	3.79	--	--	0.0415	0.195 J	47	< 0.805	< 0.305	< 0.708	20.6	22.1	1.35			
		15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.338		
		20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.228 J		
		24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0468	
28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0451		
Laboratory Reported Detection Limits (RD):			2	2	0.5	0.2	0.5	1	1	2	0.5	0.0171	0.45	0.02	0.5	2	2	1	2	2	5	0.25			
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Shallow Soils < 5.9 ft, Tier 1 Levels)			31 / 140	0.067 / 0.31 7.48***	2,900 / 3,900	40 / 40	39 / 41	--	13 / 27	3,100 / 14,000	80 / 140	--	--	13 / 41	890 / 1,700	820 / 88	390 / 1,700	390 / 1,700	0.78 / 3.4	600 / 600	33,000 / 100,000	0.0036 / 0.6048			
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Deep Soils > 5.9 ft, Tier 1 Levels)			31 / 140	0.067 / 0.31 7.48***	15,000 / 39,000	150 / 2,000	39 / 590	--	13 / 250	3,100 / 47,000	80 / 140	--	--	11 / 190	390 / 5,900	820 / 11,000	390 / 5,900	390 / 5,900	0.78 / 12	14,000 / 850,000	23,000 / 300,000	0.0036 / 0.6036			
ESLs - Direct Exposure Residential / Industrial																						5.3 / 24			
DTSC - Human and Ecological Risk Office (HERO) Human Health Risk Assessment - Note 3 Residential / Commercial			--	0.067 / 0.25 7.48***	--	15 / 210	5.2 / 7.3	36,000 / 370,000 **	--	--	80 / 110	--	--	1.0 / 4.5	--	--	--	390 / 1,560	--	390 / 1,800	--	--			
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> Residential / Commercial			31 / 470	0.68 / 3.0 7.48***	15,000 / 370,000	160 / 2,300	71 / 880	120,000 / 1,800,000 **	13 / 150	3,100 / 47,000	400 / 800	--	--	11 / 46	490 / 3,800	--	390 / 3,800	390 / 3,800	--	190 / 3,800	33,000 / 850,000	2.7 / 150			

**Table 2: Soil - Metal Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**

All soil results are in milligrams per Kilogram (mg/Kg)

Sample Information			CAM-17 Metals by EPA Method 6010 / 7470																			Cyanide by EPA Method 9012
Sample ID	Sample Date	Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Lead STLC-soluble (mg/L)	Lead TCLP-soluble (mg/L)	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	
B-12	5/3/2016	0.5	2.67	4.79	429	0.259	2.07	28.6	8.92	68.2	376	< 0.0171	--	5.08	0.698	28.8	< 0.827	0.566 J	< 0.726	39.3	413	< 0.0436
		1.5	< 0.886	5.12	145	0.589	0.344 J	31	12.6	22.9	63	0.31	--	0.0697	0.6	42.2	1.26 J	< 0.331	< 0.767	42.5	75.5	0.0781 J
		4	< 0.837	2.16 J	134	0.417	0.323 J	27.6	8.42	15.2	6.46	--	--	0.0121 J	0.436 J	23.9	< 0.826	< 0.313	< 0.726	36.9	42.9	--
B-13	5/3/2016	0.5	--	--	--	--	--	--	--	--	0.293 J	--	--	--	--	--	--	--	--	--	--	--
		1.5	--	--	--	--	--	--	--	--	10.1	--	--	--	--	--	--	--	--	--	--	--
		4	--	--	--	--	--	--	--	--	6.36	--	--	--	--	--	--	--	--	--	--	--
B-14	5/3/2016	0.5	--	--	--	--	--	--	--	--	3.87	--	--	--	--	--	--	--	--	--	--	--
		1.5	--	--	--	--	--	--	--	--	12.3	--	--	--	--	--	--	--	--	--	--	--
		4	< 0.827	2.09 J	113	0.377	0.241 J	22.8	6.08	13.2	5.94	--	--	0.0114 J	< 0.176	18.1	< 0.816	< 0.309	< 0.717	30.5	34.5	0.0456 J
		10	0.866 J	4	151	0.44	0.313 J	214	21.4	15.7	4.46	--	--	0.03	0.985	161	< 0.839	< 0.317	< 0.737	37.7	44.6	0.0495 J
		15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-15	5/3/2016	0.5	< 0.899	< 0.779	78.4	< 0.0839	< 0.0839	6.69	11	68.5	< 0.228	--	--	0.0881	< 0.192	3.51	< 0.887	< 0.336	< 0.779	85.6	47.8	0.0596 J
		1.5	< 0.909	6.29	212	0.752	0.291 J	51.4	11.3	23.1	9.44	--	--	0.0376	0.832	52.5	< 0.897	< 0.339	< 0.788	66.6	78.4	< 0.0473
		4	< 0.864	4.24	182	0.587	0.702	58.4	17.1	18.8	6.64	--	--	0.0130 J	0.964	49.8	1.29 J	< 0.323	< 0.749	60.5	69.6	--
Laboratory Reported Detection Limits (BDL):			2	2	0.5	0.2	0.5	1	1	2	0.5	0.0171	0.45	0.02	0.5	2	2	1	2	2	5	0.25
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Shallow Soils < 5.2 ft, Tier 1 Levels)			31 / 140	0.067 / 0.31 7.48***	2,000 / 2,000	40 / 40	39 / 41	--	13 / 27	3,100 / 34,000	80 / 160	--	--	13 / 43	490 / 3,700	320 / 86	390 / 1,700	390 / 3,700	0.78 / 3.8	600 / 600	23,000 / 100,000	0.0036 / 0.0036
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Deep Soils > 5.2 ft, Tier 1 Levels)			31 / 140	0.067 / 0.31 7.48***	15,000 / 110,000	150 / 2,200	19 / 500	--	13 / 250	3,100 / 47,000	80 / 160	--	--	13 / 100	390 / 5,800	320 / 11,000	390 / 5,800	390 / 5,800	0.78 / 12	14,000 / 300,000	23,000 / 100,000	0.0036 / 0.0036
ESLs - Direct Exposure Residential / Industrial																						5.3 / 24
DTSC - Human and Ecological Risk Office (HERO) Human Health Risk Assessment - Note 3 Residential / Commercial			--	0.067 / 0.25 7.48***	--	15 / 210	5.2 / 7.3	36,000 / 170,000**	--	--	80 / 160	--	--	1.0 / 4.5	--	--	--	390 / 1,500	--	390 / 3,000	--	--
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> Residential / Commercial			31 / 470	0.68 / 3.0 7.48***	15,000 / 220,000	160 / 2,300	71 / 980	170,000 / 1,800,000**	13 / 130	3,100 / 47,000	400 / 800	--	--	13 / 46	490 / 3,800	--	390 / 3,800	390 / 3,800	--	590 / 3,800	23,000 / 350,000	2.7 / 110



**Table 2: Soil - Metal Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**

All soil results are in milligrams per Kilogram (mg/Kg)

Sample Information			CAM-17 Metals by EPA Method 6010 / 7470																			Cyanide by EPA Method 9012
Sample ID	Sample Date	Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Lead STLC-soluble (mg/L)	Lead TCLP-soluble (mg/L)	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	
P-1	5/5/2016	0.5	< 0.776	< 0.672	29.7	< 0.0723	< 0.0723	1.76	2.88	24.5	0.412 J	—	—	0.0561	< 0.165	0.959 J	< 0.765	< 0.289	< 0.672	13.5	9.73	< 0.0403
		1.5	< 0.901	5.39	245	0.504	0.561 J	28.6	10.5	31.1	123	4.48	—	0.279	0.498 J	37.7	< 0.889	< 0.337	< 0.781	36.5	202	0.665
P-2	5/5/2016	0.5	< 0.789	< 0.684	44.2	< 0.0736	0.0761 J	2.43	4.1	58.9	0.746	—	—	0.0438	< 0.168	1.57 J	< 0.778	< 0.295	< 0.684	19.3	12.7	< 0.0410
		1.5	< 0.903	4.51	214	0.443	1.8	22.7	6.96	66.9	211	0.29	—	1.53	< 0.193	26.4	< 0.891	< 0.337	< 0.783	26.5	565	11.3
	8/18/2016	4	—	—	—	—	—	—	—	—	17.3	—	—	—	—	—	—	—	—	—	—	—
		6	—	—	—	—	—	—	—	—	6.83	—	—	—	—	—	—	—	—	—	—	—
P-3	5/5/2016	0.5	< 0.786	< 0.681	29.2	< 0.0734	< 0.0734	2.1	4.86	61.2	0.352 J	—	—	0.139	< 0.168	1.33 J	< 0.776	< 0.294	< 0.681	17.8	11.6	< 0.0409
		1.5	< 0.964	5.6	149	0.663	0.282 J	35.2	12	25.3	10.9	—	—	0.0543	0.667	46	< 0.952	< 0.360	< 0.836	46.8	75.8	< 0.0502
P-4	5/5/2016	0.5	< 0.889	4.38	142	0.502	0.384 J	26.5	11.4	31.1	43.9	—	—	0.125	0.328 J	35.3	< 0.877	< 0.332	< 0.770	38.2	94.8	< 0.0462
		1.5	< 0.848	3.94	131	0.538	0.329 J	26.5	13.3	19.8	9.81	—	—	0.0363	0.249 J	39.7	< 0.836	< 0.316	< 0.735	35.6	62.7	0.0493 J
P-7	5/5/2016	0.5	< 0.916	4.22	127	0.525	0.277 J	24.7	11.7	21.5	15.8	—	—	0.0452	< 0.195	39.2	< 0.903	< 0.342	< 0.794	33.9	61.2	< 0.0476
		1.5	< 0.854	1.93 J	110	0.344	0.228 J	18	8.3	12.7	5.52	—	—	0.0188 J	< 0.182	17.4	< 0.843	< 0.319	< 0.740	28	29.9	< 0.0444
Laboratory Reported Detection Limits (RDL):			2	2	0.5	0.2	0.5	1	1	2	0.5	0.0171	0.45	0.02	0.5	2	2	1	2	2	5	0.25
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Shallow Soils < 9.8 ft, Tier 1 Levels)			11 / 140	0.067 / 0.31 7.48***	2,900 / 1,900	40 / 40	99 / 41	—	11 / 27	3,100 / 14,000	80 / 160	—	—	1.8 / 4.5	390 / 1,700	820 / 84	390 / 1,700	390 / 1,700	0.78 / 1.4	140 / 100	31,000 / 100,000	0.0016 / 0.0016
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Deep Soils > 9.8 ft, Tier 1 Levels)			11 / 140	0.067 / 0.31 7.48***	15,000 / 119,000	150 / 2,000	99 / 580	—	19 / 250	3,100 / 47,000	80 / 160	—	—	1.8 / 190	390 / 5,800	820 / 11,000	390 / 5,800	390 / 5,800	0.78 / 1.2	14,000 / 800,000	23,000 / 350,000	0.0016 / 0.0016
ESLs - Direct Exposure Residential / Industrial																						5.8 / 18
DTSC - Human and Ecological Risk Office (HERO) Human Health Risk Assessment - Note 3 Residential / Commercial			—	0.067 / 0.29 7.48***	—	15 / 210	5.2 / 7.3	36,000 / 170,000 **	—	—	40 / 120	—	—	1.8 / 4.5	—	—	—	390 / 1,500	—	500 / 3,800	—	—
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> Residential / Commercial			11 / 470	0.58 / 3.0 7.48***	15,000 / 228,000	160 / 2,300	71 / 980	170,000 / 1,800,000 **	11 / 250	3,100 / 47,000	80 / 800	—	—	1.8 / 4.5	390 / 1,800	—	390 / 5,800	390 / 5,800	—	390 / 1,800	31,000 / 350,000	2.7 / 150

**Table 2: Soil - Metal Analytical Results**  
**Additional Site Assessment**  
**25 East Fifth Street, Watsonville, CA**

All soil results are in milligrams per Kilogram (mg/Kg)

Sample Information			CAM-17 Metals by EPA Method 6010 / 7470																			Cyanide by EPA Method 9012			
Sample ID	Sample Date	Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Lead STLC-soluble (mg/L)	Lead TCLP-soluble (mg/L)	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc				
DG-1	8/18/2016	0.5	—	—	—	—	—	—	—	—	7.4	—	—	—	—	—	—	—	—	—	—	—	—		
		1.5	—	—	—	—	—	—	—	—	—	7.06	—	—	—	—	—	—	—	—	—	—	—	—	—
		4	—	—	—	—	—	—	—	—	—	83.4	—	—	—	—	—	—	—	—	—	—	—	—	—
DG-2	8/18/2016	0.5	—	—	—	—	—	—	—	—	194	—	—	—	—	—	—	—	—	—	—	—	—	—	
		1.5	—	—	—	—	—	—	—	—	18.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		4	—	—	—	—	—	—	—	—	8.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
DG-3	8/18/2016	0.5	—	—	—	—	—	—	—	—	182	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1.5	—	—	—	—	—	—	—	—	15.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		4	—	—	—	—	—	—	—	—	8.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
DG-4	8/18/2016	0.5	—	—	—	—	—	—	—	—	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		1.5	—	—	—	—	—	—	—	—	1.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		4	—	—	—	—	—	—	—	—	9.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Laboratory Reported Detection Limits (RDL):			2	2	0.5	0.2	0.5	1	1	2	0.5	0.0171	0.45	0.02	0.5	2	2	1	2	2	5	0.25			
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Shallow Soils < 5.8 ft, Tier 1 Levels)			11 / 140	0.067 / 0.31 7.48***	2,900 / 2,900	40 / 40	19 / 41	—	13 / 27	3,100 / 14,000	80 / 140	—	—	13 / 41	300 / 1,700	820 / 80	390 / 1,700	390 / 1,700	0.78 / 3.8	900 / 800	13,000 / 100,000	0.0036 / 0.0036			
Environmental Screening Levels (ESLs) <sup>(1)</sup> Residential / Commercial (Deep Soils > 5.8 ft, Tier 1 Levels)			11 / 140	0.067 / 0.31 7.48***	15,000 / 210,000	150 / 2,000	19 / 500	—	13 / 250	3,100 / 47,000	80 / 140	—	—	13 / 190	300 / 5,800	820 / 11,000	390 / 5,800	390 / 5,800	0.78 / 11	14,000 / 800,000	23,000 / 250,000	0.0036 / 0.0036			
ESLs - Direct Exposure Residential / Industrial																						5.8 / 24			
DTSC - Human and Ecological Risk Office (HERO) Human Health Risk Assessment - Note 3 Residential / Commercial			—	0.067 / 0.31 7.48***	—	15 / 210	5.2 / 7.3	36,000 / 370,000**	—	—	80 / 140	—	—	1.0 / 4.5	—	—	—	390 / 1,600	—	390 / 1,600	—	—	—		
USEPA Region 9 Regional Screening Levels (RSLs) <sup>(2)</sup> Residential / Commercial			11 / 470	0.68 / 3.0 7.48***	15,000 / 220,000	160 / 3,000	71 / 980	120,000 / 1,800,000**	13 / 150	3,100 / 47,000	800 / 900	—	—	11 / 40	300 / 3,800	—	300 / 5,800	190 / 1,600	—	390 / 3,800	23,000 / 150,000	2.7 / 110			

**Notes**

1 = Environmental Screening Levels (ESLs): from Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final, February 2016). The ESLs are intended to provide quantitative guidance on whether remediation of contamination is warranted. The ESLs used in this table were obtained from the above referenced document. Table A. Shallow Soils (<3m), Groundwater is a current or potential source of Drinking Water.

2 = Regional Screening Levels (RSLs): from the USEPA Region 9 RSL Tables (updated May 2016), and the User's Guide (November 2015). The RSLs are risk-based screening levels used for screening sites, calculating risk factors and potentially as cleanup goals once a site has been characterized.

\* = Analysis of the 95% Upper Confidence Limit for arsenic in 16 shallow soil samples that were collected to establish background concentrations for metals in the Watsonville area yields a concentration of 7.6 mg/kg. Analysis of the 95% Upper Confidence Limit for arsenic collected from 9 on-site shallow soil samples yields a concentration of 6.3 mg/kg (see Appendix F of this report for reference and 95% UCL analysis). The data confirms that the on-site concentrations of arsenic fall within the range of naturally occurring background concentrations for this area of Watsonville.

\*\* = Chromium (Total) has no threshold so Chromium (VI) threshold has been placed instead. (Chromium (VI) thresholds for RSL = 0.3 / 6.3 ; (Residential / Commercial)

\*\*\* = A 2003 background assessment for metals in shallow soil was completed for the Watsonville area by Uribe & Associates: Remedial Investigation Report, Watsonville 2 Former Manufactured Gas Plant Site, Pacific Gas and Electric Company, GC Yard 11, Walker Street, Watsonville, California, September 4, 2003. Analysis of the 95% Upper Confidence Limit for arsenic in 14 shallow soil samples that were collected to establish background concentrations for metals in the Watsonville area yields a concentration of 7.48 mg/kg. Analysis of the 95% Upper Confidence Limit for arsenic collected from on site soil samples at depths of 0.5, 1.5, and 4 feet bgs yielded concentrations of 4.30, 5.20, and 3.66 mg/kg, respectively (see Appendix X of this report for details). The data confirms that the on-site concentrations of arsenic fall within the range of naturally occurring background concentrations for this area of Watsonville.

STLC = Soluble Threshold Limit Concentration

TCLP = Toxicity Characteristic Leaching Procedure

J = Laboratory reports that the detection value is between MDL and PQL, and should be considered to be an estimate.

B = Laboratory reports that the same analyte is found in the associated blank.

< X = Constituent not detected above the laboratory's Method Detection Limit (MDL) X.

\* = Method Detection Limit and Practical Quantitation Limit raised after sample was diluted. Dilutions were necessary due to elevated analyte concentrations or matrix interferences.

**BOLD** = Analytical result above commercial ESL, RSL, or HERO Note 3 values (whichever is the most conservative).

— = Not analyzed for



**Table 4: Grab Groundwater - PAH Analytical Results  
Additional Site Assessment & Semi-Annual Monitoring  
25 East Fifth Street, Watsonville, CA**

*All soil results are in micrograms per liter (ug/L)*

Sample Information				Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C-SIM															
Sample ID	Sample Date	*Depth to Groundwater (ft, bgs)	Temporary Screen Interval (feet, bgs)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[g,h,i] perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo[a]pyrene	Benzo[a]anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Indeno[1,2,3-cd]pyrene
GW-1	3/22/2017	23.5	19 - 29	10.3	4.93	0.267	0.00326 J, B	< 0.0157	0.488	<b>84.5</b>	0.243	0.0380 J	< 0.0116	< 0.00410	< 0.00212	< 0.0136	< 0.0108	< 0.00396	< 0.0148
	5/4/2016	27.9	22 - 32	0.446	0.256	0.0480 J	0.00393 J, B	< 0.0157	0.176	<b>9.27</b>	0.0673 B	< 0.0117	< 0.0116	< 0.00410	< 0.00212	< 0.0136	< 0.0108	< 0.00396	< 0.0148
GW-2	3/22/2017	22.4	23 - 27	< 0.0100	< 0.0120	< 0.0140	0.00386 J, B	< 0.0157	< 0.00850	<b>0.128 J, B</b>	0.00848 J	< 0.0117	< 0.0116	< 0.00410	< 0.00212	< 0.0136	< 0.0108	< 0.00396	< 0.0148
	5/4/2016	27	24 - 34	0.0191 J	< 0.0120	0.0169 J	0.00459 J, B	< 0.0157	0.0377 J	<b>0.454</b>	0.0379 J, B	< 0.0117	< 0.0116	0.00789 J	0.00338 J	< 0.0136	< 0.0108	< 0.00396	< 0.0148
GW-3	3/22/2017	25.8	24 - 27	0.25	0.126	0.185	0.00732 J, B	0.173	0.28	<b>2.78</b>	0.297	0.156	<b>0.0158 J</b>	<b>0.0531</b>	<b>0.0184 J</b>	< 0.0136	<b>0.0328 J</b>	< 0.00396	< 0.0148
	5/4/2016	26.5	24 - 34	7.85	3.94	<b>5.91</b>	0.0923	3.45	<b>7.35</b>	<b>34.7</b>	<b>7.38</b>	<b>3.11</b>	<b>0.377</b>	<b>0.733</b>	<b>0.309</b>	<b>0.159</b>	<b>0.45</b>	<b>0.0367 J</b>	<b>0.0886</b>
GW-4	5/4/2016	26.6	20 - 30	0.0517	0.0536	0.0146 J	0.00404 J, B	< 0.0157	0.0262 J	0.106 J	0.0197 J, B	< 0.0117	< 0.0116	0.00806 J	0.00352 J	< 0.0136	< 0.0108	< 0.00396	< 0.0148
GW-5	5/4/2016	22.5	24 - 34	0.0146 J	0.0149 J	< 0.0140	0.00509 J, B	< 0.0157	0.0199 J	0.165 J	0.0297 J, B	< 0.0117	< 0.0116	0.00921 J	< 0.00212	< 0.0136	< 0.0108	< 0.00396	< 0.0148
Reported Detection Limit (RDL) :				0.05	0.05	0.05	0.05	0.05	0.05	0.25	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Water Board Environmental Screening Levels <sup>(1)</sup> (Groundwater)				20	30	0.73	0.1	B	3.9	0.17	4.6	2	0.014	0.027	0.012	0.017	0.049	0.0034	0.034
Maximum Contaminant Levels (MCLs) <sup>(2)</sup>				NE	NE	NE	NE	NE	NE	17 <sup>(3)</sup>	NE	NE	0.2	NE	NE	NE	NE	NE	NE

- Notes**
- 1 = Environmental Screening Levels (ESLs): from User's Guide: Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, set by the San Francisco Bay Regional Water Quality Control Board (February 2016). <[http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/ESL/ESL%20Workbook\\_ESLs\\_PDF\\_Rev2.pdf](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/ESL/ESL%20Workbook_ESLs_PDF_Rev2.pdf)> The ESLs are intended to provide quantitative risk-based guidance on whether further assessment or remediation of contamination is warranted.
  - 2 = Maximum Contaminant Levels (MCLs): MCL's are drinking water standards established in Title 22 of the California Code of Regulations.
  - 3 = Naphthalene's objective is based on its established health-based advisory level, currently called a "notification level". These notification/action levels have been used to provide information to public water systems and others about certain non-regulated chemicals in drinking water that lack maximum contaminant levels (MCLs). When chemicals are found at concentrations greater than these levels, certain requirement and recommendations apply.
- \*= Depth to groundwater may not necessarily be stabilized.  
bgs= below ground surface  
< X = Constituent not detected above the laboratory's Method Detection Limit (MDL), X.  
J = Laboratory reports that the detection value is between MDL and RDL, and should be considered to be an estimate.  
B = Laboratory reports that the same analyte is found in the associated blank.  
NE = Not Established  
**BOLD =** Result exceeds the Commercial ESL threshold.



**Table 5: Grab Groundwater - TPH, VOC, Ammonia as N, & Cyanide Analytical Results**  
**Additional Site Assessment & Semi-Annual Monitoring**

25 East Fifth Street, Watsonville, California

All groundwater sample results are in parts per billion (ug/L).

Groundwater Sampling Information				Laboratory Analytical Results										
Sample ID #	Sample Date	*Depth to Groundwater (ft, bgs)	Temporary Screen Interval (feet, bgs)	HydroCarbon Ranges			Volatile Organic Compounds (VOC's by EPA 8021)						Ammonia as N	Cyanide
				Gasoline Range C5-C12	Diesel Range C12-C22	**Motor Oil Range C22-C40	Benzene	Toluene	Ethyl-benzene	Xylene (total)	MTBE	1,2-Dibromoethane		
GW-1	3/22/2017	23.5	19 - 29	<b>250</b>	<b>1,490</b>	516	0.827 J	1.57	2.87	19.9	< 0.367	< 0.381	50,000	28.2
	5/4/2016	27.9	22 - 32	< 30.4	<b>546</b>	361.1	< 0.331	< 0.780	< 0.384	< 1.06	< 0.367	--	55,000	75
GW-2	3/22/2017	22.4	23 - 27	< 30.4	<b>48.8 J</b>	< 66.0	< 0.331	< 0.412	< 0.384	< 1.06	< 0.367	< 0.381	< 280	2.86
	5/4/2016	27	24 - 34	< 30.4	<b>43.6 J</b>	< 66.0	< 0.331	< 0.780	< 0.384	< 1.06	< 0.367	--	< 280	< 1.80
GW-3	3/22/2017	25.8	24 - 27	< 30.4	<b>336</b>	216	< 0.331	< 0.412	< 0.384	< 1.06	< 0.367	< 0.381	1,100	<b>604</b>
	5/4/2016	26.5	24 - 34	< 30.4	<b>870</b>	441.2	<b>0.333 J</b>	< 0.780	< 0.384	<b>1.50 J</b>	< 0.367	--	6,400	<b>237</b>
GW-4	5/4/2016	26.6	20 - 30	< 30.4	<b>78.8</b>	53.5 J	< 0.331	< 0.780	< 0.384	< 1.06	< 0.367	--	17,000	60
GW-5	5/4/2016	22.5	24 - 34	< 30.4	< 71.3	< 142.6	< 0.331	< 0.780	< 0.384	< 1.06	< 0.367	--	4,000	21
Laboratory Reported Detection Limit (RDLS):				100	100	200	1.0	5.0	1.0	3.0	1.0	1.0	280	5.0
Water Board Environmental Screening Levels (ESL) Groundwater (1)				100		50,000	1.0	40	13	20	5.0	0.05	NE	150
Maximum Contaminant Levels (MCLs) (2)							1	150	300	1,750	5	0.05	NE	150

**NOTES:**

**WQG = Water Quality Goals:** Goals established by the CRWQCB Central Coast Region based on Maximum Contaminant Limits (Department of Health Services) or taste & odor threshold limits.

1 = **Environmental Screening Levels (ESLs):** from User's Guide: Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, set by the San Francisco Bay Regional Water Quality Control Board (February 2016). <[http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/ESL/ESL%20Workbook\\_ESL\\_PDF\\_Rev2.pdf](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/ESL/ESL%20Workbook_ESL_PDF_Rev2.pdf)> The ESLs are intended to provide quantitative risk-based guidance on whether further assessment or remediation of contamination is warranted.

2 = **Maximum Contaminant Levels (MCLs):** MCL's are drinking water standards established in Title 22 of the California Code of Regulations. Values referred to as MCLs for lead and copper are not actually MCLs; instead, they are called "Action Levels" under the lead and copper rule

**BOLD =** Result exceeds the MCL or ESL threshold.

**ND =** Not detected at or above the lab's practical quantitation limit.

**bgs =** below ground surface

\* = Depth to groundwater may not necessarily be stabilized.

**MTBE =** Methyl-tert-Butyl-Ether

\*\* = C22-C32 and C32-C40 ranges combined for Motor Oil Hydrocarbon Range results.

**NE =** Not Established

< X = Constituent not detected above laboratory's Method Detection Limit (MDL), X.

(a) = Micro-Extraction -No TPH as Motor Oil pattern present at 200 ug/L.



**Table 3: Soil Vapor - Volatile Organic Compounds Analytical Results**  
**Additional Site Assessment & Semi-Annual Monitoring**  
**25 East Fifth Street, Watsonville, CA**

All soil vapor results are in micrograms per meter cubed (ug/m<sup>3</sup>)

Sample Information			Total Petroleum Hydrocarbons as Gasoline	Volatile Organic Compounds (VOCs) <small>Laboratory Analysis by EPA Method TO-15</small>						Leak Check Monitoring <small>(Isopropyl Alcohol)</small>		
Sample ID	Sample Date	Depth <small>(feet below ground surface)</small>		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Other VOCs	Field Shroud Concentration <small>(avg., in ppm)</small>	Laboratory Results <small>(in ug/m<sup>3</sup>)</small>	Calculated Leakage <small>(percent)</small>
SV-1 <small>(by EPA Method TO-15)</small>	3/30/2017	5'	< 290	69	59	64	170	< 82	All Other VOCs = ND	15.5	< 3.5	< 0.01
	5/12/2016		< 280	< 5.9	< 4.5	< 3.9	< 12	< 150	All Other VOCs = ND	13.3	< 5.6	< 0.02
	8/8/2017	10'	< 190	< 1.1	< 1.4	< 2.6	< 10	< 19	1,2-Dibromoethane = < 2.9 All Other VOCs = ND	301.4	< 3.4	< 0.00
	3/30/2017		<b>*No Flow Conditions - Water Observed in Sample Tubing During Purge</b>						-			
	5/12/2016		< 280	< 5.8	< 4.4	< 3.9	< 12	< 150	1,2-Dibromoethane = 99 PCE = 65 <sup>1</sup> All Other VOCs = ND	26.3	< 6.5	< 0.01
SV-2 <small>(by EPA Method TO-15)</small>	3/30/2017	5'	< 310	< 3.3	< 2.5	< 2.2	< 6.8	< 86	All Other VOCs = ND	30.3	< 3.7	0.00
	5/12/2016		< 290	17 <sup>1</sup>	20 <sup>1</sup>	< 4.0	< 12	< 160	All Other VOCs = ND	78	540	0.28
	8/8/2017	10'	< 190	< 1.1	< 1.3	< 2.5	< 9.9	< 19	All Other VOCs = ND	602.55	< 3.3	< 0.00
	3/30/2017		<b>*No Flow Conditions</b>						-			
	5/12/2016		< 280	< 6.0	< 4.5	< 4.0	< 12	< 160	Styrene = 31 <sup>1</sup> All Other VOCs = ND	8.8	< 6.7	< 0.03
<small>Laboratory's Practical Quantitation Limit (PQL)</small>			300	1	1	5	5	20	Varies	-	-	-
Environmental Screening Levels <sup>(1)</sup> <small>Residential ATTENUATION FACTOR: 0.002 Commercial ATTENUATION FACTOR: 0.001</small>			50,000 / 100,000	48 / 420	160,000 / 1,300,000	560 / 4,900	57,000 / 440,000	41 / 360	1,2-Dibromoethane: 2.3 / 20 PCE: 140 / 2,100 Styrene: 470,000 / 3,400,000 Propylene: 15,000,000 / 31,000,000 Acetone: 15,000,000 / 31,000,000 All Others: vary or Not Established			
US EPA Regional Screening Levels <small>Residential / Commercial (0.03 ATTENUATION FACTOR)<sup>(2)</sup></small>			Not Established	17 / 53	173,531 / 733,833	31 / 153	3,381 / 14,667	7.5 / 12	1,2-Dibromoethane: 0.157 / 0.66 PCE: 1.67 / 3.55 Styrene: 35,833.85 / 346,667 Propylene: 103,553 / 433,833 Acetone: 1,046,867 / 4,666,667 All Others: vary or Not Established			
CA DTSC-Modified Soil Gas Levels <sup>(3)</sup> <small>"Near Source" Threshold Limits Residential ATTENUATION FACTOR: 0.002 Commercial ATTENUATION FACTOR: 0.001</small>			Not Established	49 / 420	155,000 / 1,300,000	550 / 4,900	50,000 / 440,000	42 / 360	1,2-Dibromoethane: 1.35 / 20 PCE: 240 / 2,100 Styrene: 470,000 / 3,500,000 Propylene: 1,350,000 / 31,000,000 Acetone: 16,000,000 / 31,000,000 All Others: vary or Not Established			
"Subslab" Threshold Limits <small>Residential / Commercial (0.05 ATTENUATION FACTOR)<sup>(4)</sup></small>			Not Established	1.5 / 6	6,200 / 26,000	22 / 98	2,000 / 6,800	1 / 7	1,2-Dibromoethane: 0.084 / 0.4 PCE: 8.6 / 42 Styrene: 15,000 / 78,000 Propylene: 67,000 / 240,000 Acetone: 640,000 / 2,400,000 All Others: vary or Not Established			
Site-Specific Risk-based Soil Gas Screening Levels <sup>(5)</sup> <small>@5 ft bgs / @15 ft bgs</small>			850,000 / 2,000,000	3,100 / 7,300	980,000 / 2,300,000	89,000 / 97,000	320,000 / 780,000	3,400 / 8,800	Styrene: 3,300,000 / 8,200,000 Acetone: 90,000,000 / 180,000,000 All Others: Not Established			

**Table 3: Soil Vapor - Volatile Organic Compounds Analytical Results**  
**Additional Site Assessment & Semi-Annual Monitoring**  
**25 East Fifth Street, Watsonville, CA**

All soil vapor results are in micrograms per meter cubed (ug/m<sup>3</sup>)

Sample Information			Total Petroleum Hydrocarbons as Gasoline	Volatile Organic Compounds (VOCs) <small>Laboratory Analysis by EPA Method TO-15</small>						Leak Check Monitoring (Isopropyl Alcohol)					
Sample ID	Sample Date	Depth (feet below ground surface)		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Other VOCs	Field Shroud Concentration (avg., in ppm)	Laboratory Results (in ug/m <sup>3</sup> )	Calculated Leakage (percent)			
SV-3 (by EPA Method TO-15)	8/8/2017	5'	< 220	< 1.3	< 1.5	< 2.9	< 11	< 22	All Other VOCs = ND	183	< 3.8	< 0.00			
	3/30/2017		*No Flow Conditions												
	5/12/2016		< 290	27 <sup>1</sup>	67	37 <sup>1</sup>	210	< 160	n-Heptane = 13 <sup>1</sup> All Other VOCs = ND	34.8	< 6.8	< 0.01			
	8/8/2017	10'	No Flow Conditions												
	3/30/2017		*No Flow Conditions												
	5/12/2016		6,400	170	200	69 <sup>1</sup>	370	< 150	Propylene = 1,500 All Other VOCs = ND	38.1	< 6.5	< 0.01			
SV-4 (by EPA Method TO-15)	3/30/2017	5'	< 280	< 3.0	< 2.3	< 2.0	< 6.1	< 78	All Other VOCs = ND	12.1	< 3.3	< 0.01			
	5/12/2016		< 280	< 6.0	< 4.5	< 4.0	< 12	< 160	All Other VOCs = ND	15.7	< 6.7	< 0.02			
	8/8/2017	10'	< 200	< 1.2	< 1.4	< 2.7	< 11	< 20	All Other VOCs = ND	640.9	< 3.5	< 0.00			
	3/30/2017		*No Flow Conditions												
	5/12/2016		< 270	< 5.8	< 4.4	< 3.8	< 12	< 150	All Other VOCs = ND	71.2	< 6.4	< 0.004			
Laboratory's Practical Quantitation Limit (PQL)			200	2	3	5	5	20	Various						
Environmental Screening Levels <sup>(1)</sup> <small>Residential ATTENUATION FACTOR: 0.002 Commercial ATTENUATION FACTOR: 0.001</small>			50,000	100,000	48	420	160,000	1,300,000	560	4,900	52,000	440,000	81	360	1,2-Dibromoethane: 1.3 / 20 PCE: 200 / 2,100 Styrene: 470,000 / 1,400,000 Acetone: 15,000,000 / 31,000,000 All Others: vary or Not Established
US EPA Regional Screening Levels <small>Residential / Commercial (0.03 ATTENUATION FACTOR)<sup>(2)</sup></small>			Not Established	12	53	113,931	733,333	31	183	3,383	18,667	2.8	12	1,2-Dibromoethane: 0.039 / 0.02 PCE: 1.67 / 1,657 Styrene: 33,333.33 / 146,667 Propylene: 103,333 / 633,333 Acetone: 1,696,667 / 4,666,667 All Others: vary or Not Established	
CA DTSC-Modified Soil Gas Levels <sup>(3)</sup> <small>"Near Source" Threshold Limits (Residential ATTENUATION FACTOR: 0.003 Commercial ATTENUATION FACTOR: 0.001)</small>			Not Established	49	420	153,000	1,300,000	550	4,900	50,000	440,000	82	360	1,2-Dibromoethane: 1.35 / 20 PCE: 240 / 2,100 Styrene: 470,000 / 3,000,000 Propylene: 1,310,000 / 33,000,000 Acetone: 16,000,000 / 140,000,000 All Others: vary or Not Established	
"Subslab" Threshold Limits <small>Residential / Commercial (0.05 ATTENUATION FACTOR)<sup>(4)</sup></small>			Not Established	1.0	8	6,200	26,000	22	98	2,000	6,800	2	7	1,2-Dibromoethane: 0.084 / 0.4 PCE: 9.8 / 42 Styrene: 18,000 / 78,000 Propylene: 83,000 / 240,000 Acetone: 140,000 / 2,800,000 All Others: vary or Not Established	
Site-Specific Risk-based Soil Gas Screening Levels <sup>(5)</sup> <small>@ 5 ft BS / @ 15 ft BS</small>			350,000	2,000,000	3,100	7,300	980,000	2,300,000	89,000	97,000	320,000	780,000	3,400	8,800	Styrene: 3,300,000 / 8,200,000 Acetone: 10,666,667 / 180,000,000 All Others: Not Established



**Table 3: Soil Vapor - Volatile Organic Compounds Analytical Results**  
**Additional Site Assessment & Semi-Annual Monitoring**  
**25 East Fifth Street, Watsonville, CA**

All soil vapor results are in micrograms per meter cubed (ug/m<sup>3</sup>)

Sample Information			Total Petroleum Hydrocarbons as Gasoline	Volatile Organic Compounds (VOCs) <i>Laboratory Analysis by EPA Method TO-15</i>						Leak Check Monitoring (Isopropyl Alcohol)		
Sample ID	Sample Date	Depth (feet below ground surface)		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Other VOCs	Field Shroud Concentration (avg., in ppm)	Laboratory Results (in ug/m <sup>3</sup> )	Calculated Leakage (percent)
SV-5 (by EPA Method TO-15)	3/30/2017	5'	< 290	< 3.2	< 2.4	< 2.1	< 6.4	< 82	Acetone = 36 All Other VOCs = ND	15.8	19,000	48.93
	5/12/2016		< 280	< 5.8	< 4.4	< 3.9	< 12	< 150	All Other VOCs = ND	22.6	< 6.5	< 0.01
	3/30/2017	10'	< 290	< 3.1	< 2.4	< 2.1	< 6.3	< 81	All Other VOCs = ND	34.5	< 3.5	< 0.00
	5/12/2016		< 280	< 5.9	< 4.5	< 3.9	< 12	< 150	Acetone = 18 <sup>1</sup> All Other VOCs = ND	53.6	< 6.6	< 0.01
SV-5 (by EPA Method TO-17)	5/12/2016	5'	380 <sup>a</sup>	< 16	18	< 16	57	< 16	All Other VOCs = ND	89.8	23	0.01
		10'	370 <sup>a</sup>	< 16	28	< 16	31	< 16	All Other VOCs = ND	25.8	22	0.03
Laboratory's Practical Quantitation Limit (PQL)			200	2	2	5	5	20	Various			
Environmental Screening Levels <sup>(1)</sup> Residential ATTENUATION FACTOR: 0.017 Commercial ATTENUATION FACTOR: 0.001			50,000 <sup>a</sup> 100,000 <sup>a</sup>	48 420	160,000 1,300,000	50 4,900	52,000 440,000	41 360	1,2-Dibromoethane: 1.3 / 20 PCE: 240 / 2,100 Styrene: 470,000 / 1,400,000 Acetone: 15,000,000 / 11,000,000 <sup>a</sup> All Others: vary or Not Established			
US EPA Regional Screening Levels Residential / Commercial (0.03 ATTENUATION FACTOR) <sup>(2)</sup>			Not Established	11 53	173,333 733,333	51 163	3,333 14,667	2.3 12	1,2-Dibromoethane: 0.113 / 0.64 PCE: 0.07 / 0.567 Styrene: 55,231.31 / 146,667 Propylene: 103,353 / 433,333 Acetone: 1,066,667 / 4,666,667 All Others: vary or Not Established			
CA DTSC Modified Soil Gas Levels <sup>(3)</sup> "Near Source" Threshold Limits Residential ATTENUATION FACTOR: 0.061 Commercial ATTENUATION FACTOR: 0.041			Not Established	49 420	353,000 1,300,000	95 4,900	50,000 440,000	42 360	1,2-Dibromoethane: 0.35 / 20 PCE: 240 / 2,100 Styrene: 470,000 / 1,400,000 Propylene: 1,350,000 / 13,000,000 Acetone: 16,000,000 / 140,000,000 All Others: vary or Not Established			
"Subslab" Threshold Limits Residential / Commercial (0.05 ATTENUATION FACTOR) <sup>(4)</sup>			Not Established	1.9 8	5,200 25,000	22 98	2,000 8,800	3 7	1,2-Dibromoethane: 0.094 / 0.4 PCE: 9.6 / 42 Styrene: 18,800 / 78,000 Propylene: 63,000 / 240,000 Acetone: 440,000 / 2,840,000 All Others: vary or Not Established			
Site-Specific Risk-based Soil Gas Screening Levels <sup>(4)</sup> @5 ft bgs / @15 ft bgs			850,000 2,000,000	3,100 7,300	960,000 2,300,000	19,000 97,000	320,000 780,000	3,400 8,800	Styrene: 3,100,000 / 8,200,000 Acetone: 98,000,000 / 180,000,000 All Others: Not Established			

**Notes**

- 1 = Environmental Screening Levels (ESLs): From User's Guide: Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, set by the San Francisco Bay Regional Water Quality Control Board (Interim Final, Feb 2016) <[http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/ESL/ESL%20Workbook\\_ESLs\\_PDF\\_Rev2.pdf](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/ESL/ESL%20Workbook_ESLs_PDF_Rev2.pdf)>. The ESLs are intended to provide quantitative risk-based guidance on whether further assessment or remediation of contamination is warranted. The ESLs used in this table were obtained from the above referenced document, "Tier 1 ESLs", based on shallow soils (<3m), groundwater is a current or potential source of drinking water.
  - 2 = US EPA Region 9's Regional Screening Levels (RSLs): From US EPA Regional Screening Levels for Indoor Air (<http://www.epa.gov/region9/superfund/rlrg/>), revised November 2015). The Indoor Air RSLs are divided by the US EPA's Recommended Vapor Attenuation Factor (0.03) (from the US EPA's Recommended Vapor Attenuation Factor for Risk Based Screening of sub-slab soil gas [Table 6-1 in Final Guidance for Assessing and Mitigating the Vapor Intrusion Pathway From Subsurface Sources to Indoor Air, June 2015]) to calculate the Risk Level concentration appropriate for the specific sample collected (i.e., Sub-slab soil gas, "Near-source" exterior soil gas, Crawl space air, etc.).
  - 3 = CA DTSC Modified Air Screening Levels: From the California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note Number 3, Table 3, Jan 2016 <<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-2016-01.pdf>>. The Modified Air Screening Levels are divided by the DTSC's Recommended Vapor Attenuation Factor (0.002 residential / 0.001 commercial) to calculate the Risk Level concentration appropriate for the specific sample collected. Where Modified Air Screening Levels are not available, US EPA RSLs (see Note 2 above) are used with the DTSC attenuation factor.
  - 4 = Site-Specific Risk-Based Soil Gas Screening Levels (adjacent MGP site): From Table 8, Risk-based Soil Gas Screening Levels taken from the "Soil Gas, Sub-slab Soil Gas, and Indoor Air Screening Levels" section of the Watsonville-1 Former MGP Site Report (September 29, 2009) prepared by Iris Environmental.
- <sup>a</sup> = Soil vapor monitoring points SV-1 (10 feet), SV-2 (10 feet), SV-3 (5 & 10 feet) and SV-4 (10 feet) were checked again for flow conditions on May 17, 2017 using a peristaltic pump. Slugs of water were observed in the sample tubing at each location during purging and no soil vapor samples were obtained. An effort was made to evacuate all water from the sample tubing and well annulus. Small volumes of water (i.e., ~100 mL) were removed at each location until no more water was observed.
- <sup>b</sup> = ESL threshold is due to Odor. (See note 2 for more information)
- <sup>c</sup> = No DTSC CA Note 3 screening level established for this compound, used RSL when calculating Subslab

PCE = Tetrachloroethene -- = Sample was not analyzed for this constituent

< X = Constituent not detected above laboratory's Method Detection Limit (MDL). X

**BOLD** = Analytical result exceeds Commercial US EPA Regional Screening Level threshold.

**BOLD** = Compound detected.

<sup>1</sup> = Laboratory note: Estimated value

<sup>a</sup> = Laboratory notes. Result reported as gasoline but sample chromatogram does not match reference standard pattern. TPH value due to presence of heavy hydrocarbons (best match Stoddard Solvent pattern) within range of C5-C12 quantified as Gasoline.



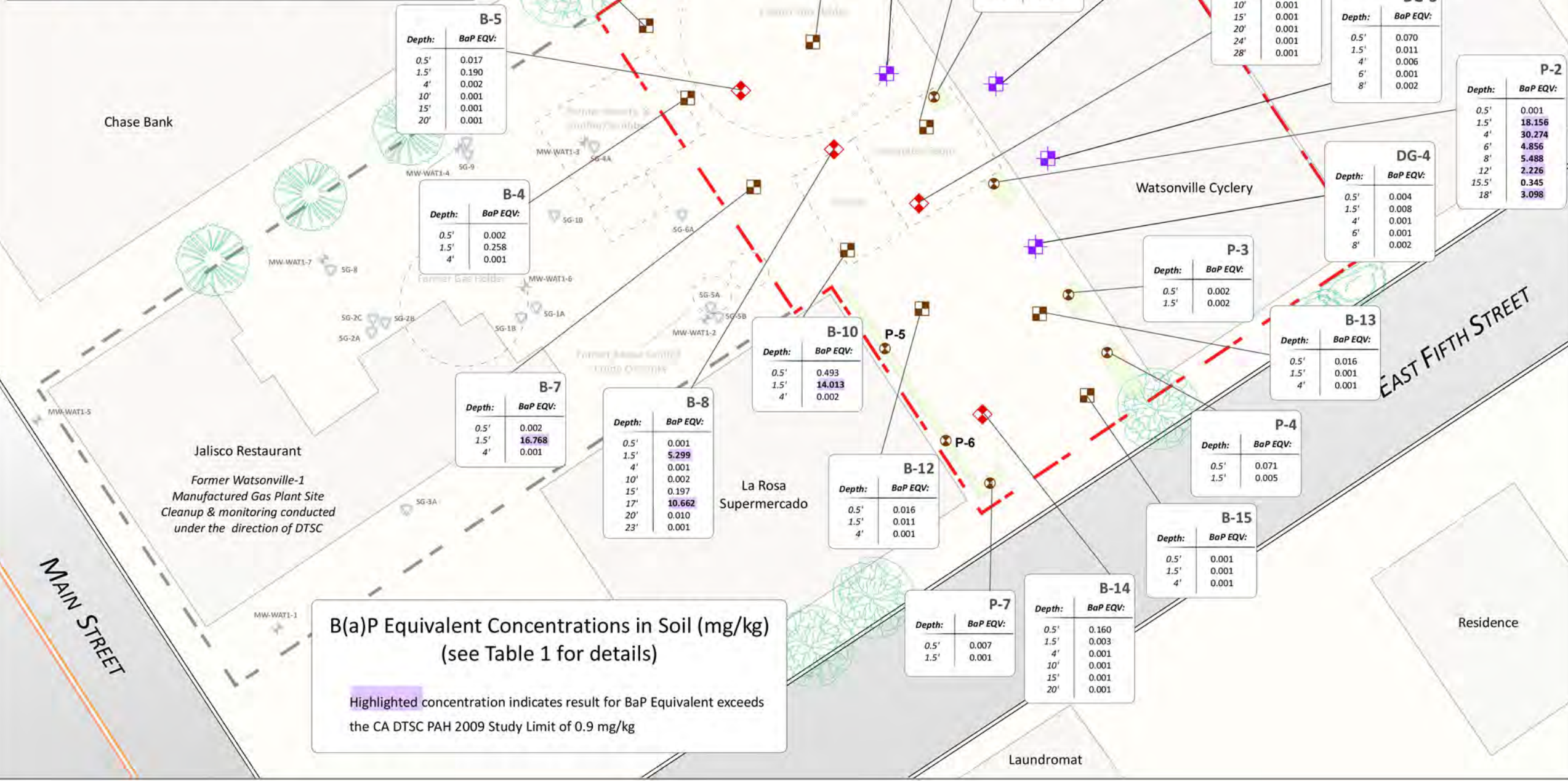
### EXPLANATION OF SYMBOLS

**Soil Sample Locations (WHA, 2016)**

- DG-1** Data Gap Soil Sample (to at least 8 feet bgs)
- B-1** Shallow Soil Sample (0.5, 1.5 & 4 feet bgs)
- B-3** Shallow & Deeper Soil Sample (to at least 20 feet bgs)
- P-1** Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs)  
(Note: proposed samples P-5 & P-6 were not collected as the planter box is installed on top of the asphalt parking lot with no native soils encountered)

**Former Watsonville-1 MGP Site Existing Sample Locations**

- Groundwater Monitoring Well (Terra Pacific Group)
- Soil Vapor Well (Terra Pacific Group)



**FIGURE 2**  
Project 2X404

**SITE MAP WITH B(a)P EQUIVALENT SOIL SAMPLE ANALYTICAL RESULTS - MAY & AUGUST 2016 ADDITIONAL SITE ASSESSMENT**

SITE: COMMERCIAL-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

DATE: JUNE 2016

**WEBER, HAYES & ASSOCIATES**  
Hydrogeology and Environmental Engineering  
120 Westgate Drive, Watsonville, CA  
831.722.3580 / www.weber-hayes.com



**EXPLANATION OF SYMBOLS**

**Soil Sample Locations (WHA, 2016)**

- DG-1** Data Gap Soil Sample (to at least 8 feet bgs)
- B-1** Shallow Soil Sample (0.5, 1.5 & 4 feet bgs)
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- P-1** Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs) (Note: proposed samples P-5 & P-6 were not collected as the planter box is installed on top of the asphalt parking lot with no native soils encountered)

**Former Watsonville-1 MGP Site Existing Sample Locations**

- Groundwater Monitoring Well (Terra Pacific Group)
- Soil Vapor Well (Terra Pacific Group)

**B-4**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	<0.679	1.07	<b>0.120 J</b>
1.5'	2.91	6.99	<b>0.434</b>

**B-7**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	<0.699	0.936	<b>0.157</b>
1.5'	5.48	<b>356</b>	<b>5.09</b>
4'	4.56	7.34	--

**B-8**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	<0.195	--
1.5'	--	8.47	--
4'	--	7.66	--
15'	--	--	<b>0.33</b>
17'	--	--	<b>0.318</b>
20'	--	--	<0.0445
23'	--	--	<0.0479

**B-10**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	35.9	--
1.5'	--	23.2	--
4'	--	6.77	--

**B-12**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	4.79	<b>376</b>	<0.0436
1.5'	5.12	63	<b>0.0781 J</b>
4'	2.16 J	6.46	--

**DG-4**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	1.3	--
1.5'	--	1.56	--
4'	--	9.4	--

**B-14**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	3.87	--
1.5'	--	12.3	--
4'	2.09 J	5.94	<b>0.0456 J</b>
10'	4	4.46	<b>0.0495 J</b>
15'	--	--	<b>0.0745 J</b>
20'	--	--	<0.0424

**P-7**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	4.22	15.8	<0.0476
1.5'	1.93 J	5.52	<0.0444

**B-5**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	0.834	--
1.5'	--	5.01	--
4'	2.7	6.77	<b>0.105 J</b>
10'	1.29 J	11.9	<0.0430
15'	--	--	<b>0.135 J</b>
20'	--	--	<b>0.0932 J</b>

**B-3**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	<0.684	1.26	<b>0.387</b>
1.5'	4.71	11.4	<0.0418
4'	1.39 J	4.97	--

**B-6**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	4.51	8.63	<b>0.671</b>
1.5'	3.97	10.4	<b>0.518</b>

**DG-1**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	7.4	--
1.5'	--	7.06	--
4'	--	83.4	--

**P-1**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	<0.672	0.412 J	<0.0403
1.5'	5.39	123	<b>0.665</b>

**DG-2**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	<b>194</b>	--
1.5'	--	18.8	--
4'	--	8.1	--

**B-9**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	2.27	--
1.5'	--	1.5	--
4'	--	10.3	--

**DG-3**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	<b>182</b>	--
1.5'	--	15.5	--
4'	--	8.25	--

**P-2**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	<0.684	0.746	<0.0410
1.5'	4.51	<b>211</b>	<b>11.3</b>
4'	--	17.3	--
6'	--	6.83	--
8'	--	6.27	--

**B-11**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	<0.681	0.968	<0.049
1.5'	5.02	<b>206</b>	<b>1.11</b>
4'	2.48	6.43	<b>1.58</b>
10'	2.89	3.79	<b>1.35</b>
15'	--	--	<b>0.338</b>
20'	--	--	<b>0.228 J</b>
24'	--	--	<0.0468
28'	--	--	<0.0451

**P-4**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	4.38	43.9	<0.0462
1.5'	3.94	9.81	<b>0.0493 J</b>

**P-3**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	<0.681	0.352 J	<0.0409
1.5'	5.6	10.9	<0.0502

**B-15**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	<0.779	<0.228	<b>0.0598 J</b>
1.5'	6.29	9.44	<0.0473
4'	4.24	6.64	--

**B-13**

Depth:	Arsenic:	Lead:	Cyanide:
0.5'	--	0.293 J	--
1.5'	--	10.1	--
4'	--	6.36	--



Parcel Boundary  
APN: 018-151-39

Chase Bank

Jalisco Restaurant  
Former Watsonville-1  
Manufactured Gas Plant Site  
Cleanup & monitoring conducted  
under the direction of DTSC

La Rosa Supermercado

Laundromat

Residence

**Metal Concentrations in Soil (mg/kg)**  
(see Table 2 for details)

Note: Only Arsenic, Cyanide, & Lead concentrations shown. All other metal concentrations were below Commercial Screening Thresholds.

Highlighted concentration indicates result exceeds the most conservative commercial threshold value (ESL, RSL, or HERO Note 3).

**Arsenic:** Analysis of the 95% Upper Confidence Limit for arsenic in 14 shallow soil samples that were collected to establish background concentrations for metals in the Watsonville area yields a concentration of 7.48 mg/kg.

**SITE MAP WITH METALS SOIL SAMPLE ANALYTICAL RESULTS  
MAY & AUGUST 2016 ADDITIONAL SITE ASSESSMENT**

SITE: COMMERCIAL-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

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Hydrogeology and Environmental Engineering  
120 Westgate Drive, Watsonville, CA  
831.722.3580 / www.weber-hayes.com

**FIGURE 3**  
Project  
2X404

DATE: JUNE 2016  
FILE: 2X404\REPORT\2016-ASA\FIGURES\SOIL METAL



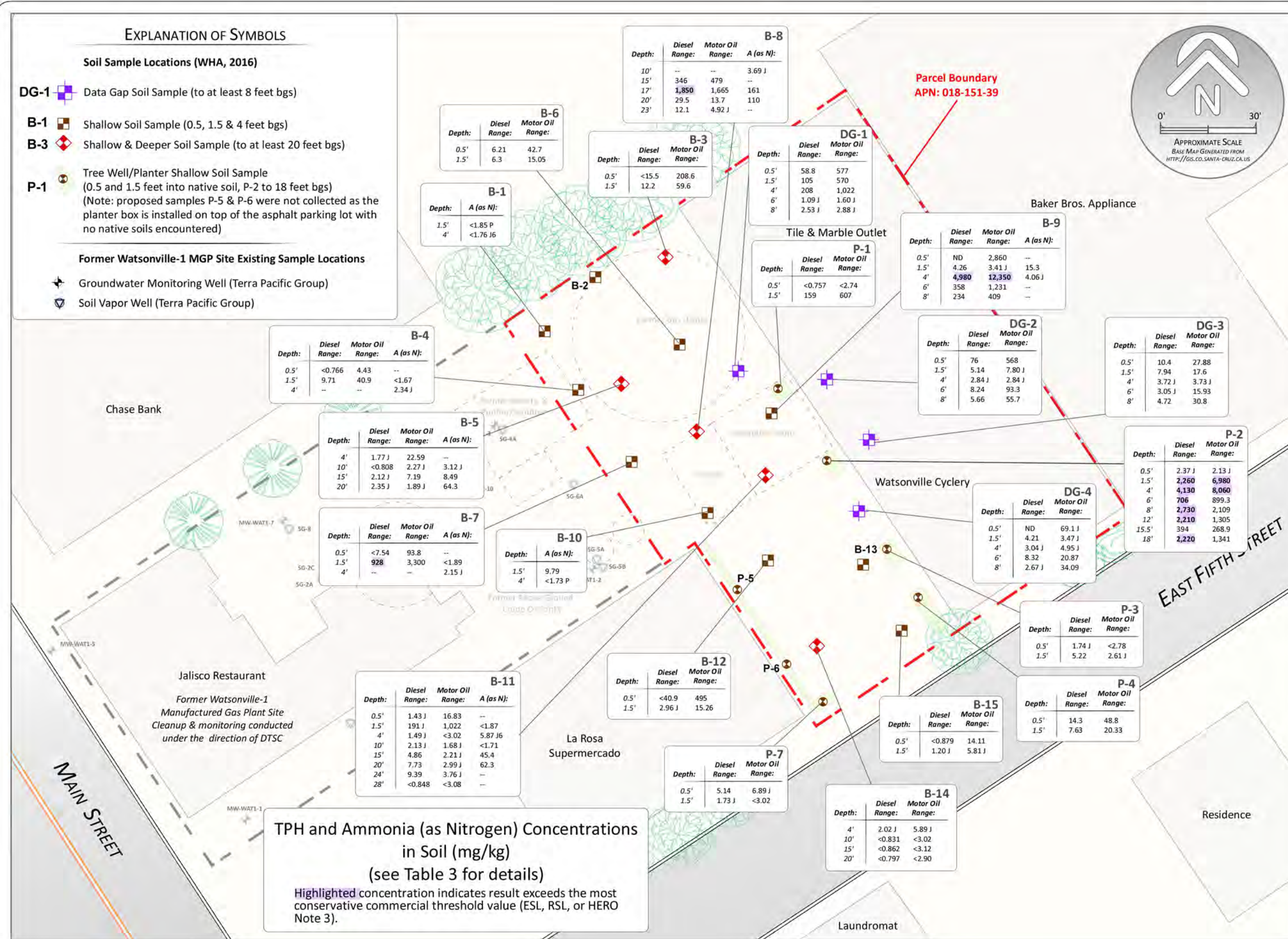
**EXPLANATION OF SYMBOLS**

**Soil Sample Locations (WHA, 2016)**

- DG-1** Data Gap Soil Sample (to at least 8 feet bgs)
- B-1** Shallow Soil Sample (0.5, 1.5 & 4 feet bgs)
- B-3** Shallow & Deeper Soil Sample (to at least 20 feet bgs)
- P-1** Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs)  
(Note: proposed samples P-5 & P-6 were not collected as the planter box is installed on top of the asphalt parking lot with no native soils encountered)

**Former Watsonville-1 MGP Site Existing Sample Locations**

- Groundwater Monitoring Well (Terra Pacific Group)
- Soil Vapor Well (Terra Pacific Group)



**SITE MAP WITH TPH & A (AS N) SOIL SAMPLE ANALYTICAL RESULTS - MAY & AUGUST 2016 ADDITIONAL SITE ASSESSMENT**

SITE: COMMERCIALY-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

DATE: JUNE 2016

FILE: 2x404\REPORT\2016-ASA\Figures\Soil\_TPH & A AS N



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**FIGURE 4**  
Project 2X404



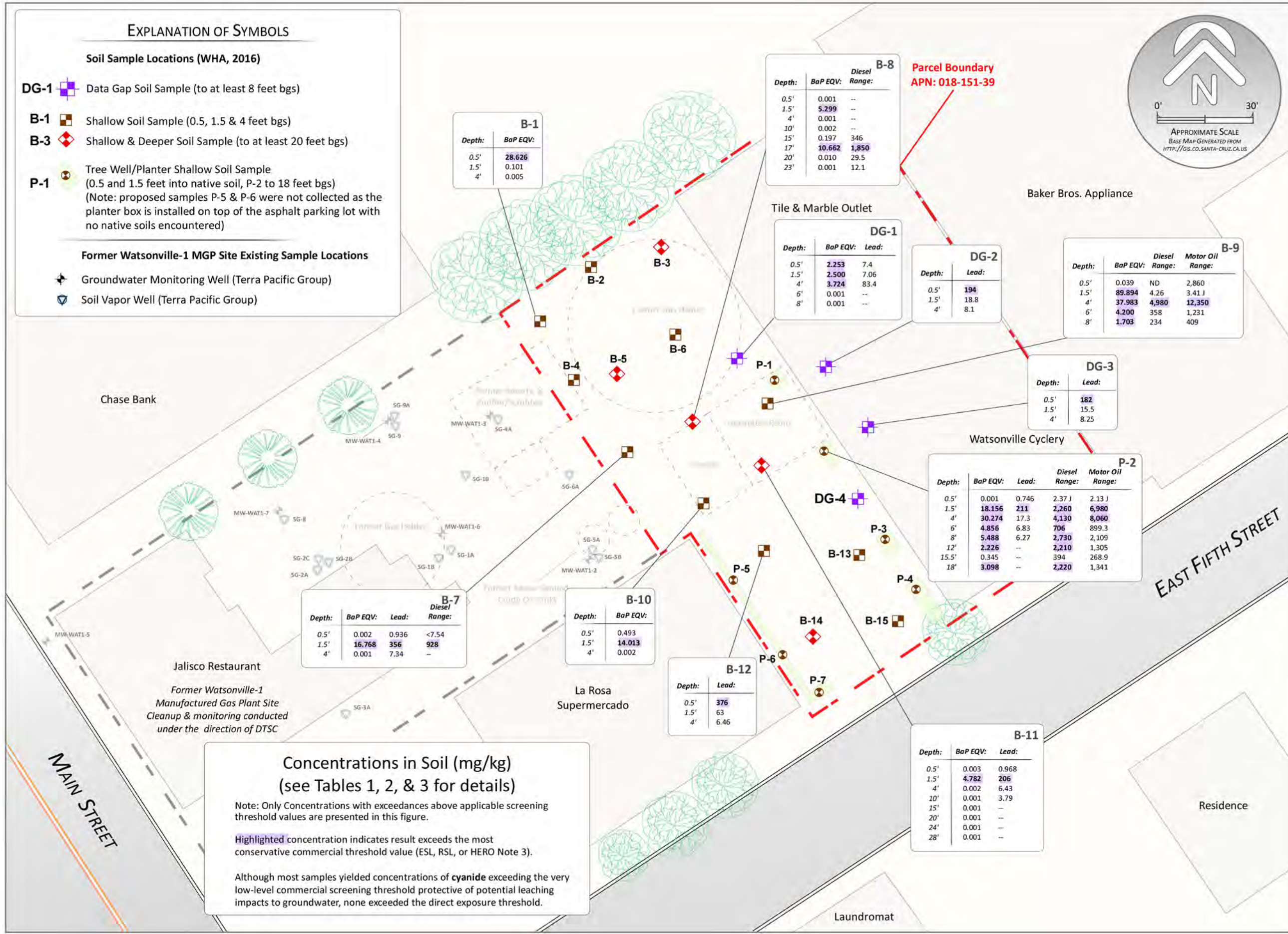
**EXPLANATION OF SYMBOLS**

**Soil Sample Locations (WHA, 2016)**

- DG-1** Data Gap Soil Sample (to at least 8 feet bgs)
- B-1** Shallow Soil Sample (0.5, 1.5 & 4 feet bgs)
- B-3** Shallow & Deeper Soil Sample (to at least 20 feet bgs)
- P-1** Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs)  
(Note: proposed samples P-5 & P-6 were not collected as the planter box is installed on top of the asphalt parking lot with no native soils encountered)

**Former Watsonville-1 MGP Site Existing Sample Locations**

- Groundwater Monitoring Well (Terra Pacific Group)
- Soil Vapor Well (Terra Pacific Group)



**B-1**

Depth:	BaP EQV:
0.5'	28.626
1.5'	0.101
4'	0.005

**B-8**

Depth:	BaP EQV:	Diesel Range:
0.5'	0.001	--
1.5'	5.299	--
4'	0.001	--
10'	0.002	--
15'	0.197	346
17'	10.662	1,850
20'	0.010	29.5
23'	0.001	12.1

**DG-1**

Depth:	BaP EQV:	Lead:
0.5'	2.253	7.4
1.5'	2.500	7.06
4'	3.724	83.4
6'	0.001	--
8'	0.001	--

**DG-2**

Depth:	Lead:
0.5'	194
1.5'	18.8
4'	8.1

**B-9**

Depth:	BaP EQV:	Diesel Range:	Motor Oil Range:
0.5'	0.039	ND	2,860
1.5'	89.894	4.26	3.41 J
4'	37.983	4,980	12,350
6'	4.200	358	1,231
8'	1.703	234	409

**DG-3**

Depth:	Lead:
0.5'	182
1.5'	15.5
4'	8.25

**P-2**

Depth:	BaP EQV:	Lead:	Diesel Range:	Motor Oil Range:
0.5'	0.001	0.746	2.37 J	2.13 J
1.5'	18.156	211	2,260	6,980
4'	30.274	17.3	4,130	8,060
6'	4.856	6.83	706	899.3
8'	5.488	6.27	2,730	2,109
12'	2.226	--	2,210	1,305
15.5'	0.345	--	394	268.9
18'	3.098	--	2,220	1,341

**B-7**

Depth:	BaP EQV:	Lead:	Diesel Range:
0.5'	0.002	0.936	<7.54
1.5'	16.768	356	928
4'	0.001	7.34	--

**B-10**

Depth:	BaP EQV:
0.5'	0.493
1.5'	14.013
4'	0.002

**B-12**

Depth:	Lead:
0.5'	376
1.5'	63
4'	6.46

**B-11**

Depth:	BaP EQV:	Lead:
0.5'	0.003	0.968
1.5'	4.782	206
4'	0.002	6.43
10'	0.001	3.79
15'	0.001	--
20'	0.001	--
24'	0.001	--
28'	0.001	--

**Concentrations in Soil (mg/kg)**  
(see Tables 1, 2, & 3 for details)

Note: Only Concentrations with exceedances above applicable screening threshold values are presented in this figure.

Highlighted concentration indicates result exceeds the most conservative commercial threshold value (ESL, RSL, or HERO Note 3).

Although most samples yielded concentrations of cyanide exceeding the very low-level commercial screening threshold protective of potential leaching impacts to groundwater, none exceeded the direct exposure threshold.

**SITE MAP WITH SOIL SAMPLE ANALYTICAL RESULTS EXCEEDING COMMERCIAL SCREENING LEVELS - MAY & AUGUST 2016 ADDITIONAL SITE ASSESSMENT**

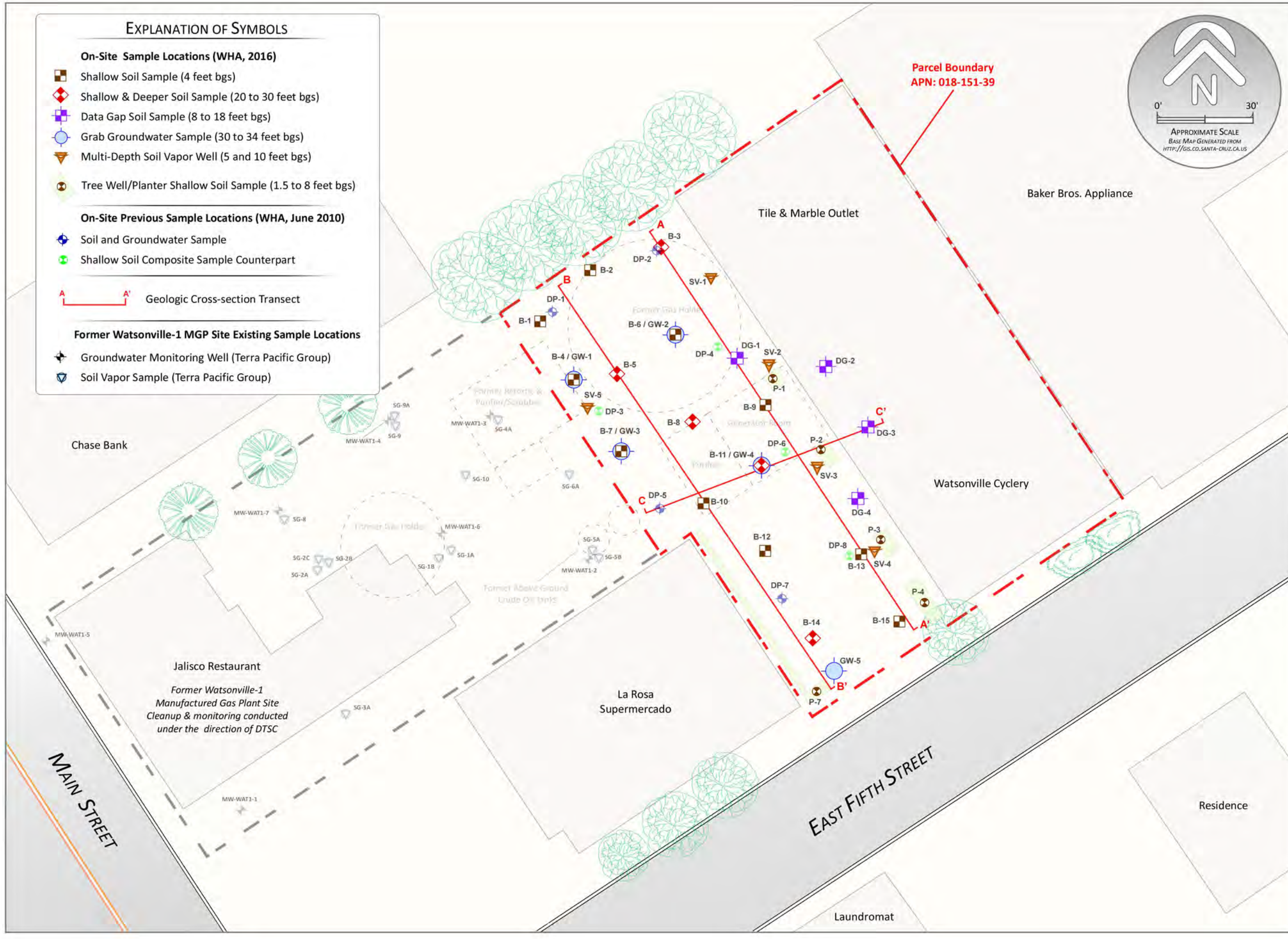
SITE: COMMERCIAL-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

**FIGURE 5**  
Project 2X404

DATE: JUNE 2016  
FILE: 2x404\REPORT\2016-ASA\FIGURES\SOIL ESCCEEDANCES

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**EXPLANATION OF SYMBOLS**

**On-Site Sample Locations (WHA, 2016)**

- Shallow Soil Sample (4 feet bgs)
- Shallow & Deeper Soil Sample (20 to 30 feet bgs)
- Data Gap Soil Sample (8 to 18 feet bgs)
- Grab Groundwater Sample (30 to 34 feet bgs)
- Multi-Depth Soil Vapor Well (5 and 10 feet bgs)
- Tree Well/Planter Shallow Soil Sample (1.5 to 8 feet bgs)

**On-Site Previous Sample Locations (WHA, June 2010)**

- Soil and Groundwater Sample
- Shallow Soil Composite Sample Counterpart

**Former Watsonville-1 MGP Site Existing Sample Locations**

- Groundwater Monitoring Well (Terra Pacific Group)
- Soil Vapor Sample (Terra Pacific Group)

**Geologic Cross-section Transect**



**SITE MAP WITH GEOLOGIC CROSS SECTION TRANSECT LINES A-A', B-B' AND C-C'**

**SITE: COMMERCIALY-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA**

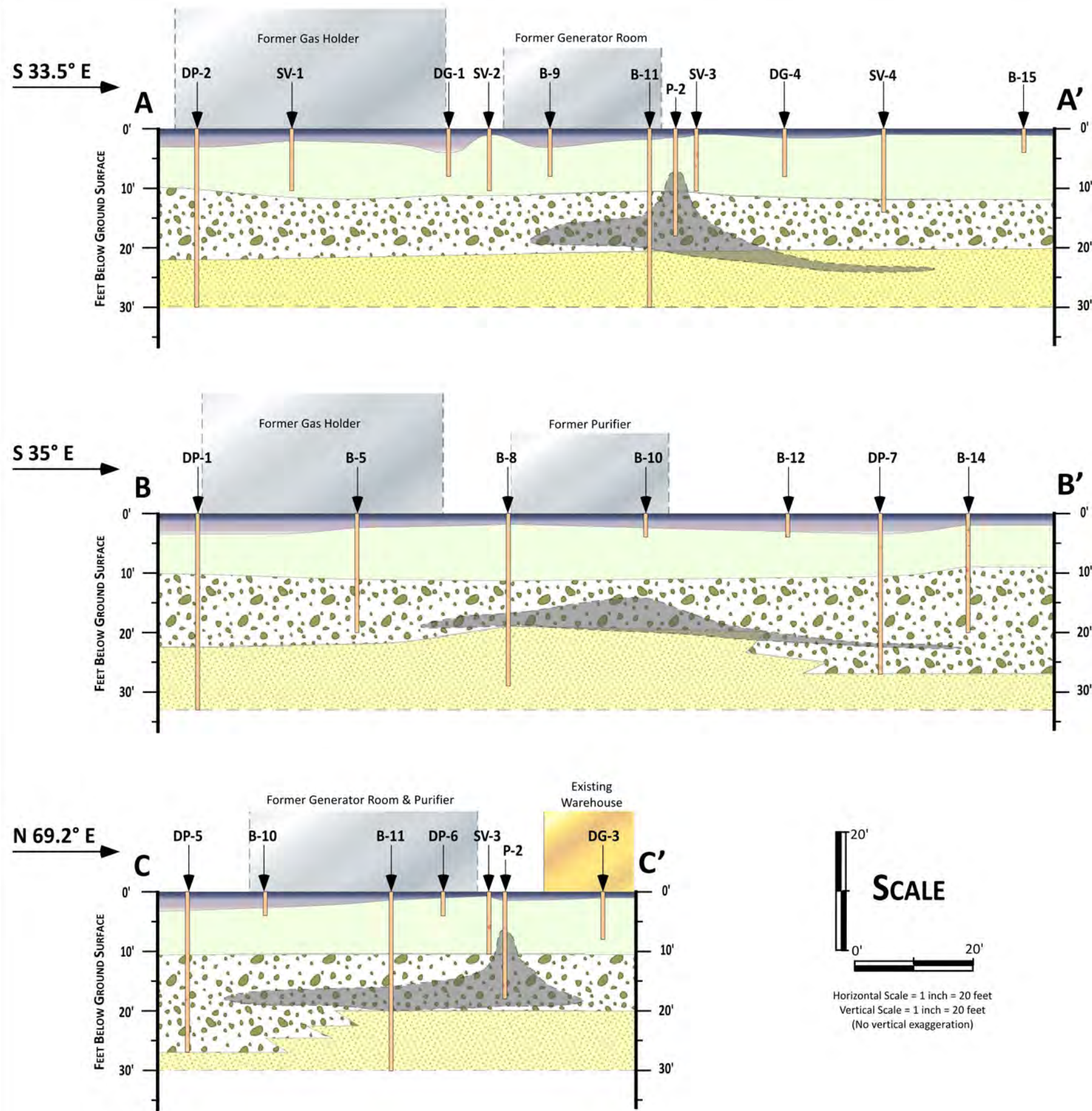
**FIGURE 6**  
Project 2X404

DATE: SEPTEMBER 2016

FILE: 2x404.ONETO-WATSONVILLE\REPORT\2016-ASA\FIGURES

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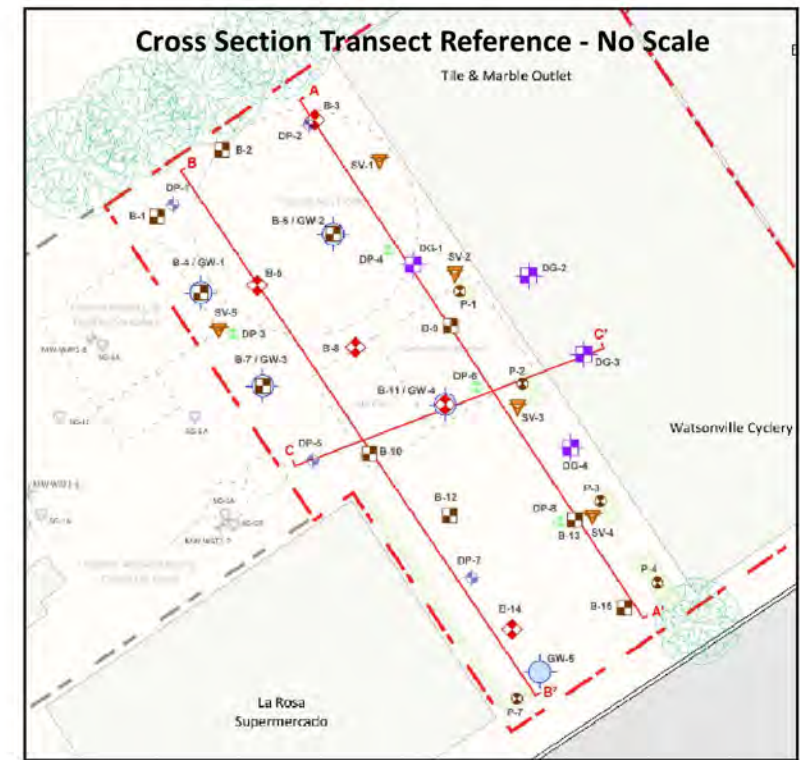
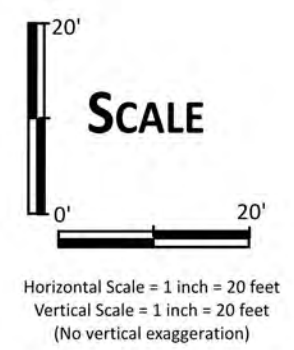


**EXPLANATION**

	Non-Native Fill and Base Rock
	Moderate Permeability Silty Sands (~10-30% silt fines) and Clayey Sands (~10-20% clay fines)
	Moderate Permeability Gravelly Well Graded Sands with up to ~15-25% gravels, ~10-15% silt to clay fines
	Higher Permeability Poorly Graded Sands with up to ~5-10% silt fines
	Observed soil discoloration and associated hydrocarbon odor (partially interpreted and projected onto cross section based on some borings that may not be shown on cross section)
	Soil Boring Location

**DP-1** Soil Boring Installed June 2010  
**B-11** Soil Boring Installed May 2016  
**P-2** Soil Boring Installed in planter box May & Aug. 2016  
**DG-1** Soil Boring Installed Aug. 2016  
**SV-1** Soil Vapor Well boring Installed May 2016

*Notes:*  
 Similar lithology has been related across areas between boring locations.  
 Most borings have been projected onto line of section - see Geologic Cross Section Transects details.



**FIGURE 7**  
Project 2X404

**GEOLOGIC CROSS SECTIONS A-A', B-B', AND C-C'**

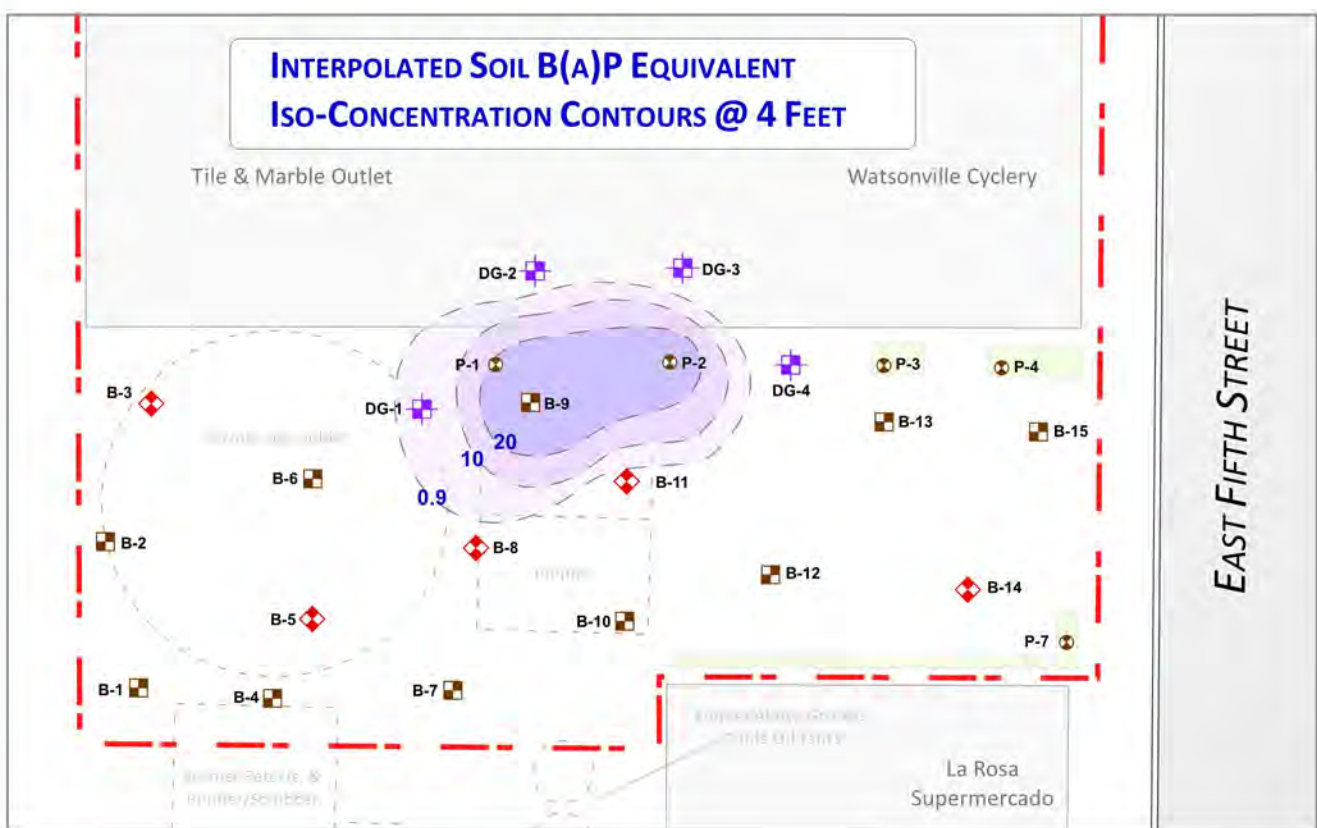
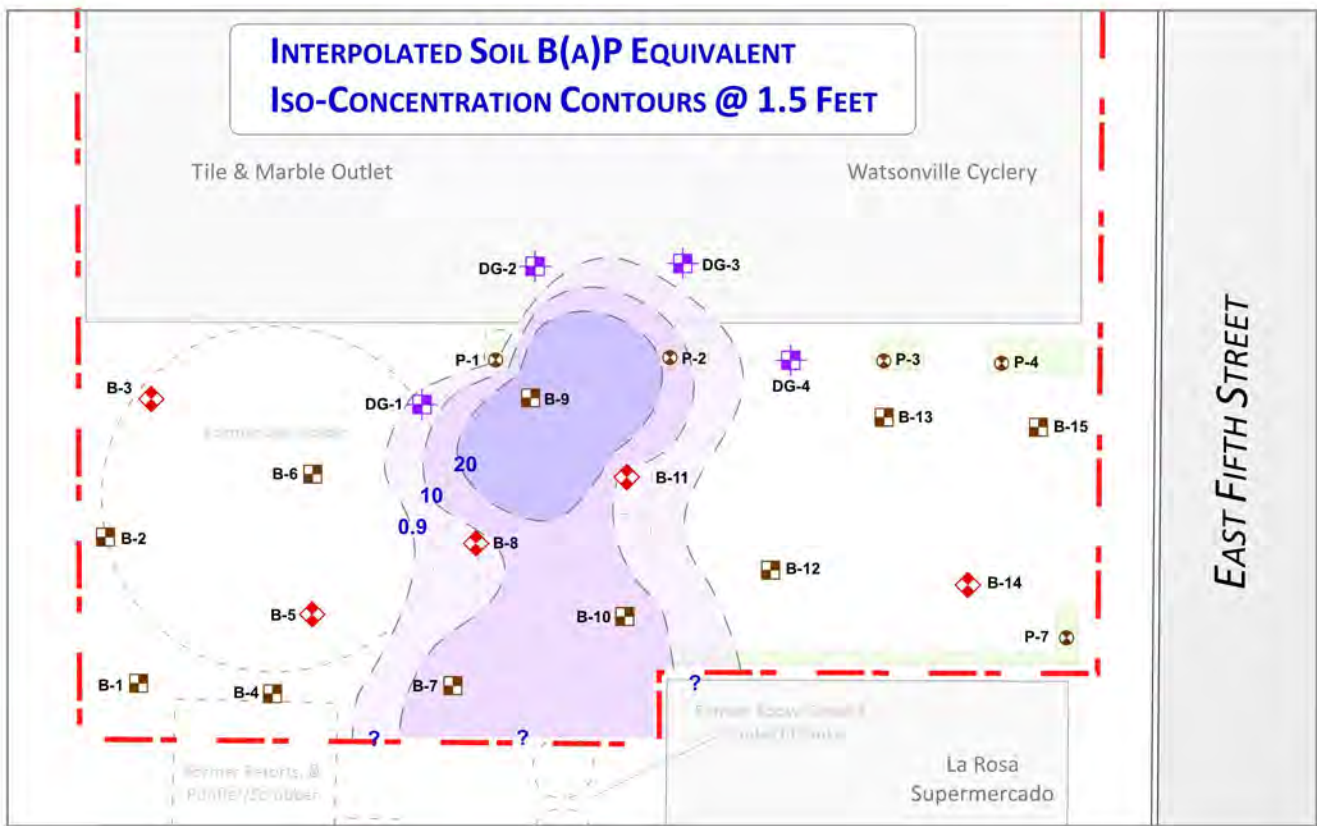
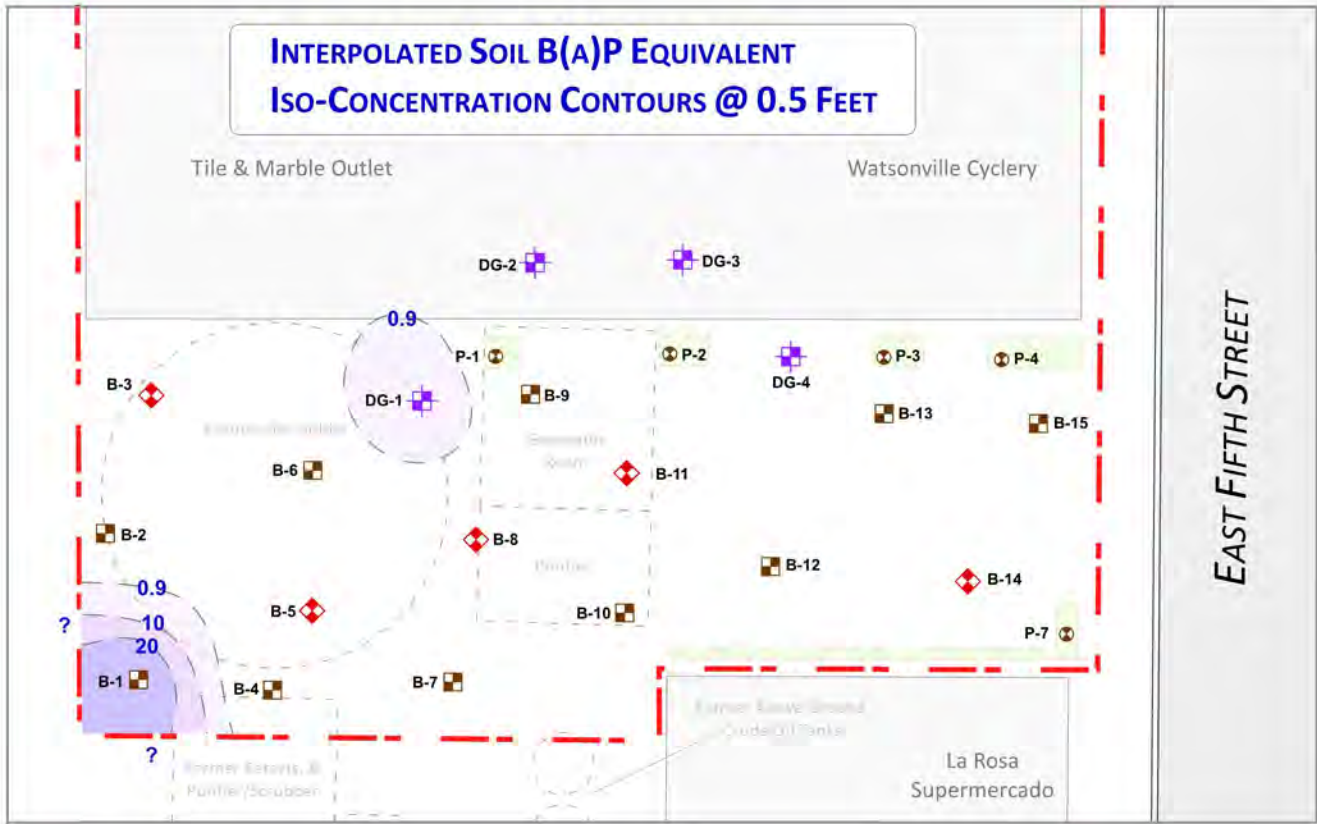
SITE: COMMERCIALY-ZONED WAREHOUSE PROPERTY  
 ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

DATE: SEPTEMBER 2016

FILE: 2X404.ONETO-WATSONVILLE\REPORT\2016-ASA\FIGURES

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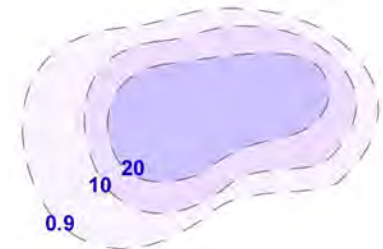


**EXPLANATION OF SYMBOLS**

**Soil Sample Locations (WHA, 2016)**

- DG-1** Data Gap Soil Sample (to at least 8 feet bgs)
- B-1** Shallow Soil Sample (0.5, 1.5 & 4 feet bgs)
- B-3** Shallow & Deeper Soil Sample (to at least 20 feet bgs)
- P-1** Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs)

**Interpolated B(a)P Equivalent Iso-Concentration Contours in Soil (0.9, 10 & 20 mg/kg) (see Table 1 for details)**



Only concentration shown for BaP Equivalent concentrations that exceeds the CA DTSC PAH 2009 Study Limit of 0.9 mg/kg



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**INTERPOLATED SOIL B(A)P EQUIVALENT ISO-CONCENTRATION CONTOURS  
MAY & AUGUST 2016 ADDITIONAL SITE ASSESSMENT**

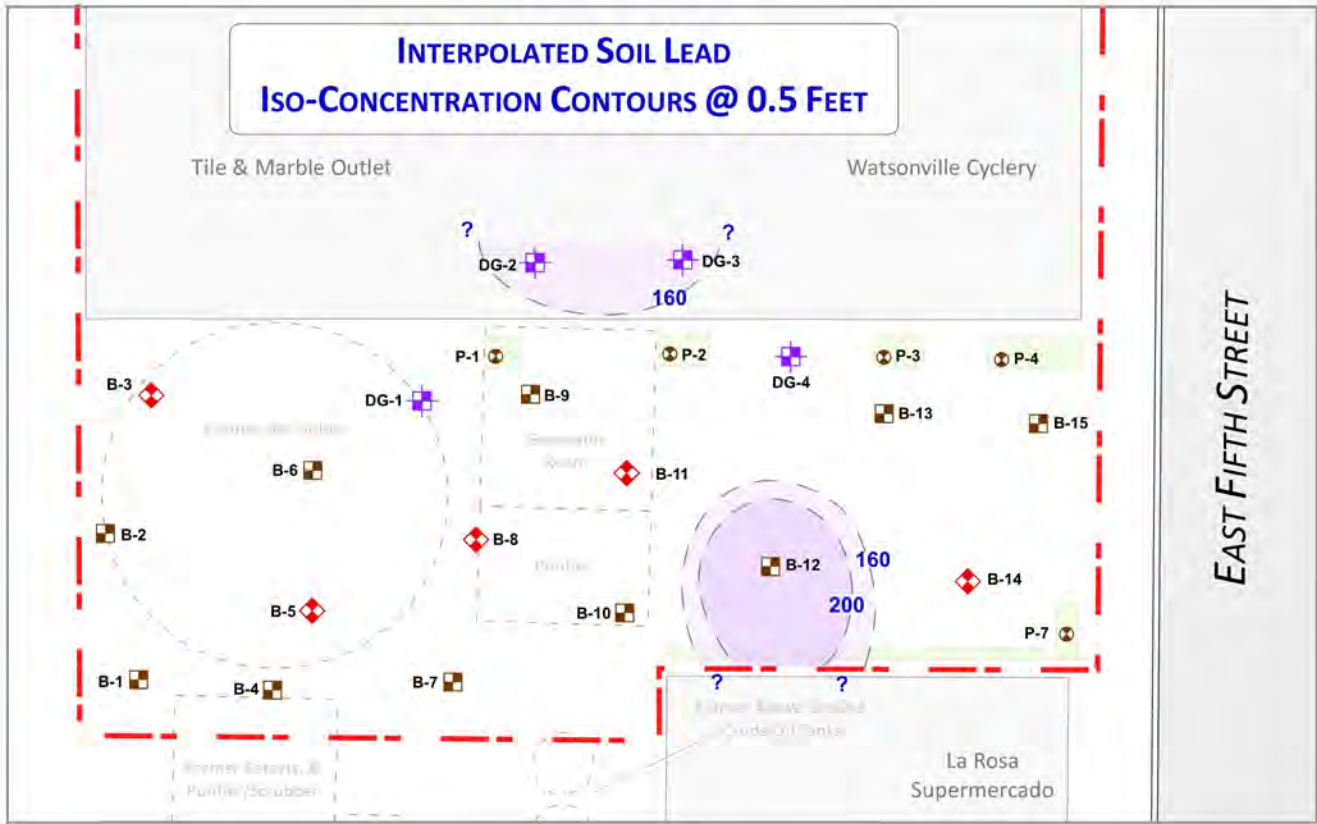
SITE: COMMERCIAL-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

DATE: SEPT. 2016

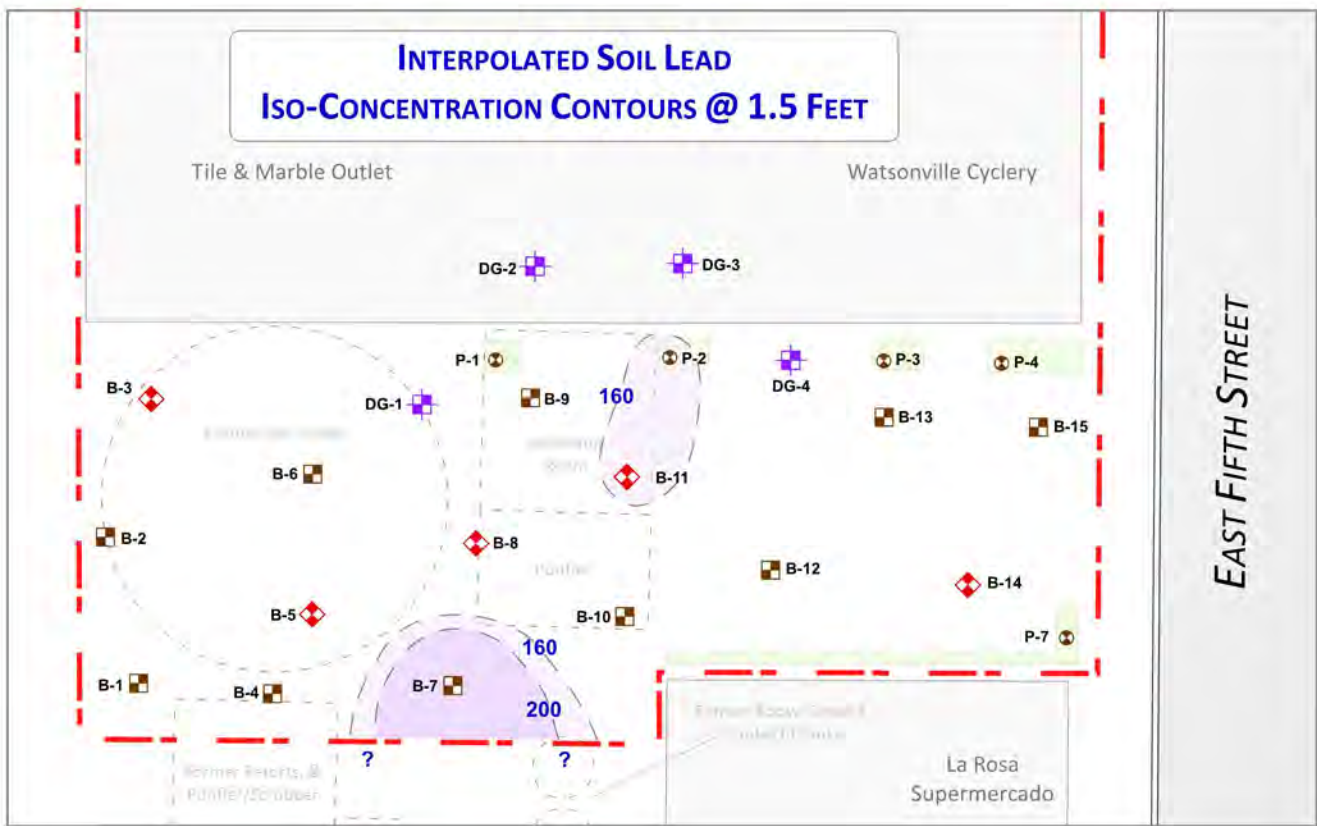
FILE: 2X404\REPORT\2016-ASA\FIGURES\

**FIGURE  
8**  
Project  
2X404

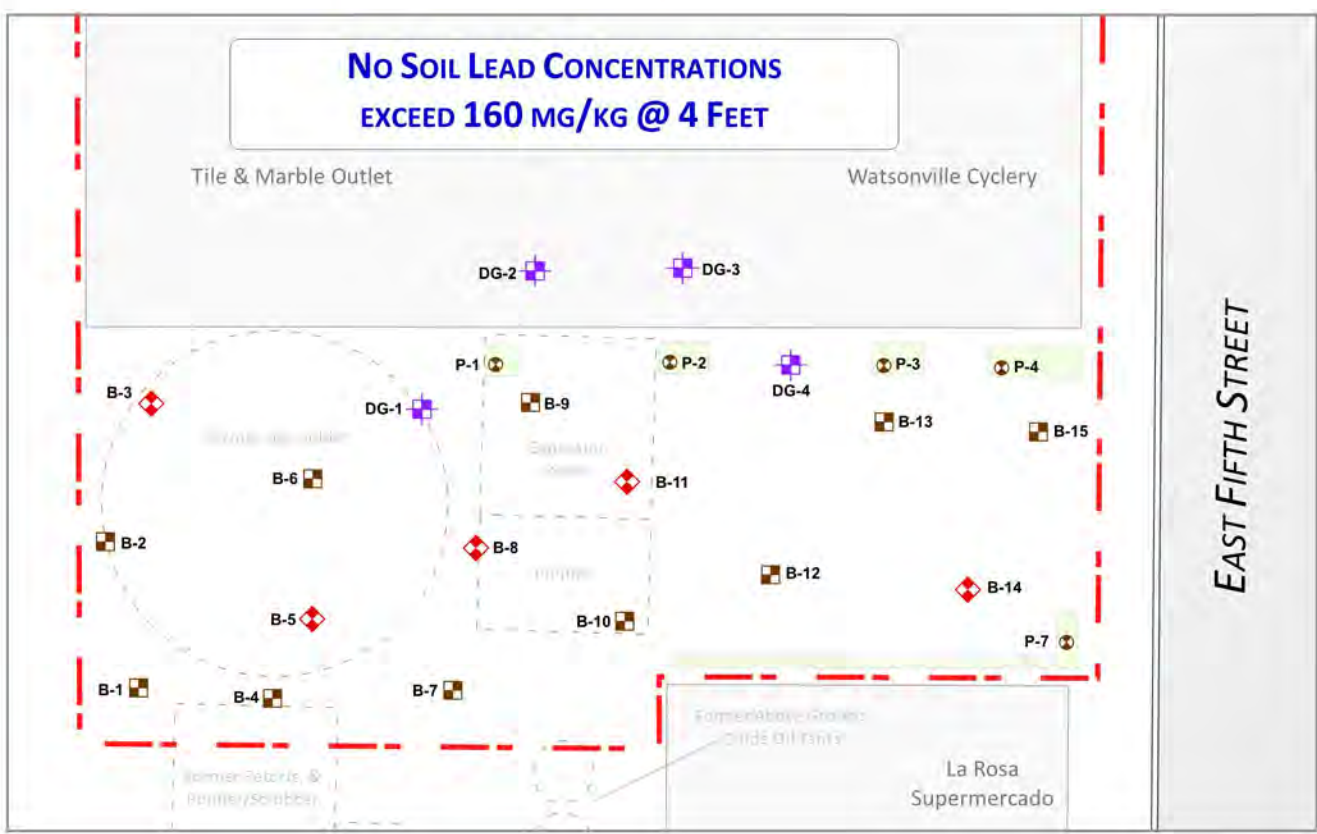




EAST FIFTH STREET



EAST FIFTH STREET



EAST FIFTH STREET

**EXPLANATION OF SYMBOLS**

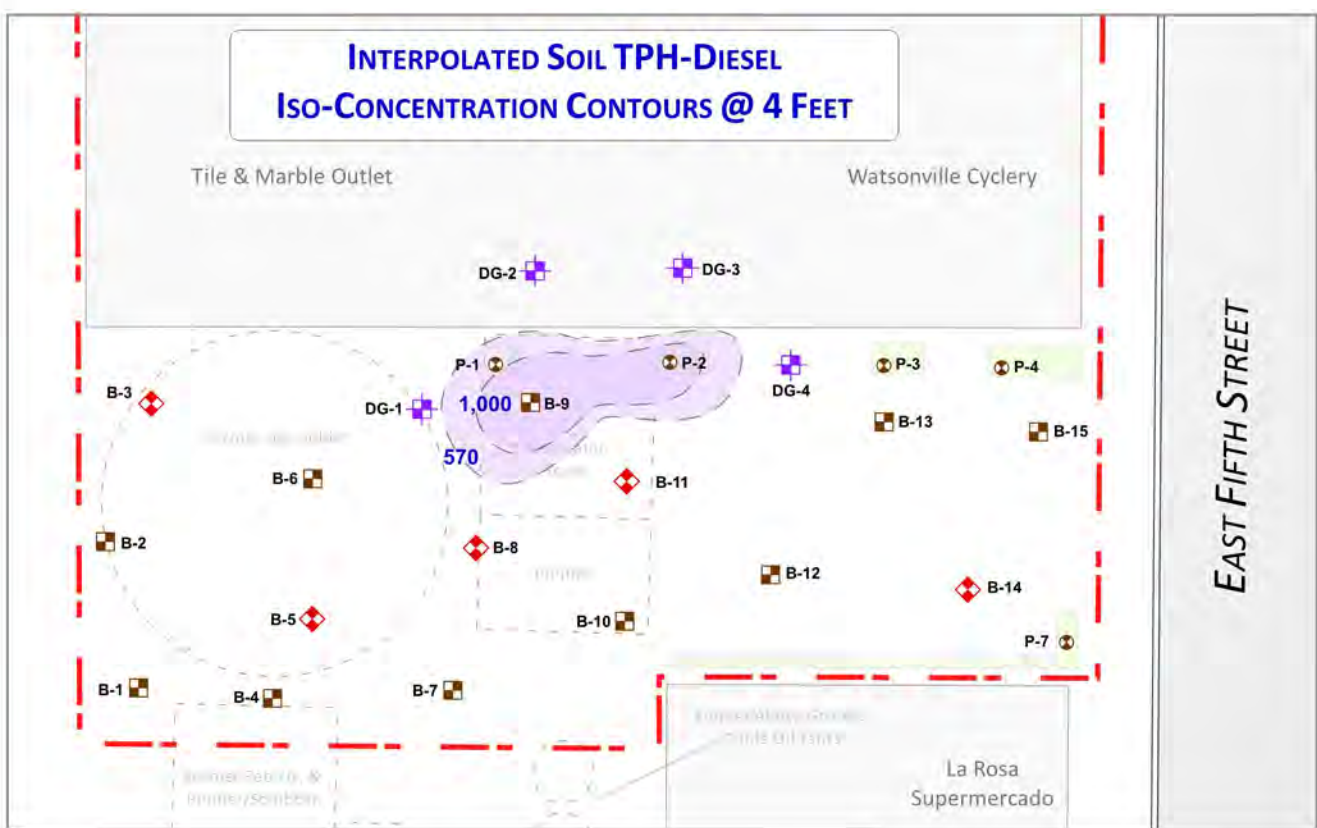
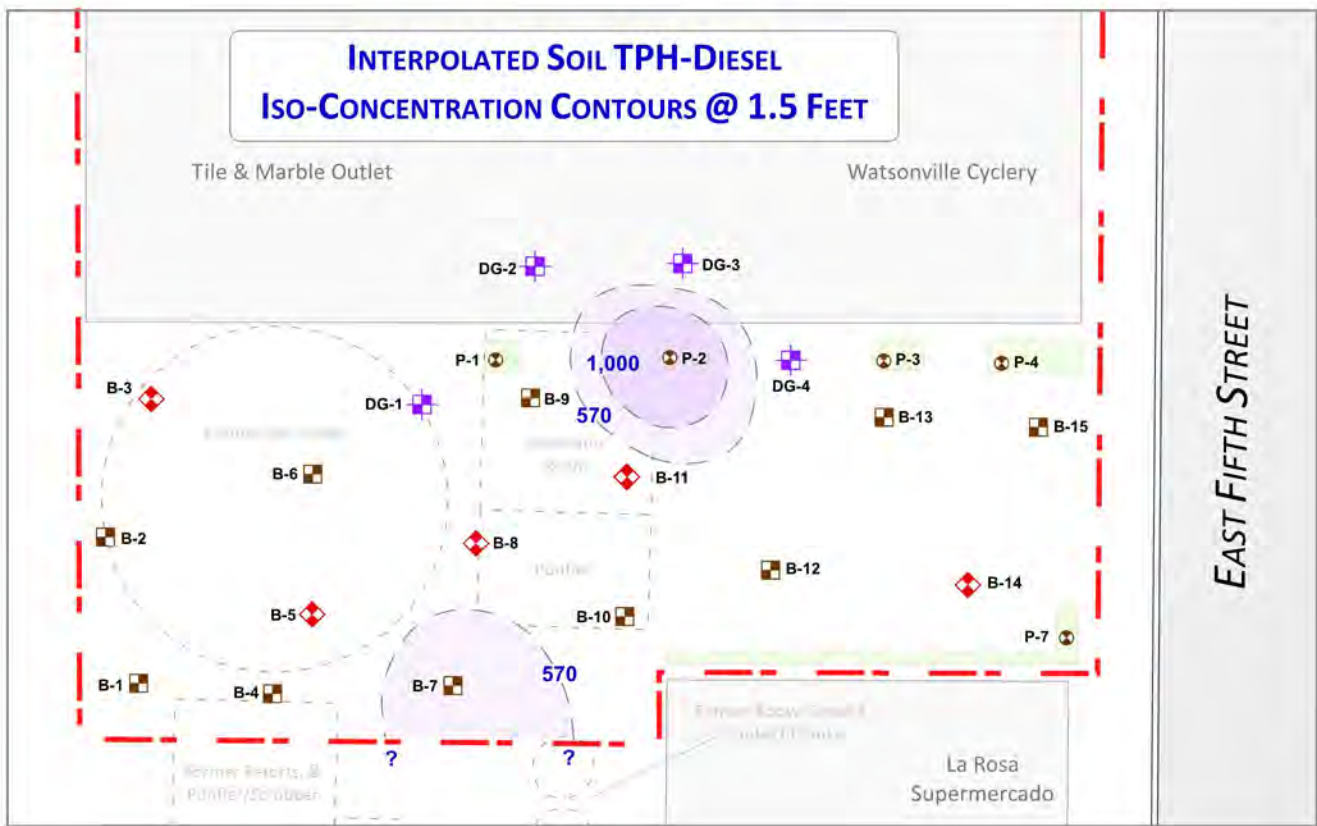
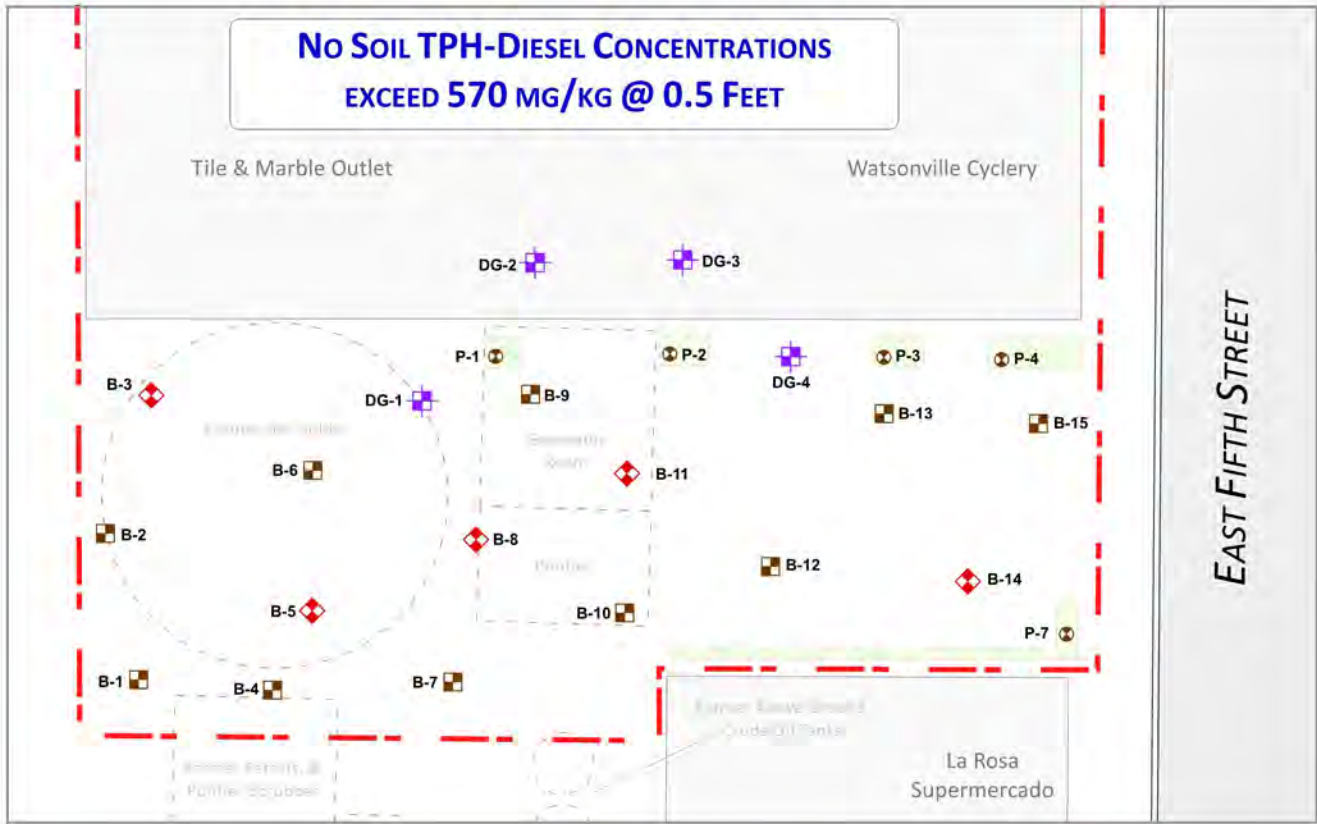
**Soil Sample Locations (WHA, 2016)**

- DG-1** Data Gap Soil Sample (to at least 8 feet bgs)
- B-1** Shallow Soil Sample (0.5, 1.5 & 4 feet bgs)
- B-3** Shallow & Deeper Soil Sample (to at least 20 feet bgs)
- P-1** Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs)

**Interpolated Lead Iso-Concentration Contours in Soil (160 & 200 mg/kg) (see Table 2 for details)**

Only concentration shown for Lead that exceed the Commercial Environmental Screening Level of 160 mg/kg



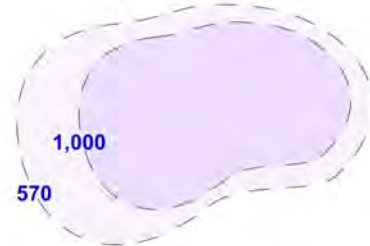


**EXPLANATION OF SYMBOLS**

**Soil Sample Locations (WHA, 2016)**

- DG-1** Data Gap Soil Sample (to at least 8 feet bgs)
- B-1** Shallow Soil Sample (0.5, 1.5 & 4 feet bgs)
- B-3** Shallow & Deeper Soil Sample (to at least 20 feet bgs)
- P-1** Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs)

**Interpolated TPH-Diesel Iso-Concentration Contours in Soil (570 & 1,000 mg/kg) (see Table 2 for details)**



Only concentration shown for TPH-diesel that exceed the Commercial Environmental Screening Level of 570 mg/kg

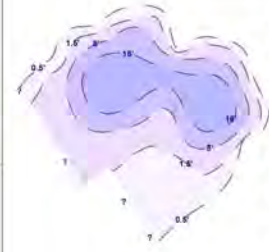
Some elevated TPH-motor oil exceeding the Commercial Environmental Screening Level of 5,100 mg/kg is co-located with elevated TPH-diesel presented on this figure (see Table 3 for details)



**EXPLANATION OF SYMBOLS**

**Soil Sample Locations (WHA, 2016)**

- DG-1** Data Gap Soil Sample (to at least 8 feet bgs)
- B-1** Shallow Soil Sample (0.5, 1.5 & 4 feet bgs; B-9 to 18 feet bgs)
- B-3** Shallow & Deeper Soil Sample (to at least 20 feet bgs)
- P-1** Tree Well/Planter Shallow Soil Sample (0.5 and 1.5 feet into native soil, P-2 to 18 feet bgs)



Interpolated depth of soil impacts exceeding commercial screening thresholds (0.5, 1.5, 8, & 16 foot depth of impacts contours are presented).

**NOTES:** Soil impacts above commercial screening thresholds likely extend deeper at borings P-2 and B-9.

2010 soil boring DP-7 (not shown on this figure) exhibited elevated concentrations of PAHs at 23 to 24 feet bgs.

**Former Watsonville-1 MGP Site Existing Sample Locations**

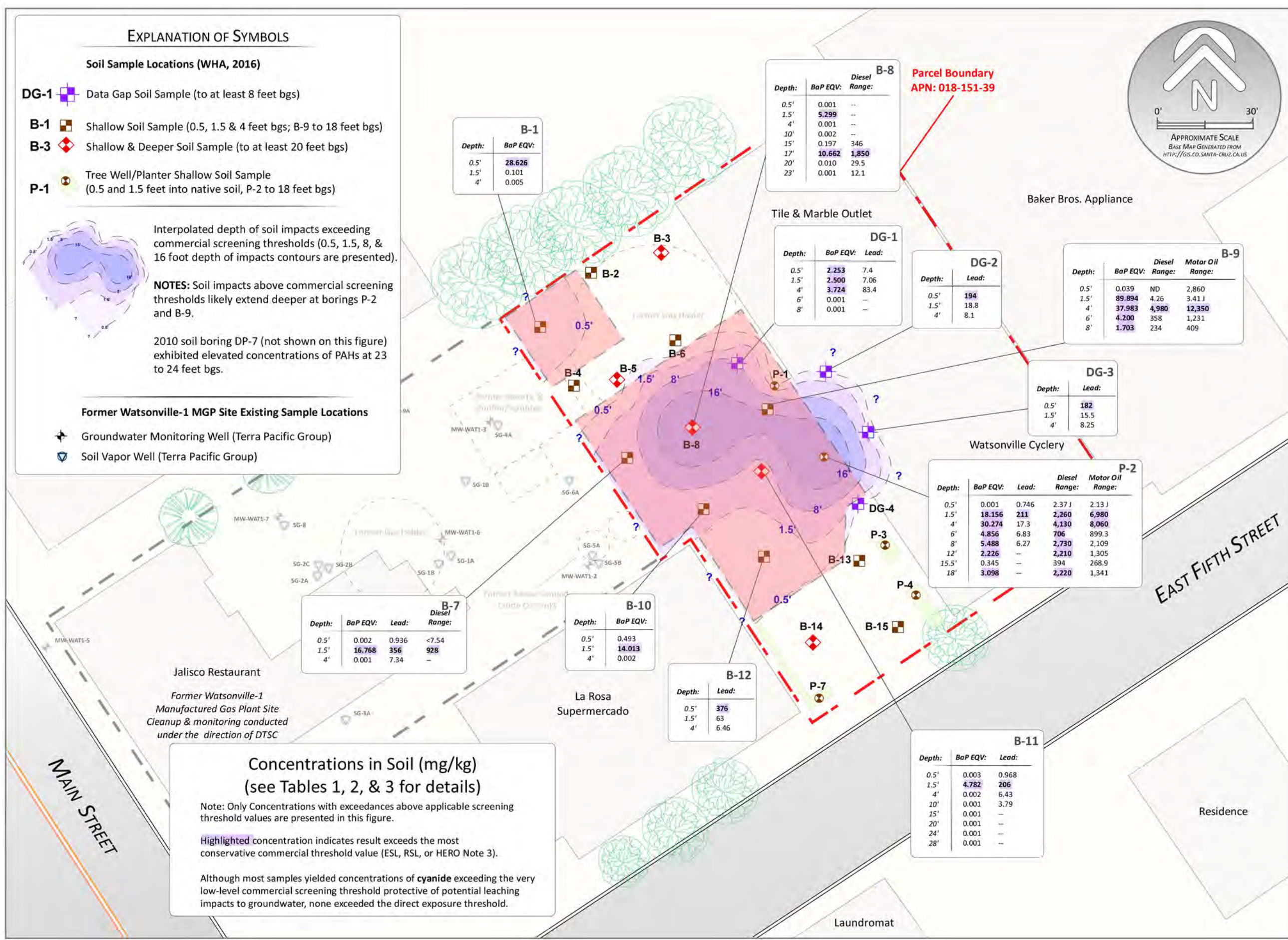
- Groundwater Monitoring Well (Terra Pacific Group)
- Soil Vapor Well (Terra Pacific Group)

**Concentrations in Soil (mg/kg)  
(see Tables 1, 2, & 3 for details)**

Note: Only Concentrations with exceedances above applicable screening threshold values are presented in this figure.

Highlighted concentration indicates result exceeds the most conservative commercial threshold value (ESL, RSL, or HERO Note 3).

Although most samples yielded concentrations of cyanide exceeding the very low-level commercial screening threshold protective of potential leaching impacts to groundwater, none exceeded the direct exposure threshold.



**B-1**

Depth:	BaP EQV:
0.5'	28.626
1.5'	0.101
4'	0.005

**B-8**

Depth:	BaP EQV:	Diesel Range:
0.5'	0.001	--
1.5'	5.299	--
4'	0.001	--
10'	0.002	--
15'	0.197	346
17'	10.662	1,850
20'	0.010	29.5
23'	0.001	12.1

**DG-1**

Depth:	BaP EQV:	Lead:
0.5'	2.253	7.4
1.5'	2.500	7.06
4'	3.724	83.4
6'	0.001	--
8'	0.001	--

**DG-2**

Depth:	Lead:
0.5'	194
1.5'	18.8
4'	8.1

**B-9**

Depth:	BaP EQV:	Diesel Range:	Motor Oil Range:
0.5'	0.039	ND	2,860
1.5'	89.894	4.26	3,411
4'	37.983	4,980	12,350
6'	4.200	358	1,231
8'	1.703	234	409

**DG-3**

Depth:	Lead:
0.5'	182
1.5'	15.5
4'	8.25

**P-2**

Depth:	BaP EQV:	Lead:	Diesel Range:	Motor Oil Range:
0.5'	0.001	0.746	2.37 J	2.13 J
1.5'	18.156	211	2,260	6,980
4'	30.274	17.3	4,130	8,060
6'	4.856	6.83	706	899.3
8'	5.488	6.27	2,730	2,109
12'	2.226	--	2,210	1,305
15.5'	0.345	--	394	268.9
18'	3.098	--	2,220	1,341

**B-7**

Depth:	BaP EQV:	Lead:	Diesel Range:
0.5'	0.002	0.936	<7.54
1.5'	16.768	356	928
4'	0.001	7.34	--

**B-10**

Depth:	BaP EQV:
0.5'	0.493
1.5'	14.013
4'	0.002

**B-12**

Depth:	Lead:
0.5'	376
1.5'	63
4'	6.46

**B-11**

Depth:	BaP EQV:	Lead:
0.5'	0.003	0.968
1.5'	4.782	206
4'	0.002	6.43
10'	0.001	3.79
15'	0.001	--
20'	0.001	--
24'	0.001	--
28'	0.001	--

**FIGURE 11**  
Project 2X404

**SITE MAP SHOWING INTERPOLATED DEPTHS OF SOIL IMPACTS EXCEEDING COMMERCIAL SCREENING THRESHOLDS FOR B(a)P, LEAD AND/OR TPH**

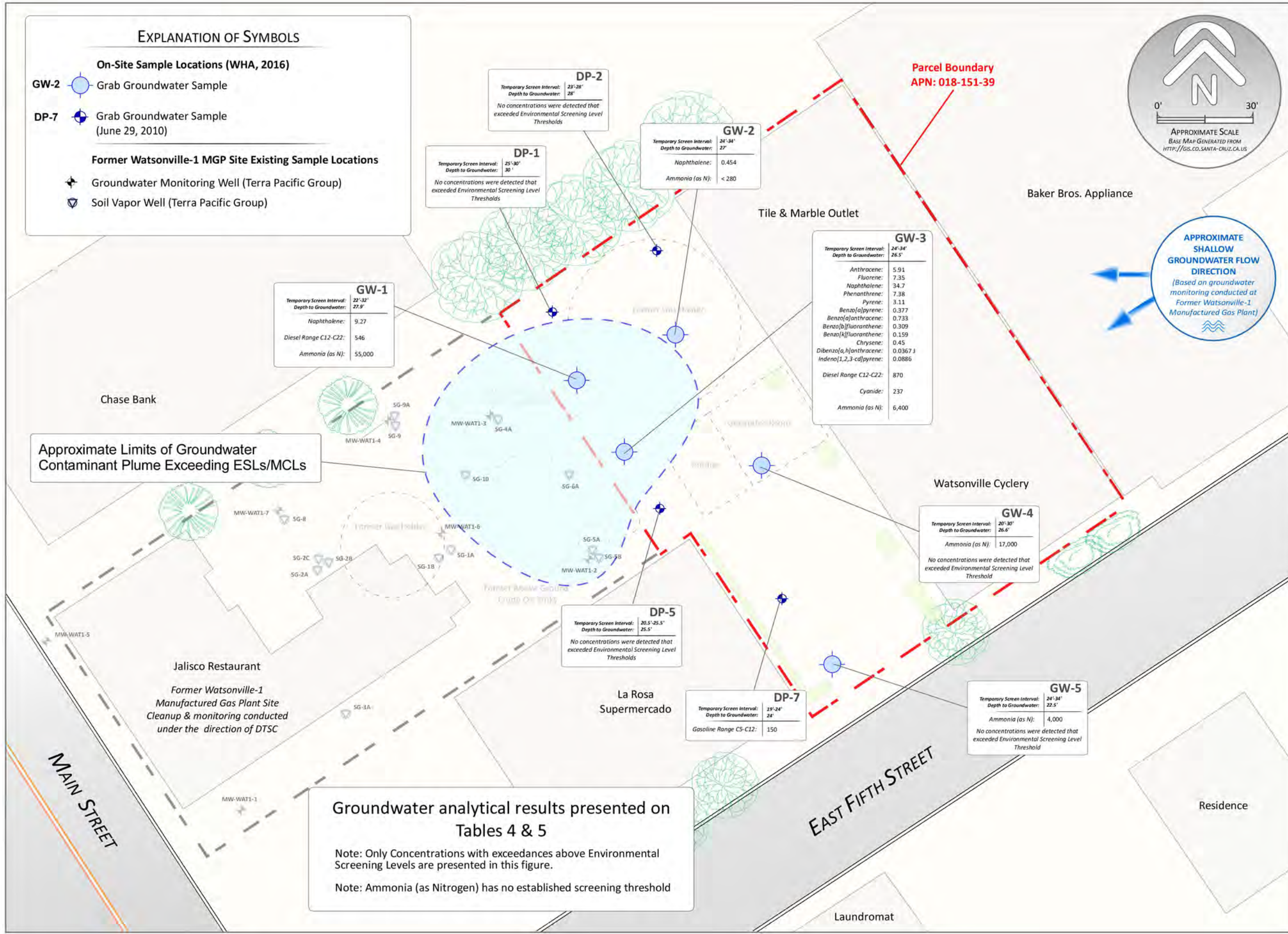
SITE: COMMERCIAL-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

DATE: SEPT. 2016  
FILE: 2X404\REPORT\2016-ASA\FIGURES\



**EXPLANATION OF SYMBOLS**

- On-Site Sample Locations (WHA, 2016)**
- GW-2** Grab Groundwater Sample
- DP-7** Grab Groundwater Sample (June 29, 2010)
- Former Watsonville-1 MGP Site Existing Sample Locations**
- Groundwater Monitoring Well (Terra Pacific Group)
- Soil Vapor Well (Terra Pacific Group)



**SITE MAP WITH CURRENT & PREVIOUS GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS**

**FIGURE 12**  
Project 2X404

SITE: COMMERCIALY-ZONED WAREHOUSE PROPERTY  
ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA


DATE: JUNE 2016

FILE: 2X404.ONETO-WATSONVILLE\REPORT\2016-ASA\FIGURES\GROUNDWATER



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**EXPLANATION OF SYMBOLS**

**SV-1**  **On-Site Sample Locations (WHA, 2016)**  
Multi-Depth Soil Vapor Well (5 and 10 feet bgs)

**Former Watsonville-1 MGP Site Existing Sample Locations**

-  Groundwater Monitoring Well (Terra Pacific Group)
-  Soil Vapor Sample (Terra Pacific Group)

**SV-5**

Depth:	5'	10'
TPH-g	<280	<280
Benzene	<5.8	<5.9
Toluene	<4.4	<4.5
EthylBenzene	<3.9	<3.9
Xylenes	<12	<12
Naphthalene	<150	<150
Acetone	<4.3	18

All Other VOCs = ND

**SV-1**

Depth:	5'	10'
TPH-g	<280	<280
Benzene	<5.9	<5.8
Toluene	<4.5	<4.4
EthylBenzene	<3.9	<3.9
Xylenes	<12	<12
Naphthalene	<150	<150
1,2-Dibromoethane	<13	99
PCE	<9.8	65

All Other VOCs = ND

**SV-5 (TO-17)**

Depth:	5'	10'
TPH-g	380	370
Benzene	<16	<16
Toluene	18	28
EthylBenzene	<16	<16
Xylenes	57	31
Naphthalene	<16	<16

All Other VOCs = ND

**SV-2**

Depth:	5'	10'
TPH-g	<290	<280
Benzene	17	<6.0
Toluene	20	<4.5
EthylBenzene	<4.0	<4.0
Xylenes	<12	<12
Naphthalene	<160	<160
Styrene	<3.1	31

All Other VOCs = ND

**SV-3**

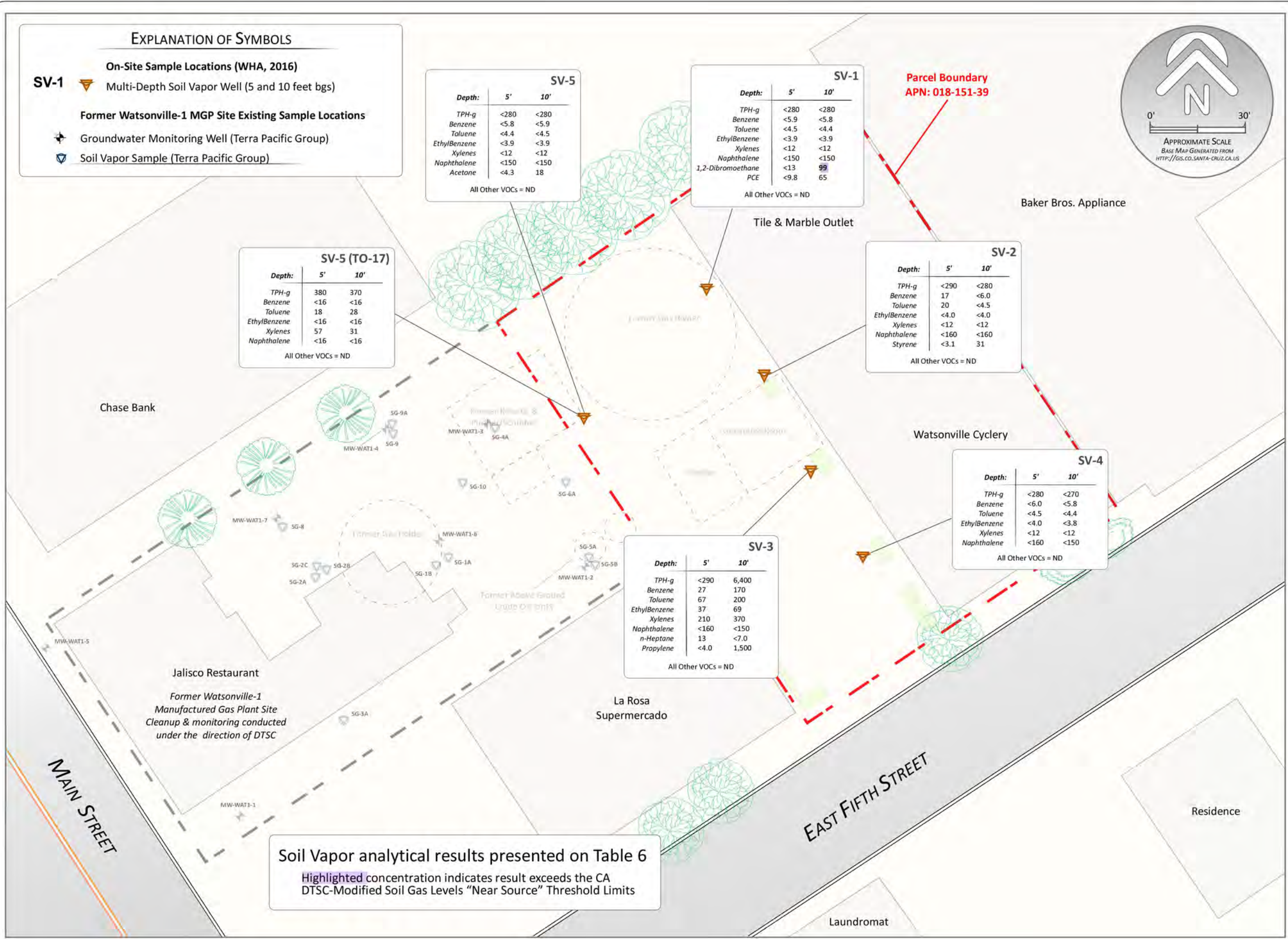
Depth:	5'	10'
TPH-g	<290	6,400
Benzene	27	170
Toluene	67	200
EthylBenzene	37	69
Xylenes	210	370
Naphthalene	<160	<150
n-Heptane	13	<7.0
Propylene	<4.0	1,500

All Other VOCs = ND

**SV-4**

Depth:	5'	10'
TPH-g	<280	<270
Benzene	<6.0	<5.8
Toluene	<4.5	<4.4
EthylBenzene	<4.0	<3.8
Xylenes	<12	<12
Naphthalene	<160	<150

All Other VOCs = ND



Soil Vapor analytical results presented on Table 6  
 Highlighted concentration indicates result exceeds the CA DTSC-Modified Soil Gas Levels "Near Source" Threshold Limits

**SITE MAP WITH SOIL VAPOR SAMPLE ANALYTICAL RESULTS  
 MAY 2016 ADDITIONAL SITE ASSESSMENT**

SITE: COMMERCIALY-ZONED WAREHOUSE PROPERTY  
 ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA

**FIGURE 13**  
 Project 2X404

DATE: JANUARY 2016  
 FILE: 2X404.ONETO-WATSONVILLE\FIGURES\2015



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## **APPENDIX B**

### **REVIEW OF FORMER WATSONVILLE-1 MANUFACTURED GAS PLANT CHARACTERIZATION & CORRECTIVE ACTIONS**

**INCLUDES: SELECT TABLES & FIGURES**

**(618 Main Street, Watsonville - Adjacent Jalisco Restaurant Property)**



## REVIEW OF FORMER WATSONVILLE-1 MANUFACTURED GAS PLANT CHARACTERIZATION & CORRECTIVE ACTIONS

Research of previous environmental investigations at the adjacent commercial restaurant parcel to the west (618 Main Street, Jalisco Restaurant) has documented evidence of soil and groundwater contamination that is associated with the same manufactured gas plant that operated on the subject Site. The adjacent property characterization and cleanup activities have been ongoing since approximately 1986 and investigation is currently under the direction of the California Department of Toxic Substances Control (DTSC). Additional details, including electronic copies of previous reports can be obtained at the State GeoTracker database website<sup>14</sup>.

Adjacent property characterization activities have included extensive sampling of soil, groundwater and soil vapor media that has provided sufficient definition of subsurface chemical impacts to guide conservative, regulatory approved corrective actions (i.e., soil removal, institutional controls and ongoing natural attenuation monitoring) that are protective of the commercial land use scenario. A land use covenant has been recorded for this property that is restrictive of residential land use.

The following provides a brief synopsis of soil, groundwater and soil vapor sample results for this adjacent property. Select Tables and Figures from previous investigations are also included in Appendix B for reference.

### SOIL

Numerous soil samples have been collected throughout the property, with the vast majority collected in 1991, 2001 and 2004. Site *Chemicals of Concern (COCs)* in soil include: polynuclear aromatic hydrocarbons (PAHs), and to a much lesser extent Naphthalene, Total Petroleum Hydrocarbons (TPH), and Cyanide. The following worst case concentrations for each COC in soil have been historically detected at this site:

Worst Case concentration of COCs in Soil Historically Detected at 618 Main Street, Watsonville

Chemical of Concern	Depth Interval	Concentration (mg/kg)	Sample Location	Sample Depth (feet, bgs)
PAHs expressed as benzo(a)pyrene equivalent	< 10 feet	17.161	GP1	0.5
	> 10 feet	21.035	GP1	15

<sup>14</sup> [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=SLT3S1091318](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT3S1091318)



*Remedial Action Plan Completion Report*  
 25 East Fifth Street, Watsonville  
 January 2018 / Project: 2X404

Worst Case concentration of COCs in Soil Historically Detected at 618 Main Street, Watsonville

Chemical of Concern	Depth Interval	Concentration (mg/kg)	Sample Location	Sample Depth (feet, bgs)
Naphthalene	< 10 feet	0.25	HA10	1.5
	> 10 feet	320	GP4	15
TPH-gasoline	< 10 feet	8.1	DSS-1-WAT1-2	surface
	> 10 feet	5,300*	GP1	15
TPH-diesel	< 10 feet	2,100	GP1	2.5
	> 10 feet	14,000		15
TPH-motor oil	< 10 feet	4,200	GP1	2.5
	> 10 feet	9,500		15
Cyanide	< 10 feet	14.3	MW-WAT1-2	5
	> 10 feet	13.1		13

\* = Concentrations of toluene, ethylbenzene, and xylenes detected at 19, 28 and 400 mg/kg, respectively

The worst case soil concentrations were detected at the rear (eastern) portion of the property, within the footprint of historic MGP infrastructure.

#### GROUNDWATER

Between 1991 and 2009 a total of seven (7) groundwater monitoring wells have been installed throughout the property (MW-WAT1-1 through -7; see Figures in Appendix B). Groundwater levels are documented to fluctuate between approximately 16 and 32 feet bgs and documented to consistently flow in a northwesterly to southwesterly direction (generally westerly with some seasonal variation). Groundwater is sampled semi-annually (October and April) from all wells and analyzed for the following chemicals:

- TPH-diesel and TPH-motor oil by EPA Method 8015B
- TPH-gas and BTEX/MTBE by EPA Method 8260B
- PAHs by EPA Method 8270SIM
- Arsenic by EPA Method 6010B
- Total cyanide by Standard Method 4500, and
- Ammonia as nitrogen by Standard Method 4500



Overall, impacted groundwater is generally limited to the eastern part of the property in the vicinity of wells MW-WAT1-3 and MW-WAT1-4 with the highest concentrations of COCs observed in groundwater at upgradient (eastern) well MW-WAT1-3. Decreasing concentrations of TPH-diesel, TPH-gas and BTEX have been observed since the April 2009. These compounds continue to be trace to non-detectable at the downgradient wells (i.e., MW-WAT1-5 and MW-WAT1-7) indicating that the groundwater contaminant plume is stable.

The following provides a brief synopsis of groundwater sample analytical results:

### **Petroleum Hydrocarbons**

Low levels of TPH-diesel have been consistently detected in the groundwater samples collected from well MW-WAT1-3 and MW-WAT1-4, at concentrations periodically exceeding the Central Coast Water Quality Objective of 1,000 µg/L. Only trace to non-detectable concentrations of TPH-gas and TPH-motor oil are detected in the monitoring well network.

### **BTEX**

BTEX compounds are currently detected in well MW-WAT1-3 at concentrations of 3.2 µg/L, 1.8 µg/L, 17 µg/L and 17 µg/L, respectively (April 2015). Benzene was detected slightly above the Maximum Contaminant Levels (MCL) of 1.0 µg/L. The BTEX detections in groundwater samples from well MW-WAT1-3 are consistent with historical ranges of concentrations for this well and are relatively low-level. These compounds are not detected in any of the other site wells, with the exception of a few sporadic low-level concentrations detected in wells MW-WAT1-2 and MW-WAT1-4.

### **PAHs**

Relatively low-level concentrations of PAHs, including naphthalene, are detected in monitoring wells MW-WAT1-3 and MW-WAT1-4. All other wells in the monitoring network remain free of PAHs.

### **Arsenic & Cyanide**

Low-levels of arsenic have been historically detected in well MW-WAT1-3 generally below the MCL of 10 µg/L and has remained free of arsenic since 2011. All other wells in the monitoring network remain free of arsenic.

Total cyanide has been historically detected in well MW-WAT1-2 at concentrations above the MCL of 150 µg/L. Low-level concentrations of total cyanide, below the MCL, have been periodically detected in all other wells in the monitoring network.



## SOIL GAS

In October 2009, nine (9) dual-depth permanent soil gas probes were installed throughout the property (SG-1 through -6 and -8 through -10; see Figure 2 and Appendix A). Additional soil gas probes were installed in May 2011 to provide additional sampling points adjacent to probe locations where samples could not be collected due to low flow conditions. Soil gas sample depths at each location are set at 5 feet bgs and either between 9 and 10 feet bgs or 14.5 feet bgs.

Soil gas samples from each probe location are collected and analyzed on a semi-annual basis for TPH-gas and VOCs (including naphthalene) by EPA Method TO-15. In general, the highest TPH-gas and VOC concentrations detected in soil gas samples are encountered the eastern portion of the property's parking lot (at probe locations SG-4A and SG-6A). These two probes are situated where elevated soil impacts were encountered during previous investigations. In the western portion of the property soil gas VOCs, if detected, are at concentrations significantly lower than those reported at locations SG-4A and SG-6A.

### ***Risk-Based Soil Gas Screening Levels***

Results of soil gas sampling and analysis are evaluated with respect to site-specific risk based screening levels (RBSLs) that were developed for the site to be protective of restaurant building occupants (commercial risk scenario)<sup>15</sup>. The site-specific screening level human health risk evaluation was based on transport modeling of VOCs from soil gas to indoor air using the USEPA-recommended Johnson and Ettinger Model for soil gas and using site-specific inputs (i.e., multiple chemicals, soil layers and site-specific building parameters such as having a basement and slab-on-grade construction). The screening levels were calculated using conservative assumptions and are based on a commercial / industrial exposure scenario with a target risk level of  $10^{-5}$  and a hazard index of 1.0. From the attenuation factors predicted using the Johnson and Ettinger Model and from risk-based target indoor air concentrations, site-specific risk-based screening levels (RBSLs) for chemicals of concern in soil gas were calculated for both shallow (5 feet bgs) and deeper (15-foot bgs) impacts. A tabular summary of the soil gas RBSLs is included in this Appendix for reference.

A *Contingency Plan for Soil Gas Sampling*<sup>16</sup> was developed for the property to present steps to be taken in the unlikely event that soil gas concentrations exceed the site-specific RBSLs. If the cumulative potential cancer risk is greater than  $10^{-5}$  or the hazard index is greater than 1.0, then a sub-slab sampling plan will be implemented, followed by potential indoor air sampling and ultimately mitigation if necessary (i.e., soil vapor extraction – see contingency below). **Continued evaluation of semi-annual sampling results**

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<sup>15</sup> Iris Environmental: Draft Screening Levels for Chemicals in Soil Gas, Sub-Slab Soil Gas, and Indoor Air, Watsonville-1 Former Manufactured Gas Plant, dated September 29, 2009

<sup>16</sup> Terra Pacific Group: Contingency Plan for Soil Gas Sampling, Watsonville-1 Former Manufactured Gas Plant, dated September 30, 2009



**confirms that potential vapor intrusion impacts to the existing commercial building are below levels of concern.**

In 2011, three (3) vapor extraction wells (VW-1 through VW-3) were installed in the parking lot at the property and a vapor extraction (VE) pilot study was conducted to support the construction of a contingency vapor extraction system (VES). The VE pilot study was successfully completed and provided the necessary data to support the construction of the contingency VES. Results of the pilot test confirmed that the installed vapor wells (i.e., VW-1 through VW-3) were spaced adequately to meet the objectives of the proposed remedy contingency<sup>17</sup>.

### **OVERVIEW OF REMOVAL ACTION ACTIVITIES/CORRECTIVE ACTIONS**

The removal action goal (RAG) developed for the property and approved by DTSC was to minimize potential future exposure of humans (property workers and visitors) to the COCs that may otherwise be available for ingestion, inhalation, or dermal contact<sup>18</sup>.

#### **Soil Corrective Actions**

The selected remedial approach for soil consisted of containment and institutional controls along with focused excavation of soil. This approach included the removal of near-surface soil within landscape planter areas that contain elevated PAH concentrations and backfilling with clean import soil. The approach also included the installation of new pavement and the surface water drainage system. The new concrete pavement and clean soil backfill within the planters collectively constitute a cap to contain or conceal the underlying impacted soil.

Specifically, these activities included the removal of impacted soil to a depth of 2 feet in various planters, as well as asphalt and soil to a depth of 1.5 feet beneath the entire parking lot and driveway area. Approximately 686 tons of non-hazardous soil was removed and properly disposed of at an off-site facility. Following the removal of impacted soils, a total of eighteen (18) confirmation soil samples were collected from the base of the excavated areas and analyzed for PAHs to document soil conditions below the new fill material. Thereafter, the parking lot was restored with new paving and planters were backfilled with clean imported soil and landscaped. A Figure showing these corrective actions and residual soil impacts that were capped in-place is included in this Appendix for reference.

As there are residual COCs beneath the cap (predominantly PAHs), a Land Use Covenant (LUC; i.e., deed restriction) was required to remain in place for the property that will be used to maintain the integrity of

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<sup>17</sup> Terra Pacific Group: Vapor Extraction Pilot Study Results, Watsonville-1 Former Manufactured Gas Plant, dated December 21, 2011

<sup>18</sup> Terra Pacific Group: Final Removal Action Completion Report, Watsonville-1 Former Manufactured Gas Plant, dated October 27, 2011



cover features and enforce land use restrictions (i.e., commercial land use only) at the property due to a potential elevated health risk associated with residual concentrations of COCs.

#### **Groundwater & Soil Gas Corrective Actions**

As described in the above sections, a post-remediation soil gas and groundwater natural attenuation monitoring program was implemented (i.e., semi-annual sampling) to evaluate attenuation of soil gas and groundwater associated with residual COCs that remain at depth beneath the property.

Soil vapor extraction and institutional controls have been retained as a contingency alternative for soil gas should soil gas monitoring show that soil gas concentrations are increasing and exceeding site-specific risk based screening levels (RBSLs). **As noted above, continued evaluation of semi-annual sampling results confirms that potential vapor intrusion impacts to the existing commercial building are below levels of concern.**



**Tables & Figure - Groundwater & Soil Gas Results**

*Source: April 2015 Groundwater and Soil Gas Monitoring Report,*  
Terra Pacific Group, dated June 20, 2015.



**Table 3**  
**Summary of VOCs, TPH, Metals and Other Constituents in Groundwater**  
Former Watsonville-1 MGP Site  
Watsonville, California

Well ID	Date Sampled	Volatile Organic Compounds					Total Petroleum Hydrocarbons			Metals		Other Constituents			
		Units	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes* µg/L	MTBE µg/L	TPHg µg/L	TPHd µg/L	TPHmo µg/L	Arsenic ** µg/L	Hexavalent Chromium µg/L	Ammonia (as Nitrogen) µg/L	Total Cyanide µg/L	Phenolics µg/L
MW-WAT1-1	6/24/1991	<1	<1	<1	1.4	—	<50	<50	<500	—	—	—	<10	<50	—
	10/17/1997	<0.5	<0.5	<0.5	<0.5	—	<50	<50	<500	—	—	—	<10	<5	—
	4/16/1998	<0.5	<0.5	<0.5	<0.5	—	<50	<50	<500	—	—	—	40	<5	340
	6/19/1998	<0.5	<0.5	<0.5	<0.5	—	<50	<50	<500	—	—	—	<10	<50	300
	10/16/1998	<0.5	<0.5	<0.5	<0.5	<5	<50	57	<500	—	—	—	<10	<5	—
	4/15/1999	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	—	—	<10	<5	—
	10/26/1999	<0.5	<0.5	<0.5	<0.5	7.6	<50	<50	<300	—	—	—	<10	<50	—
	4/13/2000	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	—	—	<5	110	—
	10/5/2000	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	—	—	<10	<100	—
	3/14/2001	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	3/27/2001	<0.5	<0.5	<0.5	<0.5	<5	140	<50	<500	—	—	—	<5	<100	—
	10/26/2001	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	—	—	—	—	—
	4/23/2002	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	<10	130	<10	—	—
	10/29/2002	<0.5	<0.5	<0.5	<1.5 UJ	—	<50 UJ	<500	<500	<5	—	<110	<24	—	—
	4/28/2003	<0.5	<0.5	<0.5	<1.5 UJ	<5	<50	<480	<480	<5	—	2,030	<21	—	—
	11/20/2003	<0.30	<0.30	<0.30	<0.30	<5.0	<50	<50	<250	<15	—	<100	<50	—	—
	5/12/2004	<0.30	<0.30	<0.30	<0.30	<0.60	<5.0	<50	<50	<250	<15	<100	<50	—	—
	11/9/2004	0.24 J	<0.30	<0.30	<0.30	<0.30	<5.0	<50	<50	<250	<10	<100	<50	—	—
	5/12/2005	<0.30	0.53	<0.30	<0.30	<0.30	<5.0	<50	<50	<250	<10	<100	<50	—	—
	8/2/2006	<0.30	<0.30	<0.30	<0.30	<0.60	<5.0	<50	<50	<250	<10.0	<100	<50	—	—
	12/19/2006	<0.50	<0.50	<0.50	<1.0	<5.0	<50	<50	<250	<10.0	—	<100	<50	—	—
	6/26/2007	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<500	<5.0	—	<200	<10	—	—
	11/15/2007	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<500	<5.0	—	<200	<10	—	—
	4/22/2008	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<500	<5.0	—	<200	<10	—	—
	11/6/2008	<0.50	<0.50	<0.50	<1.0	<0.50	<50	66 UN	<500	9.2	—	<200	<10	—	—
	4/8/2009	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<300	<9.5	—	<200	<10	—	—
	10/12/2009	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<310	<10	—	<200	<10	—	—
	4/13/2010	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<310	<10	—	<200	<10	—	—
10/13/2010	<0.50	<0.50	<0.50	<1.0	<0.50	<50	48 J, J+	100 J	<10	—	88 J	<10	—	—	
5/10/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<99	<10	—	<200	<10	—	—	
10/4/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	130 UN	<10	—	<200	<10	—	—	
10/22/2012	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<48	<95	<10	—	<200	<10	—	—	
4/23/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<100	<10	—	<200	<10	—	—	
10/22/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<53	<110	<10	—	<200	<10	—	—	
4/16/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<100	<10	—	<200	<10	—	—	
10/6/2014	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
4/21/2015	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<100	<10	—	<200	<10	—	—	
MW-WAT1-2	6/24/1991	2.3	2.2	2.1	12	—	360	60	<500	—	—	—	40	<50	—
	10/17/1997	<0.5	<0.5	<0.5	<0.5	—	<50	<62	<620	—	—	—	130	<5	—
	4/16/1998	<0.5	<0.5	<0.5	<0.5	—	11	120	<500	—	—	—	210	7	390
	6/19/1998	<0.5	<0.5	<0.5	<0.5	—	<50	<50	<500	—	—	—	87	<50	400
	10/16/1998	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC



**Table 3**  
**Summary of VOCs, TPH, Metals and Other Constituents in Groundwater**  
Former Watsonville-1 MGP Site  
Watsonville, California

Well ID	Date Sampled Units	Volatile Organic Compounds					Total Petroleum Hydrocarbons			Metals		Other Constituents			
		Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes* µg/L	MTBE µg/L	TPHg µg/L	TPHd µg/L	TPHmo µg/L	Arsenic ** µg/L	Hexavalent Chromium µg/L	Ammonia (as Nitrogen) µg/L	Total Cyanide µg/L	Phenolics µg/L	Total Dissolved Solids mg/L
MW-WAT1-2 (continued)	4/15/1999	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	—	—	74.9	<50	—
	10/26/1999	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/13/2000	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	—	—	<5	100	—
	10/5/2000	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	3/14/2001	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	3/27/2001	<0.5	<0.5	<0.5	<0.5	<5	<50	56	<500	—	—	—	<5	<100	—
	10/26/2001	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/23/2002	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	10/29/2002	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/28/2003	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	11/20/2003	<0.30	<0.30	<0.30	<0.30	<5.0	<50	140	<250	—	—	<100	—	—	—
	5/12/2004	<0.30	<0.30	<0.30	<0.60	<5.0	<50	<50	<250	<15	—	<100	190	—	—
	11/9/2004	<0.30	0.27J	<0.30	0.45	<5.0	<50	<50	<250	NC	—	NC	<50	—	—
	5/12/2005	<0.30	0.57	<0.30	<0.30	<5.0	<50	110	<250	<10	—	1,700	100	—	—
	8/2/2006	<0.30	<0.30	<0.30	<0.60	<5.0	<50	<50	<250	<10.0	—	350	81	—	—
	12/19/2006	<0.50	<0.50	<0.50	<1.0	<5.0	<50	NC	NC	NC	—	NC	NC	—	—
	6/26/2007	<0.50	<0.50	<0.50	<1.0	<0.50	<50	150	<500	<5.0	—	1,300	220	—	—
	11/15/2007	<0.50	<0.50	<0.50	<1.0	<0.50	<50	NC	NC	NC	NC	NC	NC	NC	NC
	4/22/2008	<0.50	<0.50	<0.50	<1.0	<0.50	<50	160	<500	<5.0	—	1,900	220	—	—
	11/6/2008	<0.50	<0.50	<0.50	<1.0	<0.50	<50	200	<500	<5.0	—	<200	300	—	—
	4/8/2009	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<300	<9.5	—	<200	100	—	—
	10/13/2009	<0.50	<0.50	<0.50	<1.0	<0.50	<50	NC	NC	NC	—	NC	NC	—	—
	4/13/2010	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<53	<320	<10	—	1,100	46	—	—
10/13/2010	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
5/10/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	52	<100	<10	—	1,300	130	—	—	
10/4/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	86	170 UN	<10	—	<200	120	—	—	
10/22/2012	<0.50	<0.50	<0.50	<1.0	<0.50	<50	93	140	<10	—	<200	65	—	—	
4/23/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<100	<10	—	<200	96	—	—	
10/22/2013	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
4/16/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<100	<10	—	<210	94	—	—	
10/6/2014	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
4/21/2015	<0.50	<0.50	<0.50	<1.0	<0.50	<50	NC	NC	<10	NC	NC	66	NC	NC	
MW-WAT1-3	6/24/1991	140	350	270	730	—	900	510	800	—	—	—	<10	350	—
	10/17/1997	8.8	49	8.7	100	—	470	560	<570	—	—	—	140	11	—
	4/16/1998	18	130	130	420	—	2,100	4,900	<500	—	—	—	30	61	610
	6/19/1998	7.6	81	47	190	—	1,500	2,000	670	—	—	—	24	69	500
	10/16/1998	1.2	6.9	2.4	12	<5	73	170	<500	—	—	—	<10	<5	—
	4/15/1999	25	310	120	740	<50	2,800	3,100	<500	—	—	—	18	110	—
	10/26/1999	2.3	24	9.3	39	4.3	300	150	<290	—	—	—	10	<50	—
	4/13/2000	33	360	110	650	<25	2,800	6,500	<500	—	—	—	<5	350	—
	10/5/2000	<0.5	5.2	1.2	6	<5	<50	160	<500	—	—	—	20	<100	—
	3/14/2001	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC



**Table 3**  
**Summary of VOCs, TPH, Metals and Other Constituents in Groundwater**  
Former Watsonville-1 MGP Site  
Watsonville, California

Well ID	Date Sampled Units	Volatile Organic Compounds					Total Petroleum Hydrocarbons			Metals		Other Constituents				
		Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes* µg/L	MTBE µg/L	TPHg µg/L	TPHd µg/L	TPHmo µg/L	Arsenic ** µg/L	Hexavalent Chromium µg/L	Ammonia (as Nitrogen) µg/L	Total Cyanide µg/L	Phenolics µg/L	Total Dissolved Solids mg/L	
MW-WAT1-3 (continued)	3/27/2001	9.4	40	36	99	<25	900	1,500	<590	—	—	—	<5	<100	—	
	10/26/2001	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	—	—	—	—	—	
	4/23/2002	1.8	4.3	7.3	15	<5	240	460	<500	—	<10	4,100	6	—	—	
	10/29/2002	1.5	<0.5 UJ	<0.5 UJ	9.1	—	<50 UJ	<500 UJ	<500	8.3	—	2,860	<24	—	—	
	4/28/2003	4.2	8.9	28.5	47	12	250	350 J	<480	6	—	3,490	<21	—	—	
	11/20/2003	3.9	17	8.5	19.6	<10	110	160	<250	18.4	—	2,500	<50	—	—	
	5/12/2004	3.3	7.3	16	27.2	<5.0	330	680	<250	<15	—	4,700	<50	—	—	
	11/9/2004	0.53	0.68	0.88	1.93	<5.0	<50	69	<250	<10	—	2,000	<50	—	—	
	5/12/2005	8.8	38	78	190	<10	1,800	3,000	1,000	<10	—	6,700	<50	—	—	
	8/2/2006	2.9	2.7	19	18.6	<5.0	520	1,200	610	<10.0	—	<100	<50	—	—	
	12/19/2006	0.55	1.2	1.7	3.4	<5.0	<50	220	<250	<10.0	—	4,600	<50	—	—	
	6/26/2007	2.5	2.9	12	11	<0.50	290	500	<500	5.0	—	5,800	<10	—	—	
	11/15/2007	0.70	2.4	2.1	4.7	<0.50	59	<50	<500	7.2	—	2,000	<10	—	—	
	4/22/2008	8.6	23	49	45	<0.50	710	1,000	<500	5.1	—	7,300	<10	—	—	
	11/6/2008	23	67	110	220	<0.50	1,500	1,300	< 500	6.7	—	5,600	<10	—	—	
	4/8/2009	41	290	270	750	<2.5	4,200	5,800	<300	<9.5	—	8,000	<10	—	—	
	10/13/2009	<0.50	0.81	2.1	4.0	<0.50	<50	150	<310	<10	—	3,600	13	—	—	
	4/13/2010	5.2	4.9	33	30.0	<0.50	320	1,000	<300	<10	—	3,300	11	—	—	
	10/13/2010	0.36 J	1.4 B	1.7	5.2	<0.50	51	250 J+	220 J	7.3 J	—	4,500	14	—	—	
	5/10/2011	0.79	1.1	3.1	3.4	<0.50	75	980	<100	<10	—	4,500	17	—	—	
	10/4/2011	2.8	2.9	5.3	6.1	<0.50	210	940	180 UN	<10	—	8,000	29	—	—	
	10/22/2012	6.7	8.2	40	31	<0.50	460	900	<100	<10	—	5,900	14	—	—	
	4/23/2013	2.3	1.5	22	4.0	<0.50	250	1,300	230	<10	—	2,700	<10	—	—	
10/22/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	270	<100	<10	—	3,700	<10	—	—		
4/16/2014	1.9	1.8	15	8.8	<0.50	130	550	<100	<10	—	3,900	<10	—	—		
10/6/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	270	<100	<10	—	4,400	<10	—	—		
4/21/2015	3.2	1.8	17	17	<0.50	190	630	<100	<10	—	3,600	<10	—	—		
MW-WAT1-3 duplicate	4/16/1998	21	150	130	430	—	2,200	3,400	<500	—	—	—	20	43	640	
	6/19/1998	8.6	92	55	230	—	1,800	1,900	640	—	—	—	230	<50	800	
	10/16/1998	1.2	7.6	2.6	12	<5	66	250	<500	—	—	—	10	<5	—	
	4/15/1999	26	440	110	680	<50	3,000	3,300	<500	—	—	—	16.6	110	—	
	10/26/1999	2.3	23	8.8	36	7	290	200	<300	—	—	—	20	<50	—	
	4/13/2000	38	410	110	720	<25	3,300	5,600	<500	—	—	—	<5	360	—	
	10/5/2000	0.57	5.7	1.6	5.9	<5	51	210	<500	—	—	—	<10	<100	—	
	3/27/2001	11	48	41	100	<25	1,100	1,700	<1,000	—	—	—	—	—	—	
	10/26/2001	<0.5	<0.5	<0.5	<0.5	<5	<50	—	—	—	—	—	—	—	—	—
	10/29/2002	1.8	<0.5 UJ	<0.5 UJ	10	—	<50 UJ	<500 UJ	<500	9.8	—	3,040	<24	—	—	—
	4/28/2003	3.9	8.4	27.4	45	<5	230	400 J	<480	5.4	—	3,530	<21	—	—	—
	11/20/2003	2.9	15	7.5	16.6	<10	100	140	<250	24.2	—	2,600	<50	—	—	—
	5/12/2004	3.2	7.2	15	27	6.2	340	750	<250	<15	—	4,600	<50	—	—	—
	11/9/2004	0.44	0.58	0.73	1.48	<5.0	<50	<50	<250	<10	—	2,000	<50	—	—	—
	5/12/2005	8.8	39	79	192	<10	1,800	3,600	1,200	<10	—	6,700	<50	—	—	—



**Table 3**  
**Summary of VOCs, TPH, Metals and Other Constituents in Groundwater**  
Former Watsonville-1 MGP Site  
Watsonville, California

Well ID	Date Sampled Units	Volatile Organic Compounds					Total Petroleum Hydrocarbons			Metals		Other Constituents			
		Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes* µg/L	MTBE µg/L	TPHg µg/L	TPHd µg/L	TPHmo µg/L	Arsenic ** µg/L	Hexavalent Chromium µg/L	Ammonia (as Nitrogen) µg/L	Total Cyanide µg/L	Phenolics µg/L	Total Dissolved Solids mg/L
MW-WAT1-3 duplicate (continued)	8/2/2006	3	2.8	19	18.7	<5.0	600	930	420	<10.0	—	<100	<50	—	—
	12/19/2006	0.53	1.1	1.6	3.3	<5.0	<50	200	<250	<10.0	—	4,000	<50	—	—
	6/26/2007	2.1	2.6	11	9.4	<0.50	270	480	<500	<5.0	—	5,800	12	—	—
	11/15/2007	0.74	2.4	2.2	4.9	<0.50	53	<50	<500	<5.0	—	2,100	<10	—	—
	4/22/2008	6.2	17	37	36	<0.50	520	910	<500	<5.0	—	5,800	<10	—	—
	11/6/2008	20	55	96	180	<0.50	1,100	1,400	<500	6.6	—	5,600	<10	—	—
	4/8/2009	39	310	260	720	<2.5	4,100	5,800	<300	<9.5	—	8,000	<10	—	—
	10/13/2009	0.53	0.94	2.3	4.5	<0.50	<50	150	<310	<10	—	3,400	13	—	—
	4/13/2010	4.8	4.4	30	27	<0.50	300	1,100	<310	<10	—	3,400	11	—	—
	10/13/2010	0.36 J	1.5	1.6	5	<0.50	35 J	240 J+	230 J	5.4 J	—	4,300	15	—	—
	5/10/2011	0.76	1.0	2.9	3.3	<0.50	70	430	<100	<10	—	4,000	13	—	—
	10/4/2011	2.5	3.0	5.6	6.1	<0.50	240	950	180 UN	<10	—	7,600	33	—	—
	10/22/2012	7.2	9.1	43	33	<0.50	420	860	<100	<10	—	5,800	15	—	—
	4/23/2013	2.5	1.6	22	4.5	<0.50	270	1,400	220	<10	—	3,000	<10	—	—
	10/22/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	280	<100	<10	—	3,900	<10	—	—
	4/16/2014	1.9	1.7	14	8.5	<0.50	130	690	<100	<10	—	4,000	<10	—	—
	10/6/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	240	<100	10	—	4,200	<10	—	—
4/21/2015	3.3	1.8	18	18	<0.50	200	900	<110	<10	—	3,700	<10	—	—	
MW-WAT1-4	3/27/2001	<0.5	1.1	1	18	<5	230	990	<500	—	—	—	<5	<100	—
	10/26/2001	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	—	—	—	—	—
	4/23/2002	<0.5	<0.5	<0.5	<0.5	<5	<50	180	<500	—	<10	1,400	<10	<50	—
	10/29/2002	<0.5	<0.5	<0.5	<1.5 UJ	—	<50 UJ	<500	<500	<5	—	402	<24	—	—
	4/28/2003	<0.5	<0.5 UJ	1.4	<1.5 UJ	15	33 J	<480	<480	<5	—	664	<21	—	—
	11/20/2003	<0.30	<0.30	<0.30	<0.30	<5.0	<50	<50	<250	<15	—	<100	<50	—	—
	5/12/2004	<0.30	<0.30	<0.30	<0.60	<5.0	<50	<50	<250	<15	—	1,800	<50	—	—
	11/9/2004	0.54	<0.30	0.18 J	0.39	<5.0	<50	<50	<250	<10	—	<100	<50	—	—
	5/12/2005	<0.30	0.78	<0.30	<0.30	6.1	<50	110	<250	<10	—	280	<50	—	—
	8/2/2006	<0.30	<0.30	<0.30	<0.60	<5.0	<50	150	<250	<10.0	—	<100	<50	—	—
	12/19/2006	<0.50	<0.50	<0.50	<1.0	<5.0	<50	<50	<250	<10.0	—	560	<50	—	—
	6/26/2007	<0.50	<0.50	<0.50	<1.0	<0.50	<50	350	660	<5.0	—	1,600	<10	—	—
	11/15/2007	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<500	<5.0	—	610	<10	—	—
	4/22/2008	1.7	13	2.8	39	<0.50	190	620	<500	<5.0	—	440	<10	—	—
	11/6/2008	<0.50	<0.50	<0.50	<1.0	<0.50	<50	110	<500	<5.0	—	<200	37	—	—
	4/8/2009	<0.50	1.0	<0.50	2.4	<0.50	<50	280	<300	<9.5	—	750 UN	<10	—	—
	10/13/2009	<0.50	<0.50	<0.50	<1.0	<0.50	<50	55	<310	<10	—	1,200	<10	—	—
	4/13/2010	<0.50	<0.50	<0.50	<1.0	<0.50	<50	110	<300	<10	—	<200	<10	—	—
	10/13/2010	0.096J	<0.50	<0.50	<1.0	<0.50	<50	100 J+	140 J	<10	—	1,300	12	—	—
	5/10/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	130	<100	<10	—	1,300	<10	—	—
10/4/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	86	150 UN	<10	—	1,900	<10	—	—	
10/22/2012	<0.50	<0.50	<0.50	<1.0	<0.50	<50	82	<93	<10	—	690	11	—	—	
4/23/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	220	<100	<10	—	1,000	<10	—	—	
10/22/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	58	<100	<10	—	1,100	<10	—	—	



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Former Watsonville-1 MGP Site  
Watsonville, California

Well ID	Date Sampled Units	Volatile Organic Compounds					Total Petroleum Hydrocarbons			Metals		Other Constituents			
		Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes* µg/L	MTBE µg/L	TPHg µg/L	TPHd µg/L	TPHmo µg/L	Arsenic ** µg/L	Hexavalent Chromium µg/L	Ammonia (as Nitrogen) µg/L	Total Cyanide µg/L	Phenolics µg/L	Total Dissolved Solids mg/L
MW-WAT1-4 (continued)	4/16/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	87	<100	<10	—	580	18	—	—
	10/6/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	57	<100	<10	—	970	<10	—	—
	4/21/2015	<0.50	<0.50	<0.50	<1.0	<0.50	<50	110	<100	<10	—	810	<10	—	—
MW-WAT1-4 duplicate	4/23/2002	<0.5	<0.5	<0.5	<0.5	<5	<50	150	<570	—	<0.01	870	<10	—	—
MW-WAT1-5	3/27/2001	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	—	—	<5	<100	—
	10/26/2001	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/23/2002	<0.5	<0.5	<0.5	<0.5	<5	<50	<50	<500	—	<10	400	<10	—	—
	10/29/2002	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/28/2003	<0.5	<0.5 UJ	<0.5	<1.5 UJ	<5	<50	<480	<480	<5	—	<170	<21	—	—
	11/20/2003	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	5/12/2004	<0.30	<0.30	<0.30	<0.60	8.8	<50	<50	<250	<15	—	<100	<50	—	—
	11/9/2004	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	5/12/2005	<0.30	<0.30	<0.30	<0.30	<5.0	<50	—	—	<10	—	<100	<50	—	—
	8/2/2006	<0.30	<0.30	<0.30	<0.60	<5.0	<50	66	<250	<10.0	—	<100	<50	—	—
	12/19/2006	<0.50	<0.50	<0.50	<1.0	<5.0	<50	<50	<250	<10.0	—	<100	<50	—	—
	6/26/2007	<0.50	<0.50	<0.50	<1.0	<0.50	<50	100	<500	<5.0	—	<200	<10	—	—
	11/15/2007	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<500	<5.0	—	<200	<10	—	—
	4/22/2008	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<500	<5.0	—	<200	<10	—	—
	11/6/2008	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<500	12	—	<200	<10	—	—
	4/8/2009	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<300	<9.5	—	<200	<10	—	—
	10/12/2009	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	<300	<10	—	<200	<10	—	—
	4/13/2010	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	<300	<10	—	<200	<10	—	—
	10/13/2010	<0.50	<0.50	<0.50	<1.0	<0.50	<50	55 UN	150 J	<10	—	120 J	<10	—	—
	5/10/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	<100	<10	—	<200	<10	—	—
10/4/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	110 UN	<10	—	<200	<10	—	—	
10/22/2012	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<48	<95	<10	—	<200	<10	—	—	
4/23/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	<100	<10	—	<200	<10	—	—	
10/22/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	<100	<10	—	<200	<10	—	—	
4/16/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	<100	<10	—	<200	<10	—	—	
10/6/2014	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
4/21/2015	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<100	<10	—	<200	<10	—	—	
MW-WAT1-6	10/13/2009***	<0.50	<0.50	<0.50	<1.0	<0.50	<50	1,800 / 68	1,000 / <300	<10	—	510	<10	—	—
	4/13/2010***	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50 / <50	<300 / <300	<10	—	<200	11	—	—
	10/13/2010	<0.50	<0.50	<0.50	<1.0	<0.50	<50	70 UN	160 J	<10	—	96 J	6.0 J	—	—
	5/10/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<100	<10	—	<200	13	—	—
	10/4/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	100 UN	<10	—	<200	<10	—	—
	10/22/2012	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<47	<94	<10	—	<200	<10	—	—
	4/23/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<100	<10	—	<200	<10	—	—
	10/22/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<99	<10	—	<200	<10	—	—
	4/16/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	<100	<10	—	<200	<10	—	—
	10/6/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<100	<10	—	<200	<10	—	—
4/21/2015	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<100	<10	—	200	<10	—	—	



**Table 3**  
**Summary of VOCs, TPH, Metals and Other Constituents in Groundwater**  
 Former Watsonville-1 MGP Site  
 Watsonville, California

Well ID	Date Sampled	Volatile Organic Compounds					Total Petroleum Hydrocarbons			Metals		Other Constituents			
		Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes* µg/L	MTBE µg/L	TPHg µg/L	TPHd µg/L	TPHmo µg/L	Arsenic ** µg/L	Hexavalent Chromium µg/L	Ammonia (as Nitrogen) µg/L	Total Cyanide µg/L	Phenolics µg/L	Total Dissolved Solids mg/L
MW-WAT1-7	10/13/2009	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<300	<10	—	<200	<10	—	—
	4/13/2010	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<52	<310	<10	—	<200	<10	—	—
	10/13/2010	<0.50	<0.50	<0.50	<1.0	<0.50	<50	17 J, UN	100 J	<10	—	76 J	3.9 J	—	—
	5/10/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<100	<10	—	<200	<10	—	—
	10/4/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	100 UN	<10	—	<200	<10	—	—
	10/22/2012	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<47	<94	<10	—	<200	<10	—	—
	4/23/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<99	<10	—	<200	<10	—	—
	10/22/2013	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	<100	<10	—	<200	<10	—	—
	4/16/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<51	<100	<10	—	<200	<10	—	—
	10/6/2014	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<53	<110	<10	—	<200	<10	—	—
	4/21/2015	<0.50	<0.50	<0.50	<1.0	<0.50	<50	<50	<100	<10	—	<200	<10	—	—
<b>Drinking Water MCL (µg/L)</b>		1.0	150	300	1,750	13	—	—	—	10	—	—	150	—	—

**Notes:**

Analytical results presented in **bold** exceed the drinking water maximum contaminant level (MCL), if available

\* Total xylenes represents the sum of p/m-xylene and o-xylene; when both constituents were not detected, the higher reporting limit of the individual constituent is shown.

\*\* Beginning in 2003, all samples collected for arsenic analysis have been filtered upon collection.

\*\*\* TPHd and TPHmo sample re-analyzed using silica-gel cleanup: initial TPHd and TPHmo concentration on left, and TPHd and TPHmo concentrations with silica-gel cleanup on right.

MTBE = methyl tert-butyl ether

MGP= manufactured gas plant

TPHg = total petroleum hydrocarbons (TPH) quantified as gasoline

TPHd = TPH quantified as diesel

TPHmo = TPH quantified as motor oil

µg/L = micrograms per liter

mg/L = milligrams per liter

VOC = volatile organic compound

"<" = analyte not detected at or above laboratory reporting limit shown

"J" = analyte detected at an estimated concentration between the laboratory method detection limit and reporting limit

"UJ" = analyte detected at an estimated concentration below the reporting limit, but was changed to non-detected above reporting limit based on detected concentration in associated QA/QC sample

"UN" = reported result considered tentative non-detect due to a detection of the compound in an associated QA/QC sample, where the result in the primary sample is less than 5 times that of the QA/QC sample

"J+" = reported result believed to be biased high due to a detection of the compound in an associated QA/QC sample, where the result in the primary sample is 5-20 times that of the QA/QC sample

"NC" = sample was not collected due to insufficient water column

"MCL" = Maximum Contaminant Level based on Federal Drinking Water Standards (USEPA) (last updated May 2009) or California EPA (last updated May 2009); the more stringent MCL is shown

--- = not analyzed / no data (MCL has not been established for compound)

Source: modified from ENV America (2005) and Shaw (2003)



**Table 4**  
**Summary of PAHs in Groundwater**  
 Former Watsonville-1 MGP Site  
 Watsonville, California

Well ID	Date Sampled	Filtered / Unfiltered	Acenaph- thene µg/L	Acenaph- thylene µg/L	Anthra- cene µg/L	Benzo(a) Anthra- cene µg/L	Benzo(b) Fluoran- thene µg/L	Benzo(k) Fluoran- thene µg/L	Benzo (g,h,i) perylene µg/L	Benzo(a) pyrene µg/L	Chrysene µg/L	Dibenz (a,h) Anthra- cene µg/L	Fluoran- thene µg/L	Fluorene µg/L	Indeno- (1,2,3-cd)- pyrene µg/L	Naph- thalene µg/L	Phenan- threne µg/L	Pyrene µg/L	
																			Units
MW-WAT1-1	6/24/1991	Unfiltered	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
	10/17/1997	Filtered	<0.1	<0.1	<0.051	<0.15	<0.1	<0.051	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.15	
	10/17/1997	Unfiltered	<0.1	<0.1	<0.051	<0.15	<0.1	<0.051	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.15
	4/16/1998	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/16/1998	Unfiltered	<0.1	<0.1	<0.05	<0.15	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.15
	6/19/1998	Unfiltered	<10	<10	<0.5	<0.5	<1	<0.5	<2	<0.5	<0.5	<2	<1	<1	<0.5	<5	<0.5	<1	<1
	10/16/1998	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	10/16/1998	Unfiltered	<0.1	<0.1	<0.05	<0.15	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.15
	4/15/1999	Filtered	<0.1	<0.1	<0.052	<0.15	<0.1	<0.052	<0.1	<0.1	<0.1	<0.1	<0.21	<0.1	<0.1	<0.1	0.67	<0.1	<0.15
	4/15/1999	Unfiltered	<0.1	<0.1	<0.05	<0.15	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	0.14	<0.1	<0.15
	10/26/1999	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	10/26/1999	Unfiltered	<1	<10	<0.5	<0.1	<0.2	<0.1	<0.2	<0.1	<0.1	<0.2	<0.4	<1	<0.14	<5	<0.5	<0.2	<0.2
	4/13/2000	Filtered	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.15	<0.1	<0.1	<0.15
	10/5/2000	Filtered	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.15	<0.1	<0.1	<0.15
	3/27/2001	Filtered	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.1	<0.15	<0.1	<0.15
	10/26/2001	Filtered	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.1	<0.15	<0.1	<0.15
	4/23/2002	Filtered	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.1	<0.15	<0.1	<0.15
	10/29/2002	Filtered	<5	<2	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.18	<0.15	<0.1	<0.1	<0.1	<5	<0.1	<0.15
	4/28/2003	Filtered	<5	<2	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.18	<0.15	<0.1	<0.1	<0.1	<5	<0.1	<0.15
	11/20/2003	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.062 J	0.64 J
	5/12/2004	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	11/9/2004	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	5/12/2005	Filtered	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.19	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94
	8/2/2006	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/19/2006	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/26/2007	Filtered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	11/15/2007	Filtered	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	4/22/2008	Filtered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
11/6/2008	Filtered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	
4/8/2009	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
10/12/2009	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
4/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	



**Table 4**  
**Summary of PAHs in Groundwater**  
Former Watsonville-1 MGP Site  
Watsonville, California

Well ID	Date Sampled	Filtered / Unfiltered	Units															
			Acenaph-thene µg/L	Acenaph-thylene µg/L	Anthra-cene µg/L	Benzo(a) Anthra-cene µg/L	Benzo(b) Fluoran-thene µg/L	Benzo(k) Fluoran-thene µg/L	Benzo (g,h,i) perylene µg/L	Benzo(a) pyrene µg/L	Chrysene µg/L	Dibenz (a,h) Anthra-cene µg/L	Fluoran-thene µg/L	Fluorene µg/L	Indeno-(1,2,3-cd)-pyrene µg/L	Naph-thalene µg/L	Phenan-threne µg/L	Pyrene µg/L
MW-WAT1-1 (continued)	10/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	5/10/2011	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/4/2011	Unfiltered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	10/22/2012	Unfiltered	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095
	4/23/2013	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/22/2013	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/16/2014	Unfiltered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	10/6/2014	Unfiltered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
4/21/2015	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
MW-WAT1-2	6/24/1991	Unfiltered	8.6	8.6	<5	<5	<5	<5	<5	<5	<5	<5	<5	5.5	<5	5.2	<5	<5
	10/17/1997	Filtered	<0.12	<0.12	<0.059	<0.12	<0.12	<0.059	<0.12	<0.12	<0.12	<0.12	<0.24	<0.12	<0.11	<0.12	<0.12	<0.18
	10/17/1997	Unfiltered	<0.11	<0.11	<0.056	<0.11	<0.11	<0.056	<0.11	<0.11	<0.11	<0.11	<0.22	<0.11	<0.11	<0.11	<0.11	<0.17
	4/16/1998	Filtered	<0.1	3.8	0.17	<0.15	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	0.36
	4/16/1998	Unfiltered	<0.1	2.6	0.75	0.4	<0.1	<0.05	0.74	<0.1	0.39	<0.1	1.4	<0.1	0.32	<0.1	<0.1	1.2
	6/19/1998	Unfiltered	<10	<10	<0.5	<0.5	<1	<0.5	<2	<0.5	<0.5	<2	<1	<1	<0.5	<5	<0.5	<1
	10/16/1998	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	10/16/1998	Unfiltered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/15/1999	Filtered	<0.1	<0.1	<0.05	<0.15	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.15
	4/15/1999	Unfiltered	11	<2	<1	<3.1	<2	<1	<2	<2	<2	<2	<4.1	21	<2	410	8.7	<3.1
	10/26/1999	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	10/26/1999	Unfiltered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/13/2000	Filtered	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.15	<0.1	<0.15
	10/5/2000	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	3/27/2001	Filtered	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.15	<0.1	<0.15
	10/26/2001	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/23/2002	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	10/29/2002	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/28/2003	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	11/20/2003	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	5/12/2004	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	11/9/2004	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	5/12/2005	Filtered	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.19	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94
8/2/2006	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
12/19/2006	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
6/26/2007	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	



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Former Watsonville-1 MGP Site  
Watsonville, California

Well ID	Date Sampled	Filtered / Unfiltered	Units															
			Acenaph-thene µg/L	Acenaph-thylene µg/L	Anthra-cene µg/L	Benzo(a) Anthra-cene µg/L	Benzo(b) Fluoran-thene µg/L	Benzo(k) Fluoran-thene µg/L	Benzo (g,h,i) perylene µg/L	Benzo(a) pyrene µg/L	Chrysene µg/L	Dibenz (a,h) Anthra-cene µg/L	Fluoran-thene µg/L	Fluorene µg/L	Indeno-(1,2,3-cd)-pyrene µg/L	Naph-thalene µg/L	Phenan-threne µg/L	Pyrene µg/L
MW-WAT1-2 (continued)	11/15/2007	Filtered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	4/22/2008	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	11/6/2008	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/8/2009	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/13/2009	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/13/2010	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	5/10/2011	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/4/2011	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/22/2012	Unfiltered	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095
	4/23/2013	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/22/2013	Unfiltered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/16/2014	Unfiltered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	10/6/2014	Unfiltered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
4/21/2015	Unfiltered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
MW-WAT1-3	6/24/1991	Unfiltered	40	74	20	<5	<5	<5	<5	<5	<5	<5	<5	42	<5	<5	33	16
	10/17/1997	Filtered	<0.1	<0.1	<0.051	<0.15	<0.1	<0.051	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	11	<0.1	<0.15
	10/17/1997	Unfiltered	4.6	0.72	11	<0.11	<0.11	<0.054	<0.11	<0.11	0.24	<0.11	1.4	7.9	<0.11	18	<0.11	<0.16
	4/16/1998	Filtered	11	230	1.8	<3	<2	<1	<2	<2	<2	<2	8	12	<2	260	2.5	<3
	4/16/1998	Unfiltered	12	230	3.1	<3	<2	<1	<2	<2	<2	<2	<4	19	<2	290	4.4	<3
	6/19/1998	Unfiltered	<10	120	1.9	<0.5	<1	<0.5	<2	<0.5	<0.5	<2	<1	11	<0.5	<5	2.6	<1
	10/16/1998	Filtered	<0.1	<0.1	<0.05	<0.15	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	0.4	<0.1	<0.15
	10/16/1998	Unfiltered	<0.1	<0.1	2.4	<0.15	<0.1	<0.05	<0.1	0.51	<0.1	<0.1	1.3	<0.1	<0.1	1.7	<0.1	0.7
	4/15/1999	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/15/1999	Unfiltered	<2.2	<2.2	1.9	<3.3	<2.2	<1.1	<2.2	<2.2	<2.2	<2.2	<4.3	23	<2.2	440	6.5	<3.3
	10/26/1999	Filtered	<1	<10	4.6	<0.1	<0.2	<0.1	<0.2	<0.1	<0.1	<0.2	<0.4	5	<0.14	34	<0.5	<0.2
	10/26/1999	Unfiltered	<1	<10	6.4	0.2	<0.2	<0.1	<0.2	0.2	0.4	<0.2	1.2	5.4	<0.14	38	<0.5	1.1
	4/13/2000	Filtered	<2	<2	<1	<2	<2	<1	<2	<2	<2	<2	<3	19	<2	510	5.8	<3
	10/5/2000	Filtered	<0.1	<0.1	0.73	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.15	<0.1	<0.15
	3/27/2001	Filtered	<5	<5	<2.5	<5	<5	<2.5	<5	<5	<5	<5	<7.5	<5	<5	97	<5	<7.5
	10/26/2001	Filtered	0.33	0.95	0.6	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	0.28	0.67	<0.1	<0.15	<0.1	<0.15
	4/23/2002	Filtered	18	19	1.5	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	0.98	1.6	<0.1	13	0.46	0.97
	10/29/2002	Filtered	<5	<2	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.18	<0.15	<0.1	<0.1	<5	<0.1	<0.15
	4/28/2003	Filtered	<5	26 J	0.93 J	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.18	0.37	1.4 J	<0.1	14 J	0.07 J	0.25
11/20/2003	Filtered	<1.0	<1.0	0.16 J	0.15 J	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	0.41 J	<1.0	<1.0	<1.0	0.18 J	<1.0	



**Table 4**  
**Summary of PAHs in Groundwater**  
Former Watsonville-1 MGP Site  
Watsonville, California

Well ID	Date Sampled	Filtered / Unfiltered	Acenaph-thene µg/L	Acenaph-thylene µg/L	Anthra-cene µg/L	Benzo(a) Anthra-cene µg/L	Benzo(b) Fluoran-thene µg/L	Benzo(k) Fluoran-thene µg/L	Benzo (g,h,i) perylene µg/L	Benzo(a) pyrene µg/L	Chrysene µg/L	Dibenz (a,h) Anthra-cene µg/L	Fluoran-thene µg/L	Fluorene µg/L	Indeno-(1,2,3-cd)-pyrene µg/L	Naph-thalene µg/L	Phenan-threne µg/L	Pyrene µg/L	
Units																			
MW-WAT1-3 (continued)	5/12/2004	Filtered	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	0.60J	2.2	<1.0	42	0.14J	0.27J	
	11/9/2004	Filtered	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	0.66 J	<1.0	<1.0	<1.0	0.068 J	0.70 J	
	5/12/2005	Filtered	<0.94	<0.94	0.53 J	<0.94	<0.94	<0.94	<0.94	<0.19	<0.94	<0.94	<0.94	7.4	<0.94	NA	0.73 J	<0.94	
	8/2/2006	Filtered	2.7	19	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	7.5	<1.0	23	<1.0	<1.0	
	12/19/2006	Filtered	<1.0	3.1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	<1.0	<1.0	
	6/26/2007	Filtered	1.7	1.8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.48	<0.10	3.3	<0.10	<0.10	
	11/15/2007	Filtered	0.15	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	0.12	<0.11	<0.11	
	4/22/2008	Filtered	3.4	3.3	0.82	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	2.3	<0.51	29	<0.51	<0.51	
	11/6/2008	Filtered	3.9	8.8	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.3	<2.0	99	<2.0	<2.0	
	4/8/2009	Filtered	13	16	<5.2	<5.2	<5.2	<5.2	<5.2	<5.2	<5.2	<5.2	<5.2	12	<5.2	450	<5.2	<5.2	
	10/13/2009	Filtered	1.3	1.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.30	<0.10	3.0	<0.10	<0.10	
	4/13/2010	Filtered	6.2	6.8	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	1.20	<0.11	62	<0.11	<0.11	
	10/13/2010	Filtered	0.13	0.057 J	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10	<0.10	<0.10	0.47 J+	<0.10	<0.10	
	5/10/2011	Unfiltered	4	3.7	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.2	1.90	<0.10	14	0.19	0.23
	10/4/2011	Unfiltered	7.7	5.1	1.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.21	3.90	<0.10	3	<0.10	0.18
	10/22/2012	Unfiltered	5.1	3.7	1.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.18	2.6	<0.10	21	0.17	0.2
	4/23/2013	Unfiltered	8.1	6.3	2.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.39	5.20	<0.10	13	1.1	0.33
	10/22/2013	Unfiltered	2.9	2.2	1.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.27	1.40	<0.10	0	<0.10	0.27
	4/16/2014	Unfiltered	6	4.8	1.6	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	0.25	3.80	<0.11	13	0.23	0.2
	10/6/2014	Unfiltered	2.0	1.2	0.95	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	0.68	<0.10	0.15	<0.10	0.15
4/21/2015	Unfiltered	4.7	4.0	1.1	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	0.18	1.3	<0.11	27	0.44	0.21	
MW-WAT1-3 duplicate	4/16/1998	Filtered	9.7	210	1.2	<1.5	<1	<0.5	<1	<1	<1	<1	<2	10	<1	250	1.8	<1.5	
	4/16/1998	Unfiltered	18	360	4	<3	<2	<1	<2	<2	<2	<2	<4	22	<2	360	5.4	<3	
	6/19/1998	Unfiltered	<10	160	2.1	<0.5	<1	<0.5	<2	<0.5	<0.5	<2	<1	13	<0.5	77	2.6	<1	
	10/16/1998	Filtered	<0.1	<0.1	<0.05	<0.15	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.15
	10/16/1998	Unfiltered	<0.1	<0.1	2.6	0.2	<0.1	<0.05	<0.1	<b>0.36</b>	<0.1	<0.1	<0.1	1.3	<0.1	<0.1	1.6	<0.1	0.49
	4/15/1999	Unfiltered	<2	<2	<1	<3	<2	<1	<2	<2	<2	<2	<2	<4	27	<2	440	8.8	<3
	10/26/1999	Filtered	<1	<10	4	<0.1	<0.2	<0.1	<0.2	<0.1	<0.1	<0.2	<0.4	4.2	<0.14	32	<0.5	<0.2	
	10/26/1999	Unfiltered	<1	<10	6.6	0.2	<0.2	<0.1	<0.2	0.1	0.3	<0.2	1.1	6	<0.14	39	<0.5	1	
	4/13/2000	Filtered	<2	<2	<1	<2	<2	<1	<2	<2	<2	<2	<2	<3	19	<2	580	5.4	<3
	10/5/2000	Filtered	1.2	<0.1	1.4	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	1.8	<0.1	4.5	<0.1	<0.15	
	3/27/2001	Filtered	<0.96	<0.96	4.1	<0.96	<0.96	<0.48	<0.96	<0.96	<0.96	<0.96	<0.96	<1.4	7.6	<0.96	120	3.6	<1.4
	10/29/2002	Filtered	<5	<2	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.18	<0.15	<0.1	<0.1	<0.1	<5	<0.1	<0.15
	4/28/2003	Filtered	<5	17 J	0.41 J	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.18	<0.15	0.69 J	<0.1	9 J	0.07 J	<0.15	
11/20/2003	Filtered	<1.0	<1.0	<1.0	0.17 J	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	0.66 J	0.13 J	<1.0	



**Table 4**  
**Summary of PAHs in Groundwater**  
Former Watsonville-1 MGP Site  
Watsonville, California

Well ID	Date Sampled	Filtered / Unfiltered	Acenaph-thene µg/L	Acenaph-thylene µg/L	Anthra-cene µg/L	Benzo(a) Anthra-cene µg/L	Benzo(b) Fluoran-thene µg/L	Benzo(k) Fluoran-thene µg/L	Benzo (g,h,i) perylene µg/L	Benzo(a) pyrene µg/L	Chrysene µg/L	Dibenz (a,h) Anthra-cene µg/L	Fluoran-thene µg/L	Fluorene µg/L	Indeno-(1,2,3-cd)-pyrene µg/L	Naph-thalene µg/L	Phenan-threne µg/L	Pyrene µg/L	
MW-WAT1-3 duplicate (continued)	5/12/2004	Filtered	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	<1.0	<0.2	<1.0	<1.0	0.32J	2.3	<1.0	47	0.14J	0.2J	
	11/9/2004	Filtered	<1.0	<1.0	2	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	0.63 J	<1.0	<1.0	<1.0	<1.0	0.64 J	
	5/12/2005	Filtered	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.19	<0.94	<0.94	<0.94	NA	<0.94	NA	0.11 J	<0.94	
	8/2/2006	Filtered	4.7	21	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	8.1	<1.0	26	<1.0	<1.0
	12/19/2006	Filtered	<1.0	4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	<1.0
	6/26/2007	Filtered	3.3	3.1	0.35	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2.2	<0.10	4.7	<0.10	<0.10
	11/15/2007	Filtered	0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	0.16	<0.11	<0.11
	4/22/2008	Filtered	5	4.9	0.99	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	<0.51	3.5	<0.51	40	<0.51	<0.51
	11/6/2008	Filtered	3.9	6.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.2	<1.0	100	<1.0	<1.0
	4/8/2009	Filtered	13	16	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	11	<5.1	460	<5.1	<5.1	
	10/13/2009	Filtered	1.3	1.1	0.13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.40	<0.10	3.0	<0.10	<0.10
	4/13/2010	Filtered	9.3	9.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	4.40	<0.10	74	<0.10	<0.10
	10/13/2010	Filtered	0.6	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10	<0.10	0.032 J	<0.10	1.6 J+	<0.10	<0.10
	5/10/2011	Unfiltered	4.3	3.9	1.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.21	2.0	<0.10	14	0.18	0.23
	10/4/2011	Unfiltered	5.7	3.8	1.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.17	2.8	<0.10	2	<0.10	0.14
	10/22/2012	Unfiltered	4.8	3.4	1.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.17	2.5	<0.10	19	0.15	0.19
	4/23/2013	Unfiltered	6.9	5.4	1.8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.36	4.3	<0.10	12	0.9	0.33
	10/22/2013	Unfiltered	2.5	1.8	1.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.25	1.1	<0.10	0	<0.10	0.26
4/16/2014	Unfiltered	6.1	4.9	1.8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.24	4.0	<0.10	13	0.24	0.2	
10/6/2014	Unfiltered	1.6	0.93	0.76	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.14	0.47	<0.10	0.13	<0.10	0.14	
4/21/2015	Unfiltered	3.6	2.9	0.98	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	1.0	<0.10	18	0.32	0.18	
MW-WAT1-4	3/27/2001	Filtered	<2	30	6.3	9.7	8.5	<1	<2	<b>9.9</b>	7.5	<2	7.6	12	<2	94	9.6	4.6	
	10/26/2001	Filtered	<0.11	0.56	0.18	<0.11	<0.11	<0.056	<0.11	<0.11	<0.11	<0.11	0.26	<0.11	<0.11	<0.17	<0.11	<0.17	
	4/23/2002	Filtered	24	10	1.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	0.35	3.1	<0.1	8.6	0.4	<0.15	
	10/29/2002	Filtered	<5	<2	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.18	<0.15	<0.1	<0.1	<0.1	<0.1	<0.15	
	4/28/2003	Filtered	<5	<2	<0.05	<0.1	<0.1	0.03 J	0.2	0.1	<0.1	0.27	<0.15	<0.1	0.08 J	<0.1	<0.1	<0.15	
	11/20/2003	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	5/12/2004	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	11/9/2004	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	5/12/2005	Filtered	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.19	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	
	8/2/2006	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	12/19/2006	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	6/26/2007	Filtered	<0.10	0.41	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
	11/15/2007	Filtered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	
	4/22/2008	Filtered	<0.10	0.36	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	4.3	<0.10	<0.10
	11/6/2008	Filtered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	
4/8/2009	Filtered	0.46	1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.24	<0.10	<0.10		



**Table 4**  
**Summary of PAHs in Groundwater**  
 Former Watsonville-1 MGP Site  
 Watsonville, California

Well ID	Date Sampled	Filtered / Unfiltered	Units																
			Acenaph-thene µg/L	Acenaph-thylene µg/L	Anthra-cene µg/L	Benzo(a) Anthra-cene µg/L	Benzo(b) Fluoran-thene µg/L	Benzo(k) Fluoran-thene µg/L	Benzo (g,h,i) perylene µg/L	Benzo(a) pyrene µg/L	Chrysene µg/L	Dibenz (a,h) Anthra-cene µg/L	Fluoran-thene µg/L	Fluorene µg/L	Indeno-(1,2,3-cd)-pyrene µg/L	Naph-thalene µg/L	Phenan-threne µg/L	Pyrene µg/L	
MW-WAT1-4 (continued)	10/13/2009	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
	4/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.2	<0.10	<0.10
	10/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10*	0.035 J	<0.10	<0.10	<0.10	0.030 J	<0.10
	5/10/2011	Unfiltered	<0.10	0.40	0.63	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.20	<0.10	<0.10	<0.10	<0.10	0.13
	10/4/2011	Unfiltered	<0.10	<0.10	0.29	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.34	<0.10	<0.10	<0.10	<0.10	0.26
	10/22/2012	Unfiltered	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094
	4/23/2013	Unfiltered	<0.10	0.70	1.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.93	<0.10	<0.10	<0.10	0.13	0.62
	10/22/2013	Unfiltered	<0.10	0.16	0.23	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.13	<0.10	<0.10	<0.10	<0.10	0.17
	4/16/2014	Unfiltered	<0.10	0.46	0.73	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.28	<0.10	<0.10	<0.10	<0.10	0.17
	10/6/2014	Unfiltered	<0.10	<0.10	0.17	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.18	<0.10	<0.10	<0.10	<0.10	0.24
4/21/2015	Unfiltered	<0.10	0.14	0.58	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.34	<0.10	<0.10	<0.10	<0.10	0.34	
MW-WAT1-4 duplicate	4/23/2002	Filtered	18	11	0.95	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	0.52	1.5	<0.1	6.2	0.29	<0.15	
MW-WAT1-5	3/27/2001	Filtered	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.15	<0.1	<0.15	
	10/26/2001	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
	4/23/2002	Filtered	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.15	<0.1	<0.1	<0.15	<0.1	<0.15	
	10/29/2002	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
	4/28/2003	Filtered	<5	<2	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.18	<0.15	<0.1	<0.1	<5	<0.1	<0.15	
	11/20/2003	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
	5/12/2004	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	11/9/2004	Filtered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
	5/12/2005	Filtered	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.19	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	0.56 J	<0.94	<0.94
	8/2/2006	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/19/2006	Filtered	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/26/2007	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	11/15/2007	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/22/2008	Filtered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	11/6/2008	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/8/2009	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/12/2009	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	5/10/2011	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
10/4/2011	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
10/22/2012	Unfiltered	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	
4/23/2013	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	



**Table 4**  
**Summary of PAHs in Groundwater**  
 Former Watsonville-1 MGP Site  
 Watsonville, California

Well ID	Date Sampled	Filtered / Unfiltered	Units															
			Acenaph-thene µg/L	Acenaph-thylene µg/L	Anthra-cene µg/L	Benzo(a) Anthra-cene µg/L	Benzo(b) Fluoran-thene µg/L	Benzo(k) Fluoran-thene µg/L	Benzo (g,h,i) perylene µg/L	Benzo(a) pyrene µg/L	Chrysene µg/L	Dibenz (a,h) Anthra-cene µg/L	Fluoran-thene µg/L	Fluorene µg/L	Indeno-(1,2,3-cd)-pyrene µg/L	Naph-thalene µg/L	Phenan-threne µg/L	Pyrene µg/L
MW-WAT1-5 (continued)	10/22/2013	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/16/2014	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/6/2014	Unfiltered	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
	4/21/2015	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-WAT1-6	10/13/2009	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	5/10/2011	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/4/2011	Unfiltered	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	10/22/2012	Unfiltered	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094
	4/23/2013	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/22/2013	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/16/2014	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/6/2014	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/21/2015	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-WAT1-7	10/13/2009	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/13/2010	Filtered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	5/10/2011	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/4/2011	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/22/2012	Unfiltered	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096
	4/23/2013	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/22/2013	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/16/2014	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	10/6/2014	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	4/21/2015	Unfiltered	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
<b>Drinking Water MCL (ug/L)</b>			---	---	---	---	---	---	---	0.2	---	---	---	---	---	---	---	

**Notes:**

Analytical results presented in **bold** exceed the MCL, if available

PAHs = polycyclic aromatic hydrocarbons

µg/L = micrograms per liter

\*" = analyte not detected at or above laboratory reporting limit shown

"J" = analyte detected at an estimated concentration between the laboratory method detection limit and the reporting limit

"J\*" = reported result believed to be biased high due to a detection of the compound in an associated QA/QC sample, where the result in the primary sample is 5-20 times that of the QA/QC sample

\* = LCS and/or LCSD recovery exceeds the laboratory control limits

"NC" = not collected due to insufficient water column

MGP = manufactured gas plant

MCL = Maximum Contaminant Level based on Federal Drinking Water Standards (USEPA) (last updated June 2003) or California EPA (last updated September 2003); the more stringent MCL is shown

--- = MCL has not been established for compound

Source: modified from ENV America (2005) and Shaw (2003)



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-1									
	SG-1	SG-1A				SG-1B				
Probe Location ID	5	5	5	5	5	5	5	5	5	5
Sample Depth (feet bgs)	5	5	5	5	5	5	5	5	5	5
EPA Analytical Method	8260B	8260B	TO-15 CONF	8260B	8260B	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	2/13/08	10/12/09	10/12/09	4/26/10	10/13/10	6/29/11	10/3/11	11/6/12	4/18/13	10/14/13
TPHg	NA	6.17	8.5	NS	NS	ND (0.26)	ND (0.23)	ND (0.26)	2.7	ND (0.24)
1,2,4-Trichlorobenzene	ND (0.007)	ND (0.008)	ND (0.019)	NS	NS	ND (0.038)	ND (0.033) UJ	ND (0.037)	ND (0.035)	ND (0.034)
1,2,4-Trimethylbenzene	ND (0.007)	0.142	ND (0.0064)	NS	NS	ND (0.0063)	ND (0.0055)	ND (0.0062)	0.12	ND (0.0057)
1,3,5-Trimethylbenzene	ND (0.007)	0.021	ND (0.0054)	NS	NS	ND (0.0063)	ND (0.0055)	ND (0.0062)	0.035	ND (0.0057)
1,3-Butadiene	NA	NA	NA	NS	NS	ND (0.0028)	ND (0.0025)	ND (0.0028)	ND (0.0026)	ND (0.0026)
2,2,4-Trimethylpentane	NA	NA	NA	NS	NS	ND (0.0060)	ND (0.0052)	ND (0.0059)	0.029	ND (0.0054)
2-Butanone (MEK)	NA	NA	0.0083 J	NS	NS	ND (0.015)	ND (0.013)	ND (0.015)	ND (0.014)	ND (0.014)
4-Ethyltoluene	NA	NA	ND (0.0049)	NS	NS	ND (0.0063)	ND (0.0055)	ND (0.0062)	0.093	ND (0.0057)
4-Isopropyltoluene	ND (0.007)	0.043	NA	NS	NS	NA	NA	NA	NA	NA
Acetone	NA	NA	0.036	NS	NS	ND (0.012)	ND (0.011)	ND (0.030)	ND (0.028)	ND (0.028)
Benzene	ND (0.007)	ND (0.008)	ND (0.0048)	NS	NS	ND (0.0041)	ND (0.0036)	ND (0.0040)	0.010	ND (0.0037)
Bromodichloromethane	ND (0.007)	0.030	ND (0.0067)	NS	NS	ND (0.0086)	ND (0.0075)	ND (0.0084)	ND (0.0079)	ND (0.0078)
n-Butylbenzene	ND (0.007)	0.059	NA	NS	NS	NA	NA	NA	NA	NA
sec-Butylbenzene	ND (0.007)	0.140	NA	NS	NS	NA	NA	NA	NA	NA
tert-Butylbenzene	ND (0.007)	ND (0.008)	NA	NS	NS	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	ND (0.0062)	NS	NS	ND (0.016)	ND (0.014)	ND (0.016)	ND (0.015)	ND (0.014)
Carbon tetrachloride	ND (0.007)	ND (0.008)	ND (0.0063)	NS	NS	ND (0.0081)	ND (0.0070)	ND (0.0079)	ND (0.0074)	ND (0.0073)
Chloroform	ND (0.007)	0.384	0.56	NS	NS	0.58	0.049	0.033	0.18	0.080
Cyclohexane	NA	NA	NA	NS	NS	ND (0.0044)	ND (0.0038)	ND (0.0043)	0.015	0.0053
Dichlorodifluoromethane (Freon 12)	ND (0.007)	ND (0.008)	ND (0.0074)	NS	NS	ND (0.0064)	ND (0.0055)	ND (0.0062)	ND (0.0058)	ND (0.0057)
Ethanol	NA	NA	NA	NS	NS	ND (0.0097)	ND (0.0084)	ND (0.0095)	0.088	ND (0.0087)
Ethylbenzene	ND (0.007)	0.018	0.0051 J	NS	NS	ND (0.0056)	ND (0.0049)	ND (0.0055)	0.039	ND (0.0050)
Heptane	NA	NA	NA	NS	NS	ND (0.0053)	ND (0.0046)	ND (0.0052)	0.019	ND (0.0048)
Hexane	NA	NA	NA	NS	NS	ND (0.0045)	ND (0.0039)	ND (0.0044)	0.011	ND (0.0041)
Isopropylbenzene (Cumene)	ND (0.007)	0.025	NA	NS	NS	ND (0.0063)	ND (0.0055)	ND (0.0062)	ND (0.0058)	ND (0.0057)
Methylene chloride	ND (0.007)	ND (0.008)	0.011 UN	NS	NS	0.0045 UN	ND (0.0039)	ND (0.044)	ND (0.041)	ND (0.040)
Naphthalene	ND (0.007)	ND (0.008)	ND (0.016)	NS	NS	ND (0.027)	ND (0.023) UJ	ND (0.026)	ND (0.025)	ND (0.024)
n-Propylbenzene	ND (0.007)	ND (0.008)	NA	NS	NS	ND (0.0063)	ND (0.0055)	ND (0.0062)	0.014	ND (0.0057)
Styrene	ND (0.007)	ND (0.008)	ND (0.0043)	NS	NS	ND (0.0055)	ND (0.0048)	ND (0.0054)	ND (0.0050)	ND (0.0049)
Tetrachloroethene	ND (0.007)	ND (0.008)	ND (0.0068)	NS	NS	ND (0.0088)	ND (0.0076)	ND (0.0085)	ND (0.0080)	ND (0.0079)
Toluene	0.013	ND (0.008)	0.013	NS	NS	ND (0.0049)	ND (0.0042)	ND (0.0047)	0.14	ND (0.0044)
Trichlorofluoromethane (Freon 11)	ND (0.007)	ND (0.008)	ND (0.0056)	NS	NS	ND (0.0072)	ND (0.0063)	ND (0.0071)	ND (0.0066)	ND (0.0065)
Vinyl Chloride	ND (0.007)	ND (0.008)	ND (0.0051)	NS	NS	ND (0.0033)	ND (0.0029)	ND (0.0032)	ND (0.0030)	ND (0.0030)
m,p-Xylene	NA	NA	NA	NS	NS	ND (0.0056)	ND (0.0049)	ND (0.0055)	0.18	ND (0.0050)
o-Xylene	NA	NA	NA	NS	NS	ND (0.0056)	ND (0.0049)	ND (0.0055)	0.067	ND (0.0050)
Xylenes (total)	ND (0.007)	0.202	0.027	NS	NS	NA	NA	NA	NA	NA
Other VOCs	ND	ND	ND	NS	NS	ND	ND	ND	ND	0.0036 <sup>4</sup>



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-1											
	SG-1B			SG-1A			SG-1B					
Probe Location ID	5	5	5	9	9	9	9	9	9	9	9	9
Sample Depth (feet bgs)	5	5	5	9	9	9	9	9	9	9	9	9
EPA Analytical Method	TO-15	TO-15	TO-15	8260B	8260B	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	4/7/14	10/7/14	4/14/15	10/12/09	4/26/10	10/13/10	6/29/11	10/3/11	11/6/12	4/18/13	10/14/13	4/7/14
TPHg	ND (0.24)	0.49	ND (0.47)	1.49	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	ND (0.035)	ND (0.034)	ND (0.034)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	ND (0.0058)	ND (0.0057)	ND (0.0056)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
1,3,5-Trimethylbenzene	ND (0.0058)	ND (0.0057)	ND (0.0056)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Butadiene	ND (0.0026)	ND (0.0026)	ND (0.0025)	NA	NS	NS	NS	NS	NS	NS	NS	NS
2,2,4-Trimethylpentane	ND (0.0055)	ND (0.0054)	ND (0.0053)	NA	NS	NS	NS	NS	NS	NS	NS	NS
2-Butanone (MEK)	ND (0.014)	0.019	ND (0.014)	NA	NS	NS	NS	NS	NS	NS	NS	NS
4-Ethyltoluene	ND (0.0058)	ND (0.0057)	ND (0.0056)	NA	NS	NS	NS	NS	NS	NS	NS	NS
4-Isopropyltoluene	NA	NA	NA	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Acetone	0.031	0.057	ND (0.027)	NA	NS	NS	NS	NS	NS	NS	NS	NS
Benzene	ND (0.0038)	0.018	ND (0.0036)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Bromodichloromethane	ND (0.0079)	ND (0.0078)	ND (0.0077)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
n-Butylbenzene	NA	NA	NA	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	NA	NA	NA	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
tert-Butylbenzene	NA	NA	NA	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Carbon disulfide	ND (0.015)	ND (0.014)	ND (0.014)	NA	NS	NS	NS	NS	NS	NS	NS	NS
Carbon tetrachloride	ND (0.0074)	ND (0.0073)	ND (0.0072)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	0.26	0.66	1.3	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Cyclohexane	ND (0.0041)	ND (0.0040)	ND (0.0039)	NA	NS	NS	NS	NS	NS	NS	NS	NS
Dichlorodifluoromethane (Freon 12)	ND (0.0058)	ND (0.0058)	ND (0.0057)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Ethanol	0.0093	0.014	0.014	NA	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	ND (0.0051)	ND (0.0050)	ND (0.0050)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Heptane	ND (0.0048)	ND (0.0048)	ND (0.0047)	NA	NS	NS	NS	NS	NS	NS	NS	NS
Hexane	ND (0.0042)	0.0067	ND (0.0040)	NA	NS	NS	NS	NS	NS	NS	NS	NS
Isopropylbenzene (Cumene)	ND (0.0058)	0.077	ND (0.0056)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Methylene chloride	ND (0.041)	ND (0.040)	ND (0.040)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ND (0.025)	ND (0.024)	ND (0.024)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
n-Propylbenzene	ND (0.0058)	ND (0.0057)	ND (0.0056)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Styrene	ND (0.0050)	ND (0.0050)	ND (0.0049)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	ND (0.0080)	ND (0.0079)	ND (0.0078)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	ND (0.0044)	0.021	ND (0.0043)	0.403	NS	NS	NS	NS	NS	NS	NS	NS
Trichlorofluoromethane (Freon 11)	ND (0.0066)	ND (0.0065)	ND (0.0064)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	ND (0.0030)	ND (0.0030)	ND (0.0029)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
m,p-Xylene	ND (0.0051)	ND (0.0050)	ND (0.0050)	NA	NS	NS	NS	NS	NS	NS	NS	NS
o-Xylene	ND (0.0051)	ND (0.0050)	ND (0.0050)	NA	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes (total)	NA	NA	NA	0.085	NS	NS	NS	NS	NS	NS	NS	NS
Other VOCs	ND	0.027 6	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-1		SG-2					SG-2				
Probe Location ID	SG-1B		SG-2	SG-2A			SG-2B					
Sample Depth (feet bgs)	9	9	5	5	5	5	5	5	5	5	5	5
EPA Analytical Method	TO-15	TO-15	8260B	8260B	8260B	TO-15 CONF	8260B	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	10/7/14	4/14/15	2/13/08	10/12/09	4/26/10	4/26/10	10/13/10	6/27/11	10/3/11	11/6/12	4/18/13	10/14/13
TPHg	NS	NS	NA	ND (0.008)	<b>1.38</b>	<b>2.4 J</b>	<b>0.322</b>	ND (0.25)	ND (0.25)	ND (0.24)	<b>1.1</b>	ND (0.24)
1,2,4-Trichlorobenzene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.037)	ND (0.008)	ND (0.036)	ND (0.036) UJ	ND (0.034)	ND (0.034)	ND (0.035)
1,2,4-Trimethylbenzene	NS	NS	ND (0.007)	ND (0.008)	<b>0.160</b>	<b>0.013 J</b>	ND (0.008)	ND (0.0059)	ND (0.0059)	ND (0.0057)	<b>0.019</b>	ND (0.0059)
1,3,5-Trimethylbenzene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.020)	ND (0.008)	ND (0.0059)	ND (0.0059)	ND (0.0057)	<b>0.0057</b>	ND (0.0059)
1,3-Butadiene	NS	NS	NA	NA	NA	NA	NA	ND (0.0027)	ND (0.0027)	ND (0.0026)	ND (0.0025)	ND (0.0026)
2,2,4-Trimethylpentane	NS	NS	NA	NA	NA	NA	NA	ND (0.0056)	ND (0.0056)	ND (0.0054)	<b>0.021</b>	ND (0.0056)
2-Butanone (MEK)	NS	NS	NA	NA	NA	ND (0.018)	NA	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)
4-Ethyltoluene	NS	NS	NA	NA	NA	<b>0.020</b>	NA	ND (0.0059)	ND (0.0059)	ND (0.0057)	<b>0.014</b>	ND (0.0059)
4-Isopropyltoluene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	NA	ND (0.008)	NA	NA	NA	NA	NA
Acetone	NS	NS	NA	NA	NA	<b>0.073</b>	NA	0.013 UN	0.028 UN	ND (0.028)	ND (0.027)	<b>0.044</b>
Benzene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.0096)	ND (0.008)	ND (0.0039)	ND (0.0039)	ND (0.0037)	<b>0.0069</b>	ND (0.0038)
Bromodichloromethane	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.013)	ND (0.008)	ND (0.0081)	ND (0.0081)	ND (0.0078)	ND (0.0077)	ND (0.0080)
n-Butylbenzene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	NA	ND (0.008)	NA	NA	NA	NA	NA
sec-Butylbenzene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	NA	ND (0.008)	NA	NA	NA	NA	NA
tert-Butylbenzene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	NA	ND (0.008)	NA	NA	NA	NA	NA
Carbon disulfide	NS	NS	NA	NA	NA	ND (0.025)	NA	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.014)	ND (0.015)
Carbon tetrachloride	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.013)	ND (0.008)	ND (0.0076)	ND (0.0076)	ND (0.0073)	ND (0.0072)	ND (0.0075)
Chloroform	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	<b>0.017 J</b>	ND (0.008)	ND (0.0059)	ND (0.0059)	ND (0.0057)	ND (0.0056)	ND (0.0058)
Cyclohexane	NS	NS	NA	NA	NA	NA	NA	ND (0.0042)	ND (0.0042)	ND (0.0040)	<b>0.0068</b>	ND (0.0041)
Dichlorodifluoromethane (Freon 12)	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.0099)	ND (0.008)	ND (0.0060)	ND (0.0060)	ND (0.0058)	ND (0.0057)	ND (0.0059)
Ethanol	NS	NS	NA	NA	NA	NA	NA	ND (0.0091)	ND (0.0091)	ND (0.0088)	<b>0.082 J+</b>	ND (0.0090)
Ethylbenzene	NS	NS	ND (0.007)	ND (0.008)	<b>0.034</b>	<b>0.017 J</b>	<b>0.084</b>	ND (0.0052)	ND (0.0052)	ND (0.0050)	<b>0.0079</b>	ND (0.0052)
Heptane	NS	NS	NA	NA	NA	NA	NA	ND (0.0050)	ND (0.0050)	ND (0.0048)	<b>0.0082</b>	ND (0.0049)
Hexane	NS	NS	NA	NA	NA	NA	NA	ND (0.0043)	ND (0.0043)	ND (0.0041)	<b>0.0083</b>	ND (0.0042)
Isopropylbenzene (Cumene)	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	NA	ND (0.008)	ND (0.0059)	ND (0.0059)	ND (0.0057)	ND (0.0056)	ND (0.0059)
Methylene chloride	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	<b>0.012 J, UN</b>	ND (0.008)	ND (0.0042)	ND (0.0042)	ND (0.040)	ND (0.040)	ND (0.042)
Naphthalene	NS	NS	ND (0.007)	ND (0.008)	<b>0.159</b>	ND (0.031)	ND (0.008)	ND (0.025)	ND (0.025) UJ	ND (0.024)	ND (0.024)	ND (0.025)
n-Propylbenzene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	NA	ND (0.008)	ND (0.0059)	ND (0.0059)	ND (0.0057)	ND (0.0056)	ND (0.0059)
Styrene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.0085)	ND (0.008)	ND (0.0052)	ND (0.0052)	ND (0.0050)	ND (0.0049)	ND (0.0051)
Tetrachloroethene	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.014)	ND (0.008)	ND (0.0082)	ND (0.0082)	ND (0.0079)	ND (0.0078)	ND (0.0081)
Toluene	NS	NS	<b>0.015</b>	ND (0.008)	<b>0.009</b>	<b>0.040</b>	<b>0.041</b>	ND (0.0046)	ND (0.0046)	ND (0.0044)	<b>0.048</b>	ND (0.0045)
Trichlorofluoromethane (Freon 11)	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.011)	ND (0.008)	ND (0.0068)	ND (0.0068)	ND (0.0065)	ND (0.0065)	ND (0.0067)
Vinyl Chloride	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.010)	ND (0.008)	ND (0.0031)	ND (0.0031)	ND (0.0030)	ND (0.0029)	ND (0.0030)
m,p-Xylene	NS	NS	NA	NA	NA	NA	NA	ND (0.0052)	ND (0.0052)	ND (0.0050)	<b>0.032</b>	ND (0.0052)
o-Xylene	NS	NS	NA	NA	NA	NA	NA	ND (0.0052)	ND (0.0052)	ND (0.0050)	<b>0.012</b>	ND (0.0052)
Xylenes (total)	NS	NS	ND (0.007)	ND (0.008)	<b>0.199</b>	<b>0.15</b>	<b>0.208</b>	NA	NA	NA	NA	NA
Other VOCs	NS	NS	ND	ND	ND	<b>0.016 J<sup>1</sup></b>	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-2			SG-2								
Probe Location ID	SG-2B			SG-2C								
Sample Depth (feet bgs)	5	5	5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	
EPA Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	
Sample Date	4/7/14	10/7/14	4/14/15	6/28/11	10/4/11	11/8/12	4/18/13	10/14/13	4/7/14	10/8/14	4/14/15	
TPHg	ND (0.24)	<b>0.32</b>	ND (0.49)	<b>7.2</b>	<b>0.57</b>	ND (0.24)	ND (0.44)	ND (0.22)	ND (0.24)	ND (0.24)	ND (0.45)	
1,2,4-Trichlorobenzene	ND (0.035)	ND (0.035)	ND (0.036)	ND (0.033)	ND (0.035)	ND (0.035)	ND (0.065)	ND (0.032)	ND (0.035)	ND (0.035)	ND (0.033)	
1,2,4-Trimethylbenzene	ND (0.0058)	ND (0.0059)	ND (0.0059)	ND (0.0055)	ND (0.0058)	ND (0.0058)	ND (0.011)	ND (0.0052)	ND (0.0059)	ND (0.0058)	ND (0.0054)	
1,3,5-Trimethylbenzene	ND (0.0058)	ND (0.0059)	ND (0.0059)	ND (0.0055)	ND (0.0058)	ND (0.0058)	ND (0.011)	ND (0.0052)	ND (0.0059)	ND (0.0058)	ND (0.0054)	
1,3-Butadiene	ND (0.0026)	ND (0.0026)	ND (0.0026)	ND (0.0025)	ND (0.0026)	ND (0.0026)	ND (0.0048)	ND (0.0024)	ND (0.0026)	ND (0.0026)	ND (0.0024)	
2,2,4-Trimethylpentane	ND (0.0055)	ND (0.0056)	ND (0.0056)	<b>0.023</b>	<b>0.011</b>	ND (0.0055)	ND (0.010)	ND (0.0050)	ND (0.0056)	ND (0.0055)	ND (0.0051)	
2-Butanone (MEK)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)	ND (0.026)	ND (0.012)	ND (0.014)	ND (0.014)	ND (0.013)	
4-Ethyltoluene	ND (0.0058)	ND (0.0059)	ND (0.0059)	ND (0.0055)	ND (0.0058)	ND (0.0058)	ND (0.011)	ND (0.0052)	ND (0.0059)	ND (0.0058)	ND (0.0054)	
4-Isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Acetone	ND (0.028)	ND (0.028)	ND (0.028)	0.015 UN	0.046 UN	ND (0.028)	ND (0.052)	<b>0.044</b>	ND (0.028)	ND (0.028)	ND (0.026)	
Benzene	ND (0.0038)	ND (0.0038)	ND (0.0038)	ND (0.0036)	ND (0.0038)	ND (0.0038)	ND (0.0070)	ND (0.0034)	ND (0.0038)	ND (0.0038)	ND (0.0035)	
Bromodichloromethane	ND (0.0079)	ND (0.0080)	ND (0.0080)	ND (0.0075)	ND (0.0079)	ND (0.0079)	ND (0.015)	ND (0.0071)	ND (0.0080)	ND (0.0079)	ND (0.0074)	
n-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Carbon disulfide	ND (0.015)	ND (0.015)	ND (0.015)	<b>0.12</b>	<b>0.064</b>	ND (0.015)	ND (0.027)	ND (0.013)	ND (0.015)	ND (0.015)	ND (0.014)	
Carbon tetrachloride	ND (0.0074)	ND (0.0075)	ND (0.0076)	ND (0.0070)	ND (0.0074)	ND (0.0074)	ND (0.014)	ND (0.0067)	ND (0.0075)	ND (0.0074)	ND (0.0069)	
Chloroform	ND (0.0058)	ND (0.0058)	ND (0.0058)	ND (0.0055)	ND (0.0057)	ND (0.0058)	ND (0.011)	ND (0.0052)	<b>0.017</b>	ND (0.0058)	ND (0.0054)	
Cyclohexane	ND (0.0041)	ND (0.0041)	ND (0.0041)	<b>0.054</b>	<b>0.013</b>	ND (0.0041)	ND (0.0075)	<b>0.0040</b>	ND (0.0041)	ND (0.0041)	ND (0.0038)	
Dichlorodifluoromethane (Freon 12)	ND (0.0059)	ND (0.0059)	ND (0.0059)	ND (0.0055)	ND (0.0058)	ND (0.0059)	ND (0.011)	ND (0.0053)	ND (0.0059)	ND (0.0059)	ND (0.0054)	
Ethanol	ND (0.0089)	ND (0.0090)	ND (0.0090)	ND (0.0084)	ND (0.0088)	ND (0.0089)	ND (0.016)	<b>0.011</b>	ND (0.0090)	ND (0.0089)	ND (0.0083)	
Ethylbenzene	ND (0.0051)	ND (0.0052)	ND (0.0052)	ND (0.0049)	ND (0.0051)	ND (0.0051)	ND (0.0095)	ND (0.0046)	ND (0.0052)	ND (0.0051)	ND (0.0048)	
Heptane	ND (0.0048)	ND (0.0049)	ND (0.0049)	ND (0.0046)	<b>0.0052</b>	ND (0.0048)	ND (0.0089)	ND (0.0044)	ND (0.0049)	ND (0.0048)	ND (0.0045)	
Hexane	ND (0.0042)	ND (0.0042)	ND (0.0042)	<b>0.062</b>	<b>0.011</b>	ND (0.0042)	ND (0.0077)	<b>0.0041</b>	ND (0.0042)	ND (0.0042)	ND (0.0039)	
Isopropylbenzene (Cumene)	ND (0.0058)	ND (0.0059)	ND (0.0059)	ND (0.0055)	ND (0.0058)	ND (0.0058)	ND (0.011)	ND (0.0052)	ND (0.0059)	ND (0.0058)	ND (0.0054)	
Methylene chloride	ND (0.041)	ND (0.042)	ND (0.042)	ND (0.0039)	ND (0.0041)	ND (0.041)	ND (0.076)	ND (0.037)	ND (0.042)	ND (0.041)	ND (0.038)	
Naphthalene	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.023)	ND (0.025)	ND (0.025)	ND (0.046)	ND (0.022)	ND (0.025)	ND (0.025)	ND (0.023)	
n-Propylbenzene	ND (0.0058)	ND (0.0059)	ND (0.0059)	ND (0.0055)	ND (0.0058)	ND (0.0058)	ND (0.011)	ND (0.0052)	ND (0.0059)	ND (0.0058)	ND (0.0054)	
Styrene	ND (0.0050)	ND (0.0051)	ND (0.0051)	ND (0.0048)	ND (0.0050)	ND (0.0050)	ND (0.0093)	ND (0.0045)	ND (0.0051)	ND (0.0050)	ND (0.0047)	
Tetrachloroethene	ND (0.0080)	ND (0.0081)	ND (0.0081)	ND (0.0076)	<b>0.0088</b>	ND (0.0080)	ND (0.015)	ND (0.0072)	ND (0.0081)	ND (0.0080)	ND (0.0075)	
Toluene	ND (0.0045)	ND (0.0045)	ND (0.0045)	ND (0.0042)	ND (0.0044)	ND (0.0045)	ND (0.0082)	ND (0.0040)	ND (0.0045)	ND (0.0045)	ND (0.0041)	
Trichlorofluoromethane (Freon 11)	ND (0.0066)	ND (0.0067)	ND (0.0067)	ND (0.0063)	ND (0.0066)	ND (0.0066)	ND (0.012)	ND (0.0060)	ND (0.0067)	ND (0.0066)	ND (0.0062)	
Vinyl Chloride	ND (0.0030)	ND (0.0030)	ND (0.0031)	ND (0.0029)	ND (0.0030)	ND (0.0030)	ND (0.0056)	ND (0.0027)	ND (0.0030)	ND (0.0030)	ND (0.0028)	
m,p-Xylene	ND (0.0051)	ND (0.0052)	ND (0.0052)	ND (0.0049)	ND (0.0051)	ND (0.0051)	ND (0.0095)	ND (0.0046)	ND (0.0052)	ND (0.0051)	ND (0.0048)	
o-Xylene	ND (0.0051)	ND (0.0052)	ND (0.0052)	ND (0.0049)	ND (0.0051)	ND (0.0051)	ND (0.0095)	ND (0.0046)	ND (0.0052)	ND (0.0051)	ND (0.0048)	
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Other VOCs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-2									SG-3		
	SG-2			SG-2A			SG-2B			SG-3	SG-3A	
Probe Location ID	15	15	15	14.5	14.5	14.5	14.5	14.5	14.5	5	5	5
Sample Depth (feet bgs)	15	15	15	14.5	14.5	14.5	14.5	14.5	14.5	5	5	5
EPA Analytical Method	8260B	8260B	TO-15	8260B	8260B	8260B	TO-15	TO-15	TO-15	8260B	8260B	8260B
Sample Date	2/13/08	2/13/08	2/13/08	10/12/09	4/26/10	10/13/10	6/27/11	10/4/11	11/8/12	2/13/08	10/12/09	4/26/10
TPHg	NA	NA	NA	ND (0.008)	<b>2.22</b>	NS	NS	NS	NS	NA	<b>6.32</b>	<b>0.026</b>
1,2,4-Trichlorobenzene	ND (0.007)	ND (0.007)	ND (0.007)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
1,2,4-Trimethylbenzene	ND (0.007)	ND (0.007)	<b>0.0051</b>	ND (0.008)	<b>0.010</b>	NS	NS	NS	NS	ND (0.007)	ND (0.008)	<b>0.026</b>
1,3,5-Trimethylbenzene	ND (0.007)	ND (0.007)	ND (0.0024)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
1,3-Butadiene	NA	NA	NA	NA	NA	NS	NS	NS	NS	NA	NA	NA
2,2,4-Trimethylpentane	NA	NA	NA	NA	NA	NS	NS	NS	NS	NA	NA	NA
2-Butanone (MEK)	NA	NA	<b>0.0055</b>	NA	NA	NS	NS	NS	NS	NA	NA	NA
4-Ethyltoluene	NA	NA	<b>0.0040</b>	NA	NA	NS	NS	NS	NS	NA	NA	NA
4-Isopropyltoluene	ND (0.007)	ND (0.007)	NA	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Acetone	NA	NA	<b>0.032</b>	NA	NA	NS	NS	NS	NS	NA	NA	NA
Benzene	ND (0.007)	ND (0.007)	<b>0.030</b>	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Bromodichloromethane	ND (0.007)	ND (0.007)	ND (0.002)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
n-Butylbenzene	ND (0.007)	ND (0.007)	NA	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
sec-Butylbenzene	ND (0.007)	ND (0.007)	NA	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
tert-Butylbenzene	ND (0.007)	ND (0.007)	NA	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Carbon disulfide	NA	NA	<b>0.019</b>	NA	NA	NS	NS	NS	NS	NA	NA	NA
Carbon tetrachloride	ND (0.007)	ND (0.007)	ND (0.0019)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Chloroform	ND (0.007)	ND (0.007)	ND (0.0015)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Cyclohexane	NA	NA	NA	NA	NA	NS	NS	NS	NS	NA	NA	NA
Dichlorodifluoromethane (Freon 12)	ND (0.007)	ND (0.007)	<b>0.0038</b>	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Ethanol	NA	NA	NA	NA	NA	NS	NS	NS	NS	NA	NA	NA
Ethylbenzene	ND (0.007)	ND (0.007)	<b>0.0044</b>	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Heptane	NA	NA	NA	NA	NA	NS	NS	NS	NS	NA	NA	NA
Hexane	NA	NA	NA	NA	NA	NS	NS	NS	NS	NA	NA	NA
Isopropylbenzene (Cumene)	ND (0.007)	ND (0.007)	NA	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Methylene chloride	ND (0.007)	ND (0.007)	<b>0.0016</b>	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Naphthalene	ND (0.007)	ND (0.007)	ND (0.0026)	ND (0.008)	<b>0.234</b>	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
n-Propylbenzene	ND (0.007)	ND (0.007)	NA	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Styrene	ND (0.007)	ND (0.007)	<b>0.0035 JA</b>	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Tetrachloroethene	ND (0.007)	ND (0.007)	ND (0.007)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Toluene	<b>0.037</b>	<b>0.020</b>	<b>0.041</b>	ND (0.008)	ND (0.008)	NS	NS	NS	NS	<b>0.042</b>	<b>3.12</b>	ND (0.008)
Trichlorofluoromethane (Freon 11)	ND (0.007)	ND (0.007)	<b>0.0027</b>	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Vinyl Chloride	ND (0.007)	ND (0.007)	ND (0.007)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
m,p-Xylene	NA	NA	NA	NA	NA	NS	NS	NS	NS	NA	NA	NA
o-Xylene	NA	NA	NA	NA	NA	NS	NS	NS	NS	NA	NA	NA
Xylenes (total)	ND (0.007)	ND (0.007)	<b>0.024</b>	ND (0.008)	<b>0.101</b>	NS	NS	NS	NS	ND (0.007)	ND (0.008)	ND (0.008)
Other VOCs	ND	ND	ND	ND	ND	NS	NS	NS	NS	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-3											
	SG-3A			SG-3						SG-3A		
Probe Location ID	5	5	5	5	5	5	5	5	5	15	14.5	14.5
Sample Depth (feet bgs)	5	5	5	5	5	5	5	5	5	15	14.5	14.5
EPA Analytical Method	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	8260B	8260B	8260B
Sample Date	10/13/10	6/28/11	10/3/11	11/7/12	4/19/13	10/17/13	4/9/14	10/9/14	4/15/15	2/13/08	10/12/09	4/26/10
TPHg	0.152	ND (0.24)	ND (0.24)	2.2	3.5	ND (0.23)	ND (0.24)	ND (0.24)	ND (0.46)	NA	ND (0.008)	0.325
1,2,4-Trichlorobenzene	ND (0.008)	ND (0.035)	ND (0.034) UJ	ND (0.033)	ND (0.034)	ND (0.033)	ND (0.035)	ND (0.035)	ND (0.034)	ND (0.007)	ND (0.008)	ND (0.008)
1,2,4-Trimethylbenzene	0.017	ND (0.0058)	ND (0.0057)	0.080	0.14	ND (0.0055)	ND (0.0058)	ND (0.0059)	ND (0.0056)	ND (0.007)	ND (0.008)	ND (0.008)
1,3,5-Trimethylbenzene	ND (0.008)	ND (0.0058)	ND (0.0057)	0.028	0.045	ND (0.0055)	ND (0.0058)	ND (0.0059)	ND (0.0056)	ND (0.007)	ND (0.008)	ND (0.008)
1,3-Butadiene	NA	ND (0.0026)	ND (0.0026)	ND (0.0025)	ND (0.0026)	ND (0.0025)	ND (0.0026)	ND (0.0026)	ND (0.0025)	NA	NA	NA
2,2,4-Trimethylpentane	NA	ND (0.0056)	ND (0.0054)	ND (0.0052)	0.053	ND (0.0052)	ND (0.0055)	ND (0.0056)	ND (0.0053)	NA	NA	NA
2-Butanone (MEK)	NA	ND (0.014)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)	ND (0.013)	NA	NA	NA
4-Ethyltoluene	NA	ND (0.0058)	ND (0.0057)	0.052	0.15	ND (0.0055)	ND (0.0058)	ND (0.0059)	ND (0.0056)	NA	NA	NA
4-Isopropyltoluene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.007)	ND (0.008)	ND (0.008)
Acetone	NA	ND (0.011)	0.020 UN	ND (0.027)	ND (0.028)	ND (0.027)	ND (0.028)	ND (0.028)	ND (0.027)	NA	NA	NA
Benzene	ND (0.008)	ND (0.0038)	ND (0.0037)	ND (0.0036)	0.012	ND (0.0036)	ND (0.0038)	ND (0.0038)	ND (0.0036)	ND (0.007)	ND (0.008)	ND (0.008)
Bromodichloromethane	ND (0.008)	ND (0.0080)	ND (0.0078)	ND (0.0075)	ND (0.0078)	ND (0.0075)	ND (0.0079)	ND (0.0080)	ND (0.0076)	ND (0.007)	ND (0.008)	ND (0.008)
n-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.007)	ND (0.008)	ND (0.008)
sec-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.007)	ND (0.008)	ND (0.008)
tert-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.007)	ND (0.008)	ND (0.008)
Carbon disulfide	NA	ND (0.015)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.014)	NA	NA	NA
Carbon tetrachloride	ND (0.008)	ND (0.0075)	ND (0.0073)	ND (0.0070)	ND (0.0073)	ND (0.0070)	ND (0.0074)	ND (0.0075)	ND (0.0071)	ND (0.007)	ND (0.008)	ND (0.008)
Chloroform	ND (0.008)	ND (0.0058)	ND (0.0057)	ND (0.0055)	ND (0.0057)	ND (0.0055)	ND (0.0058)	0.010	ND (0.0055)	ND (0.007)	ND (0.008)	ND (0.008)
Cyclohexane	NA	ND (0.0041)	ND (0.0040)	ND (0.0038)	0.018	ND (0.0038)	ND (0.0041)	ND (0.0041)	ND (0.0039)	NA	NA	NA
Dichlorodifluoromethane (Freon 12)	ND (0.008)	ND (0.0059)	ND (0.0058)	ND (0.0055)	ND (0.0057)	ND (0.0055)	ND (0.0058)	ND (0.0059)	ND (0.0056)	ND (0.007)	ND (0.008)	ND (0.008)
Ethanol	NA	ND (0.0090)	ND (0.0088)	ND (0.0084)	0.10	ND (0.0084)	ND (0.0089)	ND (0.0090)	0.013	NA	NA	NA
Ethylbenzene	0.058	ND (0.0052)	ND (0.0050)	0.017	0.076	ND (0.0049)	ND (0.0051)	ND (0.0052)	ND (0.0049)	ND (0.007)	ND (0.008)	ND (0.008)
Heptane	NA	ND (0.0049)	ND (0.0048)	ND (0.0046)	0.025	ND (0.0046)	ND (0.0048)	ND (0.0049)	ND (0.0046)	NA	NA	NA
Hexane	NA	ND (0.0042)	ND (0.0041)	ND (0.0039)	0.014	ND (0.0039)	ND (0.0042)	ND (0.0042)	ND (0.0040)	NA	NA	NA
Isopropylbenzene (Cumene)	ND (0.008)	ND (0.0058)	ND (0.0057)	ND (0.0055)	ND (0.0057)	ND (0.0055)	ND (0.0058)	ND (0.0059)	ND (0.0056)	ND (0.007)	ND (0.008)	ND (0.008)
Methylene chloride	ND (0.008)	ND (0.0041)	ND (0.0040)	ND (0.039)	ND (0.040)	ND (0.039)	ND (0.041)	ND (0.042)	ND (0.039)	ND (0.007)	ND (0.008)	ND (0.008)
Naphthalene	ND (0.008)	ND (0.025)	ND (0.024) UJ	0.032	ND (0.024)	ND (0.023)	ND (0.025)	ND (0.025)	ND (0.024)	ND (0.007)	ND (0.008)	0.061
n-Propylbenzene	ND (0.008)	ND (0.0058)	ND (0.0057)	0.0060	0.021	ND (0.0055)	ND (0.0058)	ND (0.0059)	ND (0.0056)	ND (0.007)	ND (0.008)	ND (0.008)
Styrene	ND (0.008)	ND (0.0051)	ND (0.0050)	ND (0.0048)	ND (0.0049)	ND (0.0048)	ND (0.0050)	ND (0.0051)	ND (0.0048)	ND (0.007)	ND (0.008)	ND (0.008)
Tetrachloroethene	ND (0.008)	ND (0.0081)	ND (0.0079)	ND (0.0076)	ND (0.0079)	ND (0.0076)	ND (0.0080)	ND (0.0081)	ND (0.0077)	ND (0.007)	ND (0.008)	ND (0.008)
Toluene	0.077	ND (0.0045)	ND (0.0044)	0.054	0.19	ND (0.0042)	ND (0.0044)	ND (0.0045)	ND (0.0043)	0.083	ND (0.008)	ND (0.008)
Trichlorofluoromethane (Freon 11)	ND (0.008)	ND (0.0067)	ND (0.0065)	ND (0.0063)	ND (0.0065)	ND (0.0063)	ND (0.0066)	ND (0.0067)	ND (0.0064)	ND (0.007)	ND (0.008)	ND (0.008)
Vinyl Chloride	ND (0.008)	ND (0.0030)	ND (0.0030)	ND (0.0029)	ND (0.0030)	ND (0.0029)	ND (0.0030)	ND (0.0030)	ND (0.0029)	ND (0.007)	ND (0.008)	ND (0.008)
m,p-Xylene	NA	ND (0.0052)	ND (0.0050)	0.12	0.38	ND (0.0049)	ND (0.0051)	ND (0.0052)	ND (0.0049)	NA	NA	NA
o-Xylene	NA	ND (0.0052)	ND (0.0050)	0.061	0.13	ND (0.0049)	ND (0.0051)	ND (0.0052)	ND (0.0049)	NA	NA	NA
Xylenes (total)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.007)	ND (0.008)	ND (0.008)
Other VOCs	ND	ND	ND	ND	0.019 <sup>5</sup>	0.027 <sup>6</sup>	0.012 <sup>7</sup>	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-3									SG-4	
Probe Location ID	SG-3A									SG-4	
Sample Depth (feet bgs)	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	5	5
EPA Analytical Method	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	8260B	TO-15
Sample Date	10/13/10	6/28/11	10/3/11	11/7/12	4/19/13	10/17/13	4/9/14	10/9/14	4/15/15	2/12/08	2/12/08
TPHg	<b>3.92</b>	ND (0.24)	ND (0.24)	ND (0.26)	<b>5.1</b>	ND (0.23)	ND (0.23)	ND (0.25)	ND (0.46)	NA	NA
1,2,4-Trichlorobenzene	ND (0.008)	ND (0.035)	ND (0.034) UJ	ND (0.038)	ND (0.14)	ND (0.033)	ND (0.034)	ND (0.036)	ND (0.034)	ND (0.007)	ND (0.007)
1,2,4-Trimethylbenzene	ND (0.008)	ND (0.0058)	ND (0.0057)	ND (0.0063)	<b>0.17</b>	ND (0.0055)	ND (0.0056)	ND (0.0060)	ND (0.0056)	ND (0.018)	<b>0.033</b>
1,3,5-Trimethylbenzene	ND (0.008)	ND (0.0058)	ND (0.0057)	ND (0.0063)	<b>0.054</b>	ND (0.0055)	ND (0.0056)	ND (0.0060)	ND (0.0056)	ND (0.018)	<b>0.025</b>
1,3-Butadiene	NA	ND (0.0026)	ND (0.0026)	ND (0.0028)	ND (0.010)	ND (0.0025)	ND (0.0025)	ND (0.0027)	ND (0.0025)	NA	NA
2,2,4-Trimethylpentane	NA	ND (0.0056)	ND (0.0054)	ND (0.0060)	<b>0.10</b>	ND (0.0052)	ND (0.0053)	ND (0.0057)	ND (0.0053)	NA	NA
2-Butanone (MEK)	NA	ND (0.014)	ND (0.014)	ND (0.015)	ND (0.056)	ND (0.013)	ND (0.013)	ND (0.014)	ND (0.013)	NA	ND (0.0058)
4-Ethyltoluene	NA	ND (0.0058)	ND (0.0057)	ND (0.0063)	<b>0.17</b>	ND (0.0055)	ND (0.0056)	ND (0.0060)	ND (0.0056)	NA	<b>0.046</b>
4-Isopropyltoluene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.018)	NA
Acetone	NA	ND (0.011)	0.020 UN	ND (0.031)	ND (0.11)	ND (0.027)	ND (0.027)	ND (0.029)	ND (0.027)	NA	<b>0.026</b>
Benzene	ND (0.008)	ND (0.0038)	ND (0.0037)	ND (0.0041)	<b>0.024</b>	ND (0.0036)	ND (0.0036)	ND (0.0039)	ND (0.0036)	<b>0.571</b>	<b>0.0093</b>
Bromodichloromethane	ND (0.008)	ND (0.0080)	ND (0.0078)	ND (0.0086)	ND (0.032)	ND (0.0075)	ND (0.0076)	<b>0.014</b>	<b>0.011</b>	ND (0.018)	ND (0.004)
n-Butylbenzene	<b>0.392</b>	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.018)	NA
sec-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.018)	NA
tert-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.018)	NA
Carbon disulfide	NA	ND (0.015)	ND (0.014)	ND (0.016)	ND (0.060)	ND (0.014)	ND (0.014)	ND (0.015)	ND (0.014)	NA	<b>0.0084</b>
Carbon tetrachloride	ND (0.008)	ND (0.0075)	ND (0.0073)	ND (0.0081)	ND (0.030)	ND (0.0071)	ND (0.0072)	ND (0.0076)	ND (0.0071)	ND (0.018)	ND (0.0038)
Chloroform	<b>0.041</b>	<b>0.035</b>	<b>0.051</b>	<b>0.037</b>	ND (0.023)	<b>0.020</b>	<b>0.011</b>	<b>0.044</b>	<b>0.026</b>	ND (0.018)	ND (0.003)
Cyclohexane	NA	ND (0.0041)	ND (0.0040)	ND (0.0044)	<b>0.026</b>	ND (0.0039)	ND (0.0039)	ND (0.0042)	ND (0.0039)	NA	NA
Dichlorodifluoromethane (Freon 12)	ND (0.008)	ND (0.0059)	ND (0.0058)	ND (0.0064)	ND (0.024)	ND (0.0056)	ND (0.0056)	ND (0.0060)	ND (0.0056)	ND (0.018)	ND (0.003)
Ethanol	NA	ND (0.0090)	ND (0.0088)	ND (0.0097)	<b>0.26</b>	ND (0.0085)	ND (0.0086)	ND (0.0092)	ND (0.0086)	NA	NA
Ethylbenzene	ND (0.008)	ND (0.0052)	ND (0.0050)	ND (0.0056)	<b>0.10</b>	ND (0.0049)	ND (0.0049)	ND (0.0053)	ND (0.0049)	<b>0.525</b>	<b>0.015</b>
Heptane	NA	ND (0.0049)	ND (0.0048)	ND (0.0053)	<b>0.048</b>	ND (0.0046)	ND (0.0047)	ND (0.0050)	ND (0.0046)	NA	NA
Hexane	NA	ND (0.0042)	ND (0.0041)	ND (0.0045)	<b>0.029</b>	ND (0.0040)	ND (0.0040)	ND (0.0043)	ND (0.0040)	NA	NA
Isopropylbenzene (Cumene)	ND (0.008)	ND (0.0058)	ND (0.0057)	ND (0.0063)	ND (0.023)	ND (0.0055)	ND (0.0056)	ND (0.0060)	ND (0.0056)	ND (0.018)	NA
Methylene chloride	ND (0.008)	0.0042 UN	ND (0.0040)	ND (0.045)	ND (0.17)	ND (0.039)	ND (0.040)	ND (0.042)	ND (0.039)	ND (0.018)	ND (0.002)
Naphthalene	<b>0.040</b>	ND (0.025)	ND (0.024) UJ	ND (0.027)	ND (0.10)	ND (0.024)	ND (0.024)	ND (0.025)	ND (0.024)	ND (0.018)	ND (0.0052)
n-Propylbenzene	ND (0.008)	ND (0.0058)	ND (0.0057)	ND (0.0063)	<b>0.027</b>	ND (0.0055)	ND (0.0056)	ND (0.0060)	ND (0.0056)	ND (0.018)	NA
Styrene	ND (0.008)	ND (0.0051)	ND (0.0050)	ND (0.0055)	ND (0.020)	ND (0.0048)	ND (0.0048)	ND (0.0052)	ND (0.0048)	ND (0.018)	<b>0.03 JA</b>
Tetrachloroethene	ND (0.008)	ND (0.0081)	ND (0.0079)	ND (0.0088)	ND (0.032)	ND (0.0076)	ND (0.0077)	ND (0.0082)	ND (0.0077)	ND (0.007)	ND (0.007)
Toluene	<b>0.055</b>	ND (0.0045)	ND (0.0044)	ND (0.0049)	<b>0.33</b>	ND (0.0042)	ND (0.0043)	ND (0.0046)	ND (0.0043)	<b>9.45</b>	<b>0.096</b>
Trichlorofluoromethane (Freon 11)	ND (0.008)	ND (0.0067)	ND (0.0065)	ND (0.0072)	ND (0.027)	ND (0.0063)	ND (0.0064)	ND (0.0068)	ND (0.0064)	ND (0.018)	ND (0.0044)
Vinyl Chloride	ND (0.008)	ND (0.0030)	ND (0.0030)	ND (0.0033)	ND (0.012)	ND (0.0029)	ND (0.0029)	ND (0.0031)	ND (0.0029)	ND (0.007)	ND (0.007)
m,p-Xylene	NA	ND (0.0052)	ND (0.0050)	ND (0.0056)	<b>0.52</b>	ND (0.0049)	ND (0.0050)	ND (0.0053)	ND (0.0049)	NA	NA
o-Xylene	NA	ND (0.0052)	ND (0.0050)	ND (0.0056)	<b>0.17</b>	ND (0.0049)	ND (0.0050)	ND (0.0053)	ND (0.0049)	NA	NA
Xylenes (total)	<b>0.108</b>	NA	NA	NA	NA	NA	NA	NA	NA	<b>3.16</b>	<b>0.430</b>
Other VOCs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-4											
Probe Location ID	SG-4A											
Sample Depth (feet bgs)	5	5	5	5	5	5	5	5	5	5	5	5
EPA Analytical Method	8260B	8260B	TO-15 CONF	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	10/12/09	4/26/10	4/26/10	10/13/10	6/27/11	10/4/11	11/7/12	4/18/13	10/15/13	4/8/14	10/8/14	4/14/15
TPHg	15.4	29.3	170	13.3	ND (0.25)	ND (0.25)	ND (0.25)	1.9	ND (0.22)	ND (0.24)	ND (0.26)	ND (0.45)
1,2,4-Trichlorobenzene	ND (0.008)	ND (0.008)	ND (0.76)	ND (0.008)	ND (0.036)	ND (0.037)	ND (0.037)	ND (0.073)	ND (0.032)	ND (0.035)	ND (0.037)	ND (0.033)
1,2,4-Trimethylbenzene	0.147	1.54	ND (0.26)	0.486	ND (0.0059)	ND (0.0061)	ND (0.0061)	0.034	ND (0.0053)	ND (0.0058)	ND (0.0061)	ND (0.0054)
1,3,5-Trimethylbenzene	0.067	0.162	ND (0.40)	0.230	ND (0.0059)	ND (0.0061)	ND (0.0061)	ND (0.012)	ND (0.0053)	ND (0.0058)	ND (0.0061)	ND (0.0054)
1,3-Butadiene	NA	NA	NA	NA	ND (0.0027)	ND (0.0027)	ND (0.0027)	ND (0.0055)	ND (0.0024)	ND (0.0026)	ND (0.0028)	ND (0.0024)
2,2,4-Trimethylpentane	NA	NA	NA	NA	ND (0.0056)	ND (0.0058)	ND (0.0058)	0.017	ND (0.0051)	ND (0.0056)	ND (0.0058)	ND (0.0052)
2-Butanone (MEK)	NA	NA	ND (0.36)	NA	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.029)	ND (0.013)	ND (0.014)	0.020	ND (0.013)
4-Ethyltoluene	NA	NA	ND (0.20)	NA	ND (0.0059)	ND (0.0061)	ND (0.0061)	0.025	ND (0.0053)	ND (0.0058)	ND (0.0061)	ND (0.0054)
4-Isopropyltoluene	0.078	ND (0.008)	NA	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	ND (0.39)	NA	0.014 UN	0.021 UN	ND (0.029)	0.059	0.026	ND (0.028)	ND (0.030)	ND (0.026)
Benzene	ND (0.008)	ND (0.008)	ND (0.20)	ND (0.008)	ND (0.0039)	ND (0.0040)	ND (0.0039)	ND (0.0079)	ND (0.0035)	ND (0.0038)	ND (0.0040)	ND (0.0035)
Bromodichloromethane	ND (0.008)	ND (0.008)	ND (0.27)	ND (0.008)	ND (0.0081)	ND (0.0083)	ND (0.0083)	ND (0.016)	ND (0.0073)	ND (0.0080)	ND (0.0084)	ND (0.0074)
n-Butylbenzene	0.06	0.065	NA	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	0.145	ND (0.008)	NA	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ND (0.008)	ND (0.008)	NA	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	ND (0.51)	NA	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.031)	ND (0.014)	ND (0.015)	ND (0.016)	ND (0.014)
Carbon tetrachloride	ND (0.008)	ND (0.008)	ND (0.26)	ND (0.008)	ND (0.0076)	ND (0.0078)	ND (0.0078)	ND (0.016)	ND (0.0068)	ND (0.0075)	ND (0.0079)	ND (0.0070)
Chloroform	ND (0.008)	ND (0.008)	ND (0.20)	ND (0.008)	ND (0.0059)	ND (0.0060)	ND (0.0060)	ND (0.012)	ND (0.0053)	ND (0.0058)	ND (0.0061)	ND (0.0054)
Cyclohexane	NA	NA	NA	NA	ND (0.0042)	ND (0.0043)	ND (0.0042)	ND (0.0085)	ND (0.0037)	ND (0.0041)	ND (0.0043)	ND (0.0038)
Dichlorodifluoromethane (Freon 12)	ND (0.008)	ND (0.008)	ND (0.20)	ND (0.008)	ND (0.0060)	ND (0.0061)	ND (0.0061)	ND (0.012)	ND (0.0054)	ND (0.0059)	ND (0.0062)	ND (0.0055)
Ethanol	NA	NA	NA	NA	ND (0.0091)	ND (0.0093)	ND (0.0093)	0.12	0.012	ND (0.0090)	0.013	0.0088
Ethylbenzene	0.671	1.84	ND (0.18)	1.25	ND (0.0052)	ND (0.0054)	ND (0.0054)	ND (0.011)	ND (0.0047)	ND (0.0052)	ND (0.0054)	ND (0.0048)
Heptane	NA	NA	NA	NA	ND (0.0050)	ND (0.0051)	ND (0.0051)	ND (0.010)	ND (0.0044)	ND (0.0049)	ND (0.0051)	ND (0.0045)
Hexane	NA	NA	NA	NA	ND (0.0043)	ND (0.0044)	ND (0.0044)	ND (0.0087)	ND (0.0038)	ND (0.0042)	0.0056	ND (0.0039)
Isopropylbenzene (Cumene)	0.03	0.043	NA	ND (0.008)	ND (0.0059)	ND (0.0061)	ND (0.0061)	ND (0.012)	ND (0.0053)	ND (0.0058)	ND (0.0061)	ND (0.0054)
Methylene chloride	ND (0.008)	ND (0.008)	ND (0.14)	ND (0.008)	0.0043 UN	ND (0.0043)	ND (0.043)	ND (0.086)	ND (0.038)	ND (0.041)	ND (0.043)	ND (0.038)
Naphthalene	ND (0.008)	0.452	ND (0.64)	0.487	ND (0.025)	ND (0.026)	ND (0.026)	ND (0.052)	ND (0.023)	ND (0.025)	ND (0.026)	ND (0.023)
n-Propylbenzene	ND (0.008)	ND (0.008)	NA	ND (0.008)	ND (0.0059)	ND (0.0061)	ND (0.0061)	ND (0.012)	ND (0.0053)	ND (0.0058)	ND (0.0061)	ND (0.0054)
Styrene	ND (0.008)	ND (0.008)	ND (0.17)	ND (0.008)	ND (0.0052)	ND (0.0053)	ND (0.0053)	ND (0.010)	ND (0.0046)	ND (0.0051)	ND (0.0053)	ND (0.0047)
Tetrachloroethene	ND (0.008)	ND (0.008)	ND (0.28)	ND (0.008)	ND (0.0082)	ND (0.0084)	ND (0.0084)	ND (0.017)	ND (0.0074)	ND (0.0081)	ND (0.0085)	ND (0.0075)
Toluene	0.295	1.71	0.29 J	0.567	ND (0.0046)	ND (0.0047)	ND (0.0046)	0.024	ND (0.0041)	ND (0.0045)	0.0080	ND (0.0042)
Trichlorofluoromethane (Freon 11)	ND (0.008)	ND (0.008)	ND (0.23)	ND (0.008)	ND (0.0068)	ND (0.0070)	ND (0.0069)	ND (0.014)	ND (0.0061)	ND (0.0067)	ND (0.0070)	ND (0.0062)
Vinyl Chloride	ND (0.008)	ND (0.008)	ND (0.21)	ND (0.008)	ND (0.0031)	ND (0.0032)	ND (0.0032)	ND (0.0063)	ND (0.0028)	ND (0.0030)	ND (0.0032)	ND (0.0028)
m,p-Xylene	NA	NA	NA	NA	ND (0.0052)	ND (0.0054)	ND (0.0054)	0.026	ND (0.0047)	ND (0.0052)	ND (0.0054)	ND (0.0048)
o-Xylene	NA	NA	NA	NA	ND (0.0052)	ND (0.0054)	ND (0.0054)	0.013	ND (0.0047)	ND (0.0052)	ND (0.0054)	ND (0.0048)
Xylenes (total)	1.05	9.50	0.49	3.04	NA	NA	NA	NA	NA	NA	NA	NA
Other VOCs	ND	ND	0.22 J <sup>2</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-4											
	SG-4		SG-4A									
Probe Location ID												
Sample Depth (feet bgs)	15	15	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
EPA Analytical Method	8260B	8260B	8260B	TO-15	8260B	8260B	TO-15	8260B	8260B	TO-15	TO-15	TO-15
Sample Date	2/12/08	2/12/08	10/12/09	10/12/09	4/26/10	4/26/10	4/26/10	10/13/10	10/13/10	10/13/10	6/27/11	6/27/11
TPHg	NA	NA	6,170	6,200	1,910	1,840	170	7,430	7,160	7,100	11,000	12,000
1,2,4-Trichlorobenzene	ND (0.007)	ND (0.007)	ND (0.08)	ND (9.4)	ND (0.02)	ND (0.4)	ND (0.39)	ND (0.4)	ND (0.4)	ND (13)	ND (12)	ND (12)
1,2,4-Trimethylbenzene	1.13	1.23	114	110	31.3	32.4	0.79	230	216	82	150	160
1,3,5-Trimethylbenzene	1.24	1.18	157	70	1.61	1.50	0.67	145	149	76	84	89
1,3-Butadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.89)	ND (0.89)
2,2,4-Trimethylpentane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (1.9)	ND (1.9)
2-Butanone (MEK)	NA	NA	NA	ND (3.0)	NA	NA	ND (0.18)	NA	NA	ND (6.0)	ND (4.8)	ND (4.8)
4-Ethyltoluene	NA	NA	NA	140	NA	NA	1.1	NA	NA	150	150	160
4-Isopropyltoluene	ND (0.07)	ND (0.07)	ND (0.08)	NA	0.941	ND (0.4)	NA	3.79	4.02	NA	NA	NA
Acetone	NA	NA	NA	ND (3.0)	NA	NA	ND (0.20)	NA	NA	ND (6.4)	ND (3.8)	ND (3.8)
Benzene	41.5	43.7	26.8	20	35.1	3.97	0.25	28.7	30.1	21	18	19
Bromodichloromethane	ND (0.07)	ND (0.07)	ND (0.08)	ND (3.4)	ND (0.02)	ND (0.4)	ND (0.14)	ND (0.4)	ND (0.4)	ND (4.5)	ND (2.7)	ND (2.7)
n-Butylbenzene	ND (0.07)	ND (0.07)	ND (0.08)	NA	0.925	1.09	NA	8.04	7.81	NA	NA	NA
sec-Butylbenzene	ND (0.07)	ND (0.07)	ND (0.08)	NA	ND (0.02)	ND (0.4)	NA	183	172	NA	NA	NA
tert-Butylbenzene	ND (0.07)	ND (0.07)	5.66	NA	ND (0.02)	ND (0.4)	NA	ND (0.4)	ND (0.4)	NA	NA	NA
Carbon disulfide	NA	NA	NA	ND (3.1)	NA	NA	ND (0.26)	NA	NA	ND (8.4)	ND (1.2)	ND (1.2)
Carbon tetrachloride	ND (0.07)	ND (0.07)	ND (0.08)	ND (3.2)	ND (0.02)	ND (0.4)	ND (0.13)	ND (0.4)	ND (0.4)	ND (4.2)	ND (2.5)	ND (2.5)
Chloroform	ND (0.07)	ND (0.07)	ND (0.08)	ND (2.5)	ND (0.02)	ND (0.4)	ND (0.10)	ND (0.4)	ND (0.4)	ND (3.3)	ND (2.0)	ND (2.0)
Cyclohexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16	16
Dichlorodifluoromethane (Freon 12)	ND (0.07)	ND (0.07)	ND (0.08)	ND (3.7)	ND (0.02)	ND (0.4)	ND (0.10)	ND (0.4)	ND (0.4)	ND (3.3)	ND (2.0)	ND (2.0)
Ethanol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (3.0)	ND (3.0)
Ethylbenzene	26.5	27.3	283	180	90.5	4.26	1.6	308	309	170	170	180
Heptane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	170	180
Hexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40	40
Isopropylbenzene (Cumene)	1.65	0.824	25.8	NA	1.05	ND (0.4)	NA	26.4	28.6	NA	15	15
Methylene chloride	ND (0.07)	ND (0.07)	ND (0.08)	ND (1.8)	ND (0.02)	ND (0.4)	0.0079 J, UN	ND (0.4)	ND (0.4)	ND (2.3)	ND (1.4)	ND (1.4)
Naphthalene	ND (0.07)	ND (0.07)	85.8	ND (7.9)	9.30	0.886	ND (0.33)	7.70	12.6	ND (11)	75	78
n-Propylbenzene	ND (0.07)	ND (0.07)	ND (0.08)	NA	ND (0.02)	ND (0.4)	NA	20.6	22.1	NA	14	15
Styrene	ND (0.07)	ND (0.07)	ND (0.08)	63	ND (0.02)	ND (0.4)	0.51	ND (0.4)	ND (0.4)	66	81	84
Tetrachloroethene	ND (0.007)	ND (0.007)	ND (0.08)	ND (3.4)	ND (0.02)	ND (0.4)	ND (0.14)	ND (0.4)	ND (0.4)	ND (4.6)	ND (2.7)	ND (2.7)
Toluene	445	501	1,320	810	280	217	7.5	1,250	1,300	570	610	650
Trichlorofluoromethane (Freon 11)	ND (0.07)	ND (0.07)	ND (0.08)	ND (2.8)	ND (0.02)	ND (0.4)	ND (0.12)	ND (0.4)	ND (0.4)	ND (3.8)	ND (2.3)	ND (2.3)
Vinyl Chloride	ND (0.007)	ND (0.007)	ND (0.08)	ND (2.6)	ND (0.02)	ND (0.4)	ND (0.11)	ND (0.4)	ND (0.4)	ND (3.5)	ND (1.0)	ND (1.0)
m,p-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,200	1,300
o-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	350	370
Xylenes (total)	130	145	2,170	1,800	489	454	15	1,580	1,660	1,500	NA	NA
Other VOCs	ND	ND	ND	ND	ND	ND	0.10 J <sup>2</sup>	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-4											
Probe Location ID	SG-4A											
Sample Depth (feet bgs)	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
EPA Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	10/4/11	11/7/12	4/18/13	4/18/13	10/15/13	10/15/13	4/8/14	4/8/14	10/8/14	10/8/14	4/14/15	4/14/15
TPHg	11,000	10,000	7,200	8,400	11,000	19,000	9,200	8,200	11,000	11,000	8,400	7,200
1,2,4-Trichlorobenzene	ND (18)	ND (75)	ND (18)	ND (12)	ND (18)	ND (18)	ND (18)	ND (9.0)	ND (64)	ND (61)	ND (34) UJ	ND (43) UJ
1,2,4-Trimethylbenzene	200	96	77	110	120	230	140	120	250	300	150	93
1,3,5-Trimethylbenzene	120	65	51	68	78	130	82	68	160	180	93	70
1,3-Butadiene	ND (1.4) UJ	ND (5.6)	ND (1.3)	ND (0.89)	ND (1.3)	ND (1.3)	ND (1.3)	ND (0.67)	ND (4.8)	ND (4.6)	ND (2.6)	ND (3.2)
2,2,4-Trimethylpentane	ND (2.9)	ND (12)	ND (2.8)	ND (1.9)	ND (2.8)	ND (2.8)	ND (2.8)	ND (1.4)	ND (10)	ND (9.6)	ND (5.4)	ND (6.8)
2-Butanone (MEK)	ND (7.4)	ND (30)	ND (7.1)	ND (4.7)	ND (7.0)	ND (7.0)	ND (7.2)	ND (3.6)	ND (26)	ND (24)	ND (14)	ND (17)
4-Ethyltoluene	200	110	91	120	140	250	140	120	250	300	180	120
4-Isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	ND (5.9)	ND (24)	ND (5.7)	ND (3.8)	ND (5.6)	ND (5.6)	ND (5.8)	ND (2.9)	ND (20)	ND (20)	ND (28)	ND (35)
Benzene	25	19	21	21	18	21	12	12	23	27	23	24
Bromodichloromethane	ND (4.2)	ND (17)	ND (4.0)	ND (2.7)	ND (4.0)	ND (4.0)	ND (4.1)	ND (2.0)	ND (14)	ND (14)	ND (7.8)	ND (9.8)
n-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ND (1.9)	ND (7.8)	ND (1.9)	ND (1.2)	ND (1.8)	ND (1.8)	ND (1.9)	ND (0.94)	ND (6.7)	ND (6.4)	ND (14)	ND (18)
Carbon tetrachloride	ND (3.9)	ND (16)	ND (3.8)	ND (2.5)	ND (3.7)	ND (3.7)	ND (3.8)	ND (1.9)	ND (14)	ND (13)	ND (7.3)	ND (9.2)
Chloroform	ND (3.0)	ND (12)	ND (3.0)	ND (2.0)	ND (2.9)	ND (2.9)	ND (3.0)	ND (1.5)	ND (10)	ND (10)	ND (5.7)	ND (7.1)
Cyclohexane	23	14	13	15	16	18	10	11	19	20	19	21
Dichlorodifluoromethane (Freon 12)	ND (3.1)	ND (12)	ND (3.0)	ND (2.0)	ND (2.9)	ND (2.9)	ND (3.0)	ND (1.5)	ND (11)	ND (10)	ND (5.7)	ND (7.2)
Ethanol	ND (4.7)	ND (19)	ND (4.6)	ND (3.0)	ND (4.4)	ND (4.5)	ND (4.6)	ND (2.3)	ND (16)	ND (16)	ND (8.7)	ND (11)
Ethylbenzene	250	160	160	180	210	340	170	150	300	340	250	230
Heptane	250	170	160	180	190	240	130	130	240	270	230	240
Hexane	54	31	28	33	27	31	17	19	43	51	42	42
Isopropylbenzene (Cumene)	21	15	12	14	16	29	15	13	25	29	20	16
Methylene chloride	ND (2.2)	ND (8.8)	ND (2.1)	ND (1.4)	ND (2.0)	ND (2.1)	ND (2.1)	ND (1.0)	ND (7.5)	ND (7.2)	ND (40)	ND (51)
Naphthalene	72	ND (53) J-	18	31	29	65	40	45	81	93	ND (24)	ND (31)
n-Propylbenzene	20	ND (12)	9.4	12	14	25	13	11	23	26	17	12
Styrene	100	52	64	76	88	150	81	72	140	160	100	62
Tetrachloroethene	ND (4.2)	ND (17)	ND (4.1)	ND (2.7)	ND (4.0)	ND (4.0)	ND (4.1)	ND (2.0)	ND (15)	ND (14)	ND (7.9)	ND (9.9)
Toluene	860	660	590	650	680	920	490	460	1,000	1,200	850	860
Trichlorofluoromethane (Freon 11)	ND (3.5)	ND (14)	ND (3.4)	ND (2.2)	ND (3.3)	ND (3.3)	ND (3.4)	ND (1.7)	ND (12)	ND (12)	ND (6.5)	ND (8.2)
Vinyl Chloride	ND (1.6) UJ	ND (6.4)	ND (1.5)	ND (1.0)	ND (1.5)	ND (1.5)	ND (1.6)	ND (0.77)	ND (5.5)	ND (5.3)	ND (3.0)	ND (3.7)
m,p-Xylene	1,700	1,100	1,100	1,200	1,500	2,300	1,200	1,100	2,500	2,900	1,900	1,700
o-Xylene	480	320	300	340	410	680	360	310	650	760	520	450
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other VOCs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-5												
	SG-5	SG-5A				SG-5				SG-5B			
Probe Location ID	5	5	5	5	5	5	5	5	5	5	5	5	5
Sample Depth (feet bgs)	5	5	5	5	5	5	5	5	5	5	5	5	5
EPA Analytical Method	8260B	8260B	8260B	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	2/13/08	10/12/09	4/26/10	10/13/10	6/28/11	10/24/11	10/24/11	11/6/12	4/18/13	10/16/13	4/8/14	10/8/14	4/15/15
TPHg	NA	<b>0.955</b>	<b>0.285</b>	ND (0.080)	ND (0.23)	ND (0.16)	ND (0.16)	ND (0.24)	<b>0.70</b>	ND (0.23)	ND (0.24)	ND (0.23)	ND (0.47)
1,2,4-Trichlorobenzene	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.034)	ND (0.023)	ND (0.023)	ND (0.034)	ND (0.037)	ND (0.034)	ND (0.035)	ND (0.034)	ND (0.034)
1,2,4-Trimethylbenzene	ND (0.007)	<b>0.119</b>	<b>0.016</b>	ND (0.008)	ND (0.0056)	ND (0.0038)	ND (0.0038)	ND (0.0057)	<b>0.021</b>	ND (0.0056)	ND (0.0058)	ND (0.0056)	ND (0.0057)
1,3,5-Trimethylbenzene	ND (0.007)	<b>0.027</b>	ND (0.008)	ND (0.008)	ND (0.0056)	ND (0.0038)	ND (0.0038)	ND (0.0057)	<b>0.0063</b>	ND (0.0056)	ND (0.0058)	ND (0.0056)	ND (0.0057)
1,3-Butadiene	NA	NA	NA	NA	ND (0.0025)	ND (0.0017)	ND (0.0017)	ND (0.0026)	ND (0.0027)	ND (0.0025)	ND (0.0026)	ND (0.0025)	ND (0.0026)
2,2,4-Trimethylpentane	NA	NA	NA	NA	ND (0.0053)	ND (0.0037)	ND (0.0037)	ND (0.0054)	<b>0.0097</b>	ND (0.0053)	ND (0.0055)	ND (0.0053)	ND (0.0054)
2-Butanone (MEK)	NA	NA	NA	NA	<b>0.015</b>	ND (0.0092)	ND (0.0092)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)
4-Ethyltoluene	NA	NA	NA	NA	ND (0.0056)	ND (0.0038)	ND (0.0038)	ND (0.0057)	<b>0.012</b>	ND (0.0056)	ND (0.0058)	ND (0.0056)	ND (0.0057)
4-Isopropyltoluene	ND (0.007)	<b>0.044</b>	ND (0.008)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	<b>0.13 J+</b>	ND (0.0074)	0.016 UN	<b>0.058</b>	ND (0.029)	ND (0.027)	<b>0.029</b>	<b>0.029</b>	ND (0.027)
Benzene	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0036)	ND (0.0025)	ND (0.0025)	ND (0.0037)	ND (0.0039)	ND (0.0036)	ND (0.0038)	ND (0.0036)	ND (0.0037)
Bromodichloromethane	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0077)	ND (0.0052)	ND (0.0052)	ND (0.0078)	ND (0.0083)	ND (0.0077)	ND (0.0079)	ND (0.0077)	ND (0.0077)
n-Butylbenzene	ND (0.007)	<b>0.057</b>	ND (0.008)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ND (0.007)	<b>0.102</b>	ND (0.008)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	ND (0.014)	ND (0.0098)	ND (0.0098)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.014)
Carbon tetrachloride	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0072)	ND (0.0049)	ND (0.0049)	ND (0.0073)	ND (0.0078)	ND (0.0072)	ND (0.0074)	ND (0.0072)	ND (0.0073)
Chloroform	ND (0.007)	<b>0.142</b>	<b>0.025</b>	<b>0.115</b>	<b>0.077</b>	<b>0.040</b>	<b>0.039</b>	<b>0.023</b>	<b>0.010</b>	<b>0.0084</b>	<b>ND (0.0058)</b>	ND (0.0056)	ND (0.0056)
Cyclohexane	NA	NA	NA	NA	ND (0.0039)	ND (0.0027)	ND (0.0027)	ND (0.0040)	ND (0.0042)	ND (0.0039)	ND (0.0041)	<b>0.0050</b>	ND (0.0040)
Dichlorodifluoromethane (Freon 12)	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0057)	ND (0.0039)	ND (0.0039)	ND (0.0058)	ND (0.0061)	ND (0.0057)	ND (0.0058)	ND (0.0057)	ND (0.0057)
Ethanol	NA	NA	NA	NA	<b>0.018</b>	ND (0.0059)	ND (0.0059)	<b>0.0093</b>	<b>0.068 J+</b>	ND (0.0086)	ND (0.0089)	<b>0.013</b>	ND (0.0087)
Ethylbenzene	ND (0.007)	ND (0.008)	<b>0.052</b>	ND (0.008)	ND (0.0050)	ND (0.0034)	ND (0.0034)	ND (0.0050)	ND (0.0054)	ND (0.0050)	ND (0.0051)	ND (0.0050)	ND (0.0050)
Heptane	NA	NA	NA	NA	ND (0.0047)	ND (0.0032)	ND (0.0032)	ND (0.0048)	ND (0.0051)	ND (0.0047)	ND (0.0048)	ND (0.0047)	ND (0.0047)
Hexane	NA	NA	NA	NA	ND (0.0040)	ND (0.0028)	ND (0.0028)	ND (0.0041)	ND (0.0044)	ND (0.0040)	ND (0.0042)	ND (0.0040)	ND (0.0041)
Isopropylbenzene (Cumene)	ND (0.007)	<b>0.021</b>	ND (0.008)	ND (0.008)	ND (0.0056)	ND (0.0038)	ND (0.0038)	ND (0.0057)	ND (0.0061)	ND (0.0056)	ND (0.0058)	ND (0.0056)	ND (0.0057)
Methylene chloride	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0040)	ND (0.0027)	ND (0.0027)	ND (0.0040)	ND (0.0043)	ND (0.0040)	ND (0.0041)	ND (0.0040)	ND (0.0040)
Naphthalene	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.024)	ND (0.016)	ND (0.016)	ND (0.024)	ND (0.026)	ND (0.024)	ND (0.025)	ND (0.024)	ND (0.024)
n-Propylbenzene	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0056)	ND (0.0038)	ND (0.0038)	ND (0.0057)	ND (0.0061)	ND (0.0056)	ND (0.0058)	ND (0.0056)	ND (0.0057)
Styrene	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0049)	ND (0.0033)	ND (0.0033)	ND (0.0050)	ND (0.0053)	ND (0.0049)	ND (0.0050)	ND (0.0049)	ND (0.0049)
Tetrachloroethene	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0078)	ND (0.0053)	ND (0.0053)	ND (0.0079)	ND (0.0084)	ND (0.0078)	ND (0.0080)	ND (0.0078)	ND (0.0078)
Toluene	<b>0.059</b>	<b>0.122</b>	<b>0.060</b>	ND (0.008)	ND (0.0043)	ND (0.0030)	ND (0.0030)	ND (0.0044)	<b>0.011</b>	ND (0.0043)	ND (0.0044)	ND (0.0043)	ND (0.0044)
Trichlorofluoromethane (Freon 11)	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0064)	ND (0.0044)	ND (0.0044)	ND (0.0065)	ND (0.0069)	ND (0.0064)	ND (0.0066)	ND (0.0064)	ND (0.0065)
Vinyl Chloride	ND (0.007)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.0029)	ND (0.0020)	ND (0.0020)	ND (0.0030)	ND (0.0032)	ND (0.0029)	ND (0.0030)	ND (0.0029)	ND (0.0030)
m,p-Xylene	NA	NA	NA	NA	ND (0.0050)	ND (0.0034)	ND (0.0034)	ND (0.0050)	<b>0.016</b>	ND (0.0050)	ND (0.0051)	ND (0.0050)	ND (0.0050)
o-Xylene	NA	NA	NA	NA	ND (0.0050)	ND (0.0034)	ND (0.0034)	ND (0.0050)	<b>0.0072</b>	ND (0.0050)	ND (0.0051)	ND (0.0050)	ND (0.0050)
Xylenes (total)	ND (0.007)	<b>0.321</b>	<b>0.157</b>	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other VOCs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-5												
	SG-5B								SG-5		SG-5A		
Probe Location ID													
Sample Depth (feet bgs)	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	15	14.5	14.5	14.5
EPA Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	8260B	8260B	8260B	8260B
Sample Date	6/28/11	10/24/11	11/6/12	4/18/13	10/16/13	4/9/14	10/8/14	4/15/15		2/12/08	10/12/09	4/26/10	10/13/10
TPHg	NS	NS	NS	NS	NS	NS	ND (0.25)	ND (0.45)	NA	17.5	2.26	NS	NS
1,2,4-Trichlorobenzene	NS	NS	NS	NS	NS	NS	ND (0.036)	ND (0.032)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
1,2,4-Trimethylbenzene	NS	NS	NS	NS	NS	NS	ND (0.0060)	ND (0.0054)	ND (0.018)	0.046	ND (0.008)	NS	NS
1,3,5-Trimethylbenzene	NS	NS	NS	NS	NS	NS	ND (0.0060)	ND (0.0054)	ND (0.018)	0.052	ND (0.008)	NS	NS
1,3-Butadiene	NS	NS	NS	NS	NS	NS	ND (0.0027)	ND (0.0024)	NA	NA	NA	NS	NS
2,2,4-Trimethylpentane	NS	NS	NS	NS	NS	NS	ND (0.0057)	ND (0.0051)	NA	NA	NA	NS	NS
2-Butanone (MEK)	NS	NS	NS	NS	NS	NS	ND (0.014)	ND (0.013)	NA	NA	NA	NS	NS
4-Ethyltoluene	NS	NS	NS	NS	NS	NS	ND (0.0060)	ND (0.0054)	NA	NA	NA	NS	NS
4-Isopropyltoluene	NS	NS	NS	NS	NS	NS	NA	NA	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
Acetone	NS	NS	NS	NS	NS	NS	ND (0.029)	ND (0.026)	NA	NA	NA	NS	NS
Benzene	NS	NS	NS	NS	NS	NS	ND (0.0039)	ND (0.0035)	0.214	0.109	ND (0.008)	NS	NS
Bromodichloromethane	NS	NS	NS	NS	NS	NS	ND (0.0082)	ND (0.0073)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
n-Butylbenzene	NS	NS	NS	NS	NS	NS	NA	NA	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
sec-Butylbenzene	NS	NS	NS	NS	NS	NS	NA	NA	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
tert-Butylbenzene	NS	NS	NS	NS	NS	NS	NA	NA	ND (0.018)	0.105	ND (0.008)	NS	NS
Carbon disulfide	NS	NS	NS	NS	NS	NS	ND (0.015)	ND (0.014)	NA	NA	NA	NS	NS
Carbon tetrachloride	NS	NS	NS	NS	NS	NS	ND (0.0077)	ND (0.0069)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
Chloroform	NS	NS	NS	NS	NS	NS	ND (0.0060)	ND (0.0053)	ND (0.018)	0.009	ND (0.008)	NS	NS
Cyclohexane	NS	NS	NS	NS	NS	NS	ND (0.0042)	ND (0.0038)	NA	NA	NA	NS	NS
Dichlorodifluoromethane (Freon 12)	NS	NS	NS	NS	NS	NS	ND (0.0060)	ND (0.0054)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
Ethanol	NS	NS	NS	NS	NS	NS	ND (0.0092)	ND (0.0082)	NA	NA	NA	NS	NS
Ethylbenzene	NS	NS	NS	NS	NS	NS	ND (0.0053)	ND (0.0048)	ND (0.018)	0.124	0.258	NS	NS
Heptane	NS	NS	NS	NS	NS	NS	ND (0.0050)	ND (0.0045)	NA	NA	NA	NS	NS
Hexane	NS	NS	NS	NS	NS	NS	ND (0.0043)	ND (0.0038)	NA	NA	NA	NS	NS
Isopropylbenzene (Cumene)	NS	NS	NS	NS	NS	NS	ND (0.0060)	ND (0.0054)	ND (0.018)	0.640	ND (0.008)	NS	NS
Methylene chloride	NS	NS	NS	NS	NS	NS	ND (0.042)	ND (0.038)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
Naphthalene	NS	NS	NS	NS	NS	NS	ND (0.026)	ND (0.023)	ND (0.018)	0.035	ND (0.008)	NS	NS
n-Propylbenzene	NS	NS	NS	NS	NS	NS	ND (0.0060)	ND (0.0054)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
Styrene	NS	NS	NS	NS	NS	NS	ND (0.0052)	ND (0.0047)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
Tetrachloroethene	NS	NS	NS	NS	NS	NS	ND (0.0083)	ND (0.0074)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
Toluene	NS	NS	NS	NS	NS	NS	ND (0.0046)	ND (0.0041)	1.56	0.211	0.036	NS	NS
Trichlorofluoromethane (Freon 11)	NS	NS	NS	NS	NS	NS	ND (0.0068)	ND (0.0062)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
Vinyl Chloride	NS	NS	NS	NS	NS	NS	ND (0.0031)	ND (0.0028)	ND (0.018)	ND (0.008)	ND (0.008)	NS	NS
m,p-Xylene	NS	NS	NS	NS	NS	NS	ND (0.0053)	ND (0.0048)	NA	NA	NA	NS	NS
o-Xylene	NS	NS	NS	NS	NS	NS	ND (0.0053)	ND (0.0048)	NA	NA	NA	NS	NS
Xylenes (total)	NS	NS	NS	NS	NS	NS	NA	NA	ND (0.018)	0.527	0.242	NS	NS
Other VOCs	NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-6											
Probe Location ID	SG-6	SG-6A										
Sample Depth (feet bgs)	5	5	5	5	5	5	5	5	5	5	5	5
EPA Analytical Method	8260B	8260B	TO-15 CONF	8260B	TO-15 CONF	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	2/12/08	10/12/09	10/12/09	4/26/10	4/26/10	10/13/10	6/29/11	10/4/11	11/7/12	4/20/13	10/17/13	4/9/2014
TPHg	NA	<b>6.65</b>	<b>19</b>	ND (0.08)	ND (1.7)	ND (0.080)	NS	ND (0.21)	ND (0.95)	ND (0.24)	ND (0.24)	ND (0.25)
1,2,4-Trichlorobenzene	ND (0.018)	ND (0.008)	ND (0.021)	ND (0.008)	ND (0.038)	ND (0.008)	NS	ND (0.031) UJ	ND (0.34)	ND (0.035)	ND (0.034)	ND (0.037)
1,2,4-Trimethylbenzene	ND (0.018)	<b>0.342</b>	<b>0.054</b>	ND (0.008)	ND (0.013)	ND (0.008)	NS	ND (0.0051)	ND (0.057)	<b>0.0078</b>	ND (0.0057)	ND (0.0061)
1,3,5-Trimethylbenzene	ND (0.018)	<b>0.188</b>	<b>0.093</b>	ND (0.008)	ND (0.020)	ND (0.008)	NS	ND (0.0051)	ND (0.057)	ND (0.0058)	ND (0.0057)	ND (0.0061)
1,3-Butadiene	NA	NA	NA	NA	NA	NA	NS	ND (0.0023)	ND (0.026)	ND (0.0026)	ND (0.0026)	ND (0.0027)
2,2,4-Trimethylpentane	NA	NA	NA	NA	NA	NA	NS	ND (0.0049)	ND (0.054)	ND (0.0055)	ND (0.0054)	ND (0.0058)
2-Butanone (MEK)	NA	NA	<b>0.011 J</b>	NA	ND (0.018)	NA	NS	ND (0.012)	ND (0.14)	ND (0.014)	ND (0.014)	ND (0.014)
4-Ethyltoluene	NA	NA	<b>0.088</b>	NA	ND (0.010)	NA	NS	ND (0.0051)	ND (0.057)	ND (0.0058)	ND (0.0057)	ND (0.0061)
4-Isopropyltoluene	ND (0.018)	<b>0.057</b>	NA	ND (0.008)	NA	ND (0.008)	NS	NA	NA	NA	NA	NA
Acetone	NA	NA	ND (0.0069)	NA	<b>0.053</b>	NA	NS	ND (0.0099)	ND (0.11)	ND (0.028)	ND (0.027)	ND (0.029)
Benzene	<b>0.608</b>	ND (0.008)	<b>0.016</b>	ND (0.008)	ND (0.0097)	ND (0.008)	NS	ND (0.0033)	ND (0.037)	ND (0.0038)	ND (0.0037)	ND (0.0039)
Bromodichloromethane	ND (0.018)	ND (0.008)	ND (0.0078)	ND (0.008)	ND (0.014)	ND (0.008)	NS	ND (0.0070)	ND (0.078)	ND (0.0079)	ND (0.0077)	ND (0.0083)
n-Butylbenzene	ND (0.018)	<b>0.076</b>	NA	ND (0.008)	NA	ND (0.008)	NS	NA	NA	NA	NA	NA
sec-Butylbenzene	ND (0.018)	<b>0.301</b>	NA	ND (0.008)	NA	ND (0.008)	NS	NA	NA	NA	NA	NA
tert-Butylbenzene	ND (0.018)	ND (0.008)	NA	ND (0.008)	NA	ND (0.008)	NS	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	<b>0.019 J</b>	NA	ND (0.025)	NA	NS	ND (0.013)	ND (0.036)	ND (0.015)	ND (0.014)	ND (0.015)
Carbon tetrachloride	ND (0.018)	ND (0.008)	ND (0.0073)	ND (0.008)	ND (0.013)	ND (0.008)	NS	ND (0.0066)	ND (0.073)	ND (0.0074)	ND (0.0073)	ND (0.0078)
Chloroform	ND (0.018)	ND (0.008)	<b>0.010 J</b>	ND (0.008)	ND (0.0099)	ND (0.008)	NS	<b>0.068</b>	ND (0.057)	ND (0.0058)	ND (0.0056)	ND (0.0060)
Cyclohexane	NA	NA	NA	NA	NA	NA	NS	ND (0.0036)	ND (0.040)	ND (0.0041)	ND (0.0040)	ND (0.0042)
Dichlorodifluoromethane (Freon 12)	ND (0.018)	ND (0.008)	ND (0.0086)	ND (0.008)	ND (0.010)	ND (0.008)	NS	ND (0.0052)	ND (0.058)	ND (0.0058)	ND (0.0057)	ND (0.0061)
Ethanol	NA	NA	NA	NA	NA	NA	NS	ND (0.0079)	ND (0.088)	<b>0.016 UN</b>	ND (0.0087)	ND (0.0093)
Ethylbenzene	<b>0.940</b>	<b>0.648</b>	<b>0.082</b>	ND (0.008)	ND (0.0088)	ND (0.008)	NS	ND (0.0045)	ND (0.050)	ND (0.0051)	ND (0.0050)	ND (0.0054)
Heptane	NA	NA	NA	NA	NA	NA	NS	ND (0.0043)	ND (0.048)	ND (0.0048)	ND (0.0047)	ND (0.0051)
Hexane	NA	NA	NA	NA	NA	NA	NS	ND (0.0037)	ND (0.041)	ND (0.0042)	ND (0.0041)	ND (0.0044)
Isopropylbenzene (Cumene)	ND (0.018)	<b>0.095</b>	NA	ND (0.008)	NA	ND (0.008)	NS	ND (0.0051)	ND (0.057)	ND (0.0058)	ND (0.0057)	ND (0.0061)
Methylene chloride	ND (0.018)	ND (0.008)	<b>0.0096 UN</b>	ND (0.008)	<b>0.0095 J, UN</b>	ND (0.008)	NS	ND (0.0036)	ND (0.040)	ND (0.041)	ND (0.040)	ND (0.043)
Naphthalene	ND (0.018)	ND (0.008)	<b>0.023 J</b>	ND (0.008)	ND (0.032)	ND (0.008)	NS	ND (0.022) UJ	ND (0.24)	ND (0.025)	ND (0.024)	ND (0.026)
n-Propylbenzene	ND (0.018)	<b>0.021</b>	NA	ND (0.008)	NA	ND (0.008)	NS	ND (0.0051)	ND (0.057)	ND (0.0058)	ND (0.0057)	ND (0.0061)
Styrene	ND (0.018)	ND (0.008)	ND (0.0049)	ND (0.008)	ND (0.0087)	ND (0.008)	NS	ND (0.0044)	ND (0.050)	ND (0.0050)	ND (0.0049)	ND (0.0053)
Tetrachloroethene	ND (0.018)	ND (0.008)	ND (0.0079)	ND (0.008)	ND (0.014)	ND (0.008)	NS	ND (0.0071)	ND (0.079)	ND (0.0080)	ND (0.0078)	ND (0.0084)
Toluene	<b>5.97</b>	<b>0.141</b>	<b>0.052</b>	ND (0.008)	<b>0.0092 J</b>	ND (0.008)	NS	ND (0.0039)	ND (0.044)	ND (0.0044)	ND (0.0044)	ND (0.0046)
Trichlorofluoromethane (Freon 11)	ND (0.018)	ND (0.008)	ND (0.0065)	ND (0.008)	ND (0.011)	ND (0.008)	NS	ND (0.0059)	ND (0.065)	ND (0.0066)	ND (0.0065)	ND (0.0069)
Vinyl Chloride	ND (0.018)	ND (0.008)	ND (0.0059)	ND (0.008)	ND (0.010)	ND (0.008)	NS	ND (0.0027)	ND (0.030)	ND (0.0030)	ND (0.0030)	ND (0.0032)
m,p-Xylene	NA	NA	NA	NA	NA	NA	NS	ND (0.0045)	ND (0.050)	ND (0.0051)	ND (0.0050)	ND (0.0054)
o-Xylene	NA	NA	NA	NA	NA	NA	NS	ND (0.0045)	ND (0.050)	ND (0.0051)	ND (0.0050)	ND (0.0054)
Xylenes (total)	<b>6.00</b>	<b>1.14</b>	<b>0.40</b>	ND (0.008)	ND (0.0088)	ND (0.008)	NS	NA	NA	NA	NA	NA
Other VOCs	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	<b>0.0055<sup>4</sup></b>



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-6												
	SG-6A		SG-6	SG-6A									
Probe Location ID	5	5	15	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Sample Depth (feet bgs)	5	5	15	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
EPA Analytical Method	TO-15	TO-15	8260B	8260B	8260B	8260B	8260B	8260B	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	10/9/14	4/16/15	2/12/08	10/12/09	4/26/10	4/26/10	10/13/10	10/13/2010	6/29/11	10/4/11	11/7/12	11/7/12	4/20/13
TPHg	ND (0.25)	ND (0.52)	NA	946	1,990	2,090	3,000	3,200	4,400	3,200	4,600	4,200	1,800
1,2,4-Trichlorobenzene	ND (0.037)	ND (0.037)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (2.2)	ND (1.8)	ND (8.3)	ND (8.6)	ND (11)	ND (1.8)
1,2,4-Trimethylbenzene	ND (0.0061)	ND (0.0062)	ND (0.018)	11.1	13.3	154	188	79	110	100	110	100	33
1,3,5-Trimethylbenzene	ND (0.0061)	ND (0.0062)	ND (0.018)	29.6	38.3	85.5	40.7	30	28	26	32	30	9.8
1,3-Butadiene	ND (0.0027)	ND (0.0028)	NA	NA	NA	NA	NA	NA	ND (0.13)	ND (0.62) UJ	ND (0.64)	ND (0.84)	ND (0.14)
2,2,4-Trimethylpentane	ND (0.0058)	ND (0.0059)	NA	NA	NA	NA	NA	NA	ND (0.28)	ND (1.3)	ND (1.4)	ND (1.8)	0.86
2-Butanone (MEK)	ND (0.015)	ND (0.015)	NA	NA	NA	NA	NA	ND (1.1)	ND (0.70)	ND (3.3)	ND (3.4)	ND (4.5)	ND (0.74)
4-Ethyltoluene	ND (0.0061)	ND (0.0062)	NA	NA	NA	NA	NA	48	46	48	54	48	17
4-Isopropyltoluene	NA	NA	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	0.540	NA	NA	NA	NA	NA	NA
Acetone	ND (0.029)	ND (0.030)	NA	NA	NA	NA	NA	ND (1.1)	ND (0.56)	ND (2.7)	ND (2.8)	ND (3.6)	ND (0.59)
Benzene	ND (0.0040)	ND (0.0040)	19.1	3.54	5.12	5.37	7.87	8.1	5.9	7.8	6.1	5.9	6.2
Bromodichloromethane	ND (0.0083)	ND (0.0084)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (0.81)	ND (0.40)	ND (1.9)	ND (1.9)	ND (2.6)	ND (0.42)
n-Butylbenzene	NA	NA	ND (0.018)	ND (0.02)	1.71	2.30	6.24	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	1.00	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	NA	NA	ND (0.018)	0.995	0.318	ND (0.4)	ND (0.008)	NA	NA	NA	NA	NA	NA
Carbon disulfide	ND (0.015)	ND (0.016)	NA	NA	NA	NA	NA	ND (1.5)	ND (0.18)	ND (0.87)	ND (0.91)	ND (1.2)	ND (0.19)
Carbon tetrachloride	ND (0.0078)	ND (0.0079)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (0.76)	ND (0.37)	ND (1.8)	ND (1.8)	ND (2.4)	ND (0.39)
Chloroform	ND (0.0060)	ND (0.0062)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (0.59)	ND (0.29)	ND (1.4)	ND (1.4)	ND (1.9)	ND (0.30)
Cyclohexane	ND (0.0043)	ND (0.0043)	NA	NA	NA	NA	NA	NA	6.6	7.4	5.7	5.3	5.4
Dichlorodifluoromethane (Freon 12)	ND (0.0061)	ND (0.0062)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (0.60)	ND (0.29)	ND (1.4)	ND (1.4)	ND (1.9)	ND (0.31)
Ethanol	ND (0.0093)	ND (0.0095)	NA	NA	NA	NA	NA	NA	ND (0.45)	ND (2.1)	ND (2.2)	ND (2.9)	ND (0.47)
Ethylbenzene	ND (0.0054)	ND (0.0055)	10.4	43.5	17.1	20.0	194	100	93	120	110	100	59
Heptane	ND (0.0051)	ND (0.0052)	NA	NA	NA	NA	NA	NA	47	55	44	41	38
Hexane	ND (0.0044)	ND (0.0044)	NA	NA	NA	NA	NA	NA	12	14	9.2	8.9	8.6
Isopropylbenzene (Cumene)	ND (0.0061)	ND (0.0062)	0.441	9.87	19.5	23.2	35.5	NA	15	19	20	18	7.8
Methylene chloride	ND (0.043)	ND (0.044)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (0.42)	ND (0.21)	ND (0.97)	ND (1.0)	ND (1.3)	ND (0.22)
Naphthalene	ND (0.026)	ND (0.026)	ND (0.018)	19.7	10.6	42.4	28.0	9.3	73 E	34	31	40	12
n-Propylbenzene	ND (0.0061)	ND (0.0062)	ND (0.018)	ND (0.02)	8.76	11.5	18.0	NA	10	12	13	12	4.0
Styrene	ND (0.0053)	ND (0.0054)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (0.51)	ND (0.25)	ND (1.2)	ND (1.2)	ND (1.6)	1.4
Tetrachloroethene	ND (0.0084)	ND (0.0085)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (0.82)	ND (0.40)	ND (1.9)	ND (2.0)	ND (2.6)	ND (0.42)
Toluene	ND (0.0047)	ND (0.0047)	99.3	70.0	124	138	148	96	76	100	49	45	30
Trichlorofluoromethane (Freon 11)	ND (0.0070)	ND (0.0071)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (0.68)	ND (0.33)	ND (1.6)	ND (1.6)	ND (2.1)	ND (0.35)
Vinyl Chloride	ND (0.0032)	ND (0.0032)	ND (0.018)	ND (0.02)	ND (0.008)	ND (0.4)	ND (0.008)	ND (0.62)	ND (0.15)	ND (0.72) UJ	ND (0.74)	ND (0.98)	ND (0.16)
m,p-Xylene	ND (0.0054)	0.0062	NA	NA	NA	NA	NA	NA	190	250	240	220	120
o-Xylene	ND (0.0054)	ND (0.0055)	NA	NA	NA	NA	NA	NA	140	170	66	62	31
Xylenes (total)	NA	NA	24.7	258	546	622	658	230	NA	NA	NA	NA	NA
Other VOCs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-6									SG-7		SG-8	
Probe Location ID	SG-6A									SG-7		SG-8	
Sample Depth (feet bgs)	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	5	15	5	5
EPA Analytical Method	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	8260B	8260B	8260B	8260B
Sample Date	DUP	DUP	DUP	DUP	DUP	DUP	DUP	DUP	DUP				
	4/20/13	10/17/13	10/17/13	4/9/14	4/9/14	10/9/14	10/9/14	4/16/15	4/16/15	2/12/08	2/12/08	10/12/09	4/26/10
TPHg	1,700	5,300	4,000	2,500	3,200	4,000	4,000	2,600	2,500	NA	NA	ND (0.008)	2.14
1,2,4-Trichlorobenzene	ND (1.2)	ND (6.1)	ND (7.3)	ND (2.4)	ND (5.5)	ND (18)	ND (18)	ND (15) UJ	ND (14) UJ	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
1,2,4-Trimethylbenzene	32	150	130	61	96	170	180	96	120	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
1,3,5-Trimethylbenzene	9.3	37	32	15	23	39	36	25	26	ND (0.018)	ND (0.018)	ND (0.008)	0.293
1,3-Butadiene	ND (0.090)	ND (0.45)	ND (0.54)	ND (0.18)	ND (0.41)	ND (1.3)	ND (1.3)	ND (1.1)	ND (1.1)	NA	NA	NA	NA
2,2,4-Trimethylpentane	0.91	ND (0.96)	ND (1.1)	0.53	ND (0.87)	ND (2.8)	ND (2.8)	ND (2.3)	ND (2.2)	NA	NA	NA	NA
2-Butanone (MEK)	ND (0.48)	ND (2.4)	ND (2.9)	ND (0.94)	ND (2.2)	ND (7.0)	ND (7.0)	ND (5.8)	ND (5.7)	NA	NA	NA	NA
4-Ethyltoluene	16	66	57	28	42	69	72	48	53	NA	NA	NA	NA
4-Isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Acetone	ND (0.39)	ND (1.9)	ND (2.3)	ND (0.76)	ND (1.8)	ND (5.6)	ND (5.6)	ND (12)	ND (11)	NA	NA	NA	NA
Benzene	5.9	5.4	5.4	2.8	3.6	5.7	6.0	7.5	7.1	0.051	1.19	ND (0.008)	ND (0.008)
Bromodichloromethane	ND (0.27)	ND (1.4)	ND (1.6)	ND (0.53)	ND (1.2)	ND (4.0)	ND (4.0)	ND (3.3)	ND (3.2)	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
n-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Carbon disulfide	ND (0.13)	ND (0.64)	ND (0.76)	ND (0.25)	ND (0.58)	ND (1.8)	ND (1.8)	ND (6.2)	ND (6.0)	NA	NA	NA	NA
Carbon tetrachloride	ND (0.26)	ND (1.3)	ND (1.5)	ND (0.50)	ND (1.2)	ND (3.7)	ND (3.7)	ND (3.1)	ND (3.0)	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Chloroform	ND (0.20)	ND (1.0)	ND (1.2)	ND (0.39)	ND (0.91)	ND (2.9)	ND (2.9)	ND (2.4)	ND (2.3)	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Cyclohexane	5.4	6.4	6.2	3.5	4.3	6.1	6.1	6.9	6.6	NA	NA	NA	NA
Dichlorodifluoromethane (Freon 12)	ND (0.20)	ND (1.0)	ND (1.2)	ND (0.39)	ND (0.92)	ND (2.9)	ND (2.9)	ND (2.4)	ND (2.4)	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Ethanol	ND (0.31)	ND (1.5)	ND (1.8)	ND (0.60)	ND (1.4)	ND (4.5)	ND (4.5)	ND (3.7)	ND (3.6)	NA	NA	NA	NA
Ethylbenzene	56	140	130	70	93	150	150	150	160	1.26	0.358	ND (0.008)	0.019
Heptane	37	51	51	30	37	56	58	53	52	NA	NA	NA	NA
Hexane	8.7	8.4	8.6	4.8	5.8	10	10	9.7	9.6	NA	NA	NA	NA
Isopropylbenzene (Cumene)	7.4	25	23	12	16	27	27	22	25	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Methylene chloride	ND (0.14)	ND (0.71)	ND (0.85)	ND (0.28)	ND (0.65)	ND (2.1)	ND (2.1)	ND (17)	ND (17)	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Naphthalene	11	58	55	25	60	88	90	ND (10)	12	ND (0.018)	ND (0.018)	ND (0.008)	0.263
n-Propylbenzene	3.7	16.0	14	6.1	9.0	15	15	11	13	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Styrene	1.3	3.2	2.9	ND (0.34)	ND (0.79)	ND (2.5)	ND (2.5)	ND (2.1)	ND (2.0)	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Tetrachloroethene	ND (0.28)	ND (1.4)	ND (1.7)	ND (0.54)	ND (1.3)	ND (4.0)	ND (4.0)	ND (3.4)	ND (3.2)	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Toluene	28	46	43	33	42	90	91	100	100	2.01	6.97	ND (0.008)	0.031
Trichlorofluoromethane (Freon 11)	ND (0.23)	ND (1.2)	ND (1.4)	ND (0.45)	ND (1.0)	ND (3.3)	ND (3.3)	ND (2.8)	ND (2.7)	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
Vinyl Chloride	ND (0.10)	ND (0.52)	ND (0.63)	ND (0.20)	ND (0.48)	ND (1.5)	ND (1.5)	ND (1.3)	ND (1.2)	ND (0.018)	ND (0.018)	ND (0.008)	ND (0.008)
m,p-Xylene	110	280	260	150	200	360	360	330	370	NA	NA	NA	NA
o-Xylene	30	76	71	47	64	130	130	160	170	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	16.0	1.10	ND (0.008)	0.473
Other VOCs	ND	ND	1.4 <sup>4</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-8										
Probe Location ID	SG-8										
Sample Depth (feet bgs)	5	5	5	5	5	5	5	5	5	5	14.5
EPA Analytical Method	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	8260B
Sample Date	10/13/10	6/28/11	10/3/11	10/3/11	11/7/12	4/20/13	10/16/13	4/8/2014	10/7/14	4/14/15	10/12/09
TPHg	ND (0.080)	ND (0.25)	ND (0.24)	ND (0.24)	ND (0.24)	<b>0.66</b>	ND (0.24)	ND (0.24)	ND (0.23)	ND (0.47)	ND (0.008)
1,2,4-Trichlorobenzene	ND (0.008)	ND (0.036)	ND (0.034) UJ	ND (0.034) UJ	ND (0.034)	ND (0.037)	ND (0.034)	ND (0.035)	ND (0.034)	ND (0.034)	ND (0.008)
1,2,4-Trimethylbenzene	ND (0.008)	ND (0.0059)	ND (0.0057)	ND (0.0057)	ND (0.0056)	<b>0.040</b>	ND (0.0057)	ND (0.0058)	ND (0.0056)	ND (0.0057)	ND (0.008)
1,3,5-Trimethylbenzene	ND (0.008)	ND (0.0059)	ND (0.0057)	ND (0.0057)	ND (0.0056)	<b>0.011</b>	ND (0.0057)	ND (0.0058)	ND (0.0056)	ND (0.0057)	ND (0.008)
1,3-Butadiene	NA	ND (0.0027)	ND (0.0026)	ND (0.0026)	ND (0.0025)	ND (0.0028)	ND (0.0026)	ND (0.0026)	ND (0.0025)	ND (0.0026)	NA
2,2,4-Trimethylpentane	NA	ND (0.0056)	ND (0.0054)	ND (0.0054)	ND (0.0054)	<b>0.0076</b>	ND (0.0054)	ND (0.0055)	ND (0.0053)	ND (0.0054)	NA
2-Butanone (MEK)	NA	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.014)	ND (0.013)	ND (0.014)	NA
4-Ethyltoluene	NA	ND (0.0059)	ND (0.0057)	ND (0.0057)	ND (0.0056)	<b>0.030</b>	ND (0.0057)	ND (0.0058)	ND (0.0056)	ND (0.0057)	NA
4-Isopropyltoluene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.008)
Acetone	NA	0.028 UN	0.032 UN	0.017 UN	ND (0.027)	ND (0.030)	ND (0.028)	ND (0.028)	ND (0.027)	ND (0.028)	NA
Benzene	ND (0.008)	ND (0.0039)	ND (0.0037)	ND (0.0037)	ND (0.0037)	ND (0.0040)	ND (0.0037)	ND (0.0038)	ND (0.0036)	ND (0.0037)	ND (0.008)
Bromodichloromethane	ND (0.008)	ND (0.0081)	ND (0.0078)	ND (0.0078)	ND (0.0077)	ND (0.0084)	ND (0.0078)	ND (0.0079)	ND (0.0076)	ND (0.0078)	ND (0.008)
n-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.008)
sec-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.008)
tert-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.008)
Carbon disulfide	NA	ND (0.015)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.016)	ND (0.014)	ND (0.015)	ND (0.014)	ND (0.014)	NA
Carbon tetrachloride	ND (0.008)	ND (0.0076)	ND (0.0073)	ND (0.0073)	ND (0.0072)	ND (0.0079)	ND (0.0073)	ND (0.0074)	ND (0.0071)	ND (0.0073)	ND (0.008)
Chloroform	ND (0.008)	ND (0.0059)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0061)	<b>0.020</b>	<b>0.020</b>	<b>0.018</b>	<b>0.010</b>	ND (0.008)
Cyclohexane	NA	ND (0.0042)	ND (0.0040)	ND (0.0040)	<b>0.0044</b>	ND (0.0043)	ND (0.0040)	ND (0.0041)	ND (0.0039)	ND (0.0040)	NA
Dichlorodifluoromethane (Freon 12)	ND (0.008)	ND (0.0060)	ND (0.0058)	ND (0.0058)	ND (0.0057)	ND (0.0062)	ND (0.0058)	ND (0.0059)	ND (0.0056)	ND (0.0057)	ND (0.008)
Ethanol	NA	ND (0.0091)	ND (0.0088)	ND (0.0088)	ND (0.0087)	<b>0.051 J+</b>	ND (0.0088)	ND (0.0089)	ND (0.0086)	ND (0.0087)	NA
Ethylbenzene	ND (0.008)	ND (0.0052)	ND (0.0050)	ND (0.0050)	ND (0.0050)	<b>0.0070</b>	ND (0.0050)	ND (0.0051)	ND (0.0049)	ND (0.0050)	ND (0.008)
Heptane	NA	ND (0.0050)	ND (0.0048)	ND (0.0048)	ND (0.0047)	ND (0.0051)	ND (0.0048)	ND (0.0048)	ND (0.0046)	ND (0.0048)	NA
Hexane	NA	ND (0.0043)	ND (0.0041)	ND (0.0041)	ND (0.0040)	ND (0.0044)	ND (0.0041)	ND (0.0042)	ND (0.0040)	ND (0.0041)	NA
Isopropylbenzene (Cumene)	ND (0.008)	ND (0.0059)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0061)	ND (0.0057)	ND (0.0058)	ND (0.0056)	ND (0.0057)	ND (0.008)
Methylene chloride	ND (0.008)	ND (0.0042)	ND (0.0040)	ND (0.0040)	ND (0.040)	ND (0.043)	ND (0.040)	ND (0.041)	ND (0.039)	ND (0.040)	ND (0.008)
Naphthalene	ND (0.008)	ND (0.025)	ND (0.024) UJ	ND (0.024) UJ	ND (0.024)	ND (0.026)	ND (0.024)	ND (0.025)	ND (0.024)	ND (0.024)	ND (0.008)
n-Propylbenzene	ND (0.008)	ND (0.0059)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0061)	ND (0.0057)	ND (0.0058)	ND (0.0056)	ND (0.0057)	ND (0.008)
Styrene	ND (0.008)	ND (0.0052)	ND (0.0050)	ND (0.0050)	ND (0.0049)	ND (0.0053)	ND (0.0050)	ND (0.0050)	ND (0.0048)	ND (0.0049)	ND (0.008)
Tetrachloroethene	ND (0.008)	ND (0.0082)	ND (0.0079)	ND (0.0079)	ND (0.0078)	ND (0.0085)	ND (0.0079)	ND (0.0080)	ND (0.0077)	ND (0.0079)	ND (0.008)
Toluene	ND (0.008)	ND (0.0046)	ND (0.0044)	ND (0.0044)	ND (0.0043)	<b>0.015</b>	ND (0.0044)	ND (0.0045)	<b>0.0058</b>	ND (0.0044)	ND (0.008)
Trichlorofluoromethane (Freon 11)	ND (0.008)	ND (0.0068)	ND (0.0065)	ND (0.0065)	ND (0.0065)	ND (0.0070)	ND (0.0065)	ND (0.0066)	ND (0.0064)	ND (0.0065)	ND (0.008)
Vinyl Chloride	ND (0.008)	ND (0.0031)	ND (0.0030)	ND (0.0030)	ND (0.0029)	ND (0.0032)	ND (0.0030)	ND (0.0030)	ND (0.0029)	ND (0.0030)	ND (0.008)
m,p-Xylene	NA	ND (0.0052)	ND (0.0050)	ND (0.0050)	ND (0.0050)	<b>0.031</b>	ND (0.0050)	ND (0.0051)	ND (0.0049)	ND (0.0050)	NA
o-Xylene	NA	ND (0.0052)	ND (0.0050)	ND (0.0050)	ND (0.0050)	<b>0.017</b>	ND (0.0050)	ND (0.0051)	ND (0.0049)	ND (0.0050)	NA
Xylenes (total)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.008)
Other VOCs	ND	ND	ND	ND	<b>0.0081<sup>3</sup></b>	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-8										SG-9		
	SG-8										SG-9		
Probe Location ID													
Sample Depth (feet bgs)	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	5	5	5
EPA Analytical Method	8260B	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	8260B	8260B	8260B
Sample Date	4/26/10	10/13/10	6/28/11	10/3/11	11/7/12	4/19/13	10/16/13	4/8/2014	10/7/14	4/14/15	10/12/09	10/12/09	4/26/10
TPHg	5.73	ND (0.080)	ND (0.24)	ND (0.24)	ND (0.24)	1.1	ND (0.24)	ND (0.24)	ND (0.25)	ND (0.46)	0.180	0.195	6.76
1,2,4-Trichlorobenzene	ND (0.008)	ND (0.008)	ND (0.035)	ND (0.034) UJ	ND (0.035)	ND (0.037)	ND (0.035)	ND (0.035)	ND (0.036)	ND (0.034)	ND (0.008)	ND (0.008)	ND (0.008)
1,2,4-Trimethylbenzene	ND (0.008)	ND (0.008)	ND (0.0058)	ND (0.0056)	ND (0.0058)	0.054	ND (0.0058)	ND (0.0058)	ND (0.0060)	ND (0.0056)	0.058	0.070	0.360
1,3,5-Trimethylbenzene	0.319	ND (0.008)	ND (0.0058)	ND (0.0056)	ND (0.0058)	0.014	ND (0.0058)	ND (0.0058)	ND (0.0060)	ND (0.0056)	ND (0.008)	ND (0.008)	0.120
1,3-Butadiene	NA	NA	ND (0.0026)	ND (0.0025)	ND (0.0026)	ND (0.0027)	ND (0.0026)	ND (0.0026)	ND (0.0027)	ND (0.0025)	NA	NA	NA
2,2,4-Trimethylpentane	NA	NA	ND (0.0056)	ND (0.0054)	ND (0.0055)	0.014	ND (0.0055)	ND (0.0055)	ND (0.0057)	ND (0.0053)	NA	NA	NA
2-Butanone (MEK)	NA	NA	ND (0.014)	ND (0.014)	0.44 J+	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.013)	NA	NA	NA
4-Ethyltoluene	NA	NA	ND (0.0058)	ND (0.0056)	ND (0.0058)	0.038	ND (0.0058)	ND (0.0058)	ND (0.0060)	ND (0.0056)	NA	NA	NA
4-Isopropyltoluene	ND (0.008)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	0.048	0.042	ND (0.008)
Acetone	NA	NA	0.015 UN	0.017 UN	0.074 J+	0.032	ND (0.028)	ND (0.028)	ND (0.029)	ND (0.027)	NA	NA	NA
Benzene	ND (0.008)	ND (0.008)	ND (0.0038)	ND (0.0037)	ND (0.0038)	ND (0.0039)	ND (0.0038)	ND (0.0038)	ND (0.0039)	ND (0.0036)	ND (0.008)	ND (0.008)	ND (0.008)
Bromodichloromethane	ND (0.008)	ND (0.008)	ND (0.0080)	ND (0.0077)	ND (0.0079)	ND (0.0083)	ND (0.0079)	ND (0.0079)	ND (0.0081)	ND (0.0076)	ND (0.008)	ND (0.008)	ND (0.008)
n-Butylbenzene	ND (0.008)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.008)	ND (0.008)	0.011
sec-Butylbenzene	ND (0.008)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	0.073	0.083	ND (0.008)
tert-Butylbenzene	ND (0.008)	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.008)	ND (0.008)	ND (0.008)
Carbon disulfide	NA	NA	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.014)	NA	NA	NA
Carbon tetrachloride	ND (0.008)	ND (0.008)	ND (0.0075)	ND (0.0072)	ND (0.0074)	ND (0.0078)	ND (0.0074)	ND (0.0074)	ND (0.0076)	ND (0.0071)	ND (0.008)	ND (0.008)	ND (0.008)
Chloroform	ND (0.008)	ND (0.008)	ND (0.0058)	ND (0.0056)	ND (0.0058)	0.20	0.033	ND (0.0058)	ND (0.0059)	ND (0.0055)	ND (0.008)	ND (0.008)	ND (0.008)
Cyclohexane	NA	NA	ND (0.0041)	ND (0.0040)	ND (0.0041)	0.0046	ND (0.0041)	ND (0.0041)	0.0049	ND (0.0039)	NA	NA	NA
Dichlorodifluoromethane (Freon 12)	ND (0.008)	ND (0.008)	ND (0.0059)	ND (0.0057)	ND (0.0059)	ND (0.0061)	ND (0.0058)	ND (0.0059)	ND (0.0060)	ND (0.0056)	ND (0.008)	ND (0.008)	ND (0.008)
Ethanol	NA	NA	ND (0.0090)	ND (0.0087)	ND (0.0089)	0.11	ND (0.0089)	ND (0.0089)	ND (0.0092)	0.0088	NA	NA	NA
Ethylbenzene	0.559	ND (0.008)	ND (0.0052)	ND (0.0050)	ND (0.0051)	0.011	ND (0.0051)	ND (0.0051)	ND (0.0053)	ND (0.0049)	ND (0.008)	ND (0.008)	1.25
Heptane	NA	NA	ND (0.0049)	ND (0.0047)	ND (0.0048)	ND (0.0051)	ND (0.0048)	ND (0.0048)	ND (0.0050)	ND (0.0046)	NA	NA	NA
Hexane	NA	NA	ND (0.0042)	ND (0.0040)	ND (0.0042)	ND (0.0044)	ND (0.0042)	ND (0.0042)	ND (0.0043)	ND (0.0040)	NA	NA	NA
Isopropylbenzene (Cumene)	ND (0.008)	ND (0.008)	ND (0.0058)	ND (0.0056)	ND (0.0058)	ND (0.0061)	ND (0.0058)	ND (0.0058)	ND (0.0060)	ND (0.0056)	ND (0.008)	ND (0.008)	ND (0.008)
Methylene chloride	ND (0.008)	ND (0.008)	0.0044 UN	ND (0.0040)	ND (0.0041)	ND (0.0043)	ND (0.0041)	ND (0.0041)	ND (0.0042)	ND (0.0039)	ND (0.008)	ND (0.008)	ND (0.008)
Naphthalene	0.199	ND (0.008)	ND (0.025)	ND (0.024) UJ	ND (0.025)	ND (0.026)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.024)	ND (0.008)	ND (0.008)	0.100
n-Propylbenzene	ND (0.008)	ND (0.008)	ND (0.0058)	ND (0.0056)	ND (0.0058)	0.0060	ND (0.0058)	ND (0.0058)	ND (0.0060)	ND (0.0056)	ND (0.008)	ND (0.008)	ND (0.008)
Styrene	ND (0.008)	ND (0.008)	ND (0.0051)	ND (0.0049)	ND (0.0050)	ND (0.0053)	ND (0.0050)	ND (0.0050)	ND (0.0052)	ND (0.0048)	ND (0.008)	ND (0.008)	ND (0.008)
Tetrachloroethene	ND (0.008)	ND (0.008)	ND (0.0081)	ND (0.0078)	ND (0.0080)	ND (0.0084)	ND (0.0080)	ND (0.0080)	ND (0.0082)	ND (0.0077)	ND (0.008)	ND (0.008)	ND (0.008)
Toluene	0.529	ND (0.008)	ND (0.0045)	ND (0.0043)	ND (0.0045)	0.028	ND (0.0044)	ND (0.0045)	ND (0.0046)	ND (0.0042)	ND (0.008)	ND (0.008)	0.431
Trichlorofluoromethane (Freon 11)	ND (0.008)	ND (0.008)	ND (0.0067)	ND (0.0065)	ND (0.0066)	ND (0.0069)	ND (0.0066)	ND (0.0066)	ND (0.0068)	ND (0.0063)	ND (0.008)	ND (0.008)	ND (0.008)
Vinyl Chloride	ND (0.008)	ND (0.008)	ND (0.0030)	ND (0.0029)	ND (0.0030)	ND (0.0032)	ND (0.0030)	ND (0.0030)	ND (0.0031)	ND (0.0029)	ND (0.008)	ND (0.008)	ND (0.008)
m,p-Xylene	NA	NA	ND (0.0052)	ND (0.0050)	ND (0.0051)	0.047	ND (0.0051)	ND (0.0051)	ND (0.0053)	ND (0.0049)	NA	NA	NA
o-Xylene	NA	NA	ND (0.0052)	ND (0.0050)	ND (0.0051)	0.020	ND (0.0051)	ND (0.0051)	ND (0.0053)	ND (0.0049)	NA	NA	NA
Xylenes (total)	1.83	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	ND (0.007)	ND (0.007)	2.49
Other VOCs	ND	ND	ND	ND	0.061 J+	ND	ND	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-9									
Probe Location ID	SG-9									
Sample Depth (feet bgs)	5	5	5	5	5	5	5	5	5	5
EPA Analytical Method	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	10/13/10	6/27/11	10/4/11	DUP 10/4/11	11/8/12	4/20/13	10/16/13	4/8/2014	10/8/14	4/15/15
TPHg	8.61	ND (0.23)	ND (0.24)	ND (0.25)	14	1.5	2.0	0.79	2.1	1.6
1,2,4-Trichlorobenzene	ND (0.008)	ND (0.034)	ND (0.035)	ND (0.036)	ND (0.035)	ND (0.035)	ND (0.036)	ND (0.035)	ND (0.035)	ND (0.035)
1,2,4-Trimethylbenzene	0.718	ND (0.0056)	ND (0.0058)	ND (0.0059)	0.011	0.025	0.011	0.0060	0.0062	0.014
1,3,5-Trimethylbenzene	0.103	ND (0.0056)	ND (0.0058)	ND (0.0059)	ND (0.0058)	0.0087	ND (0.0059)	ND (0.0059)	ND (0.0058)	ND (0.0058)
1,3-Butadiene	NA	ND (0.0025)	ND (0.0026)	ND (0.0027)	ND (0.0026)	ND (0.0026)	ND (0.0026)	ND (0.0026)	ND (0.0026)	ND (0.0026)
2,2,4-Trimethylpentane	NA	ND (0.0053)	ND (0.0055)	ND (0.0056)	ND (0.0055)	0.032	ND (0.0056)	ND (0.0056)	ND (0.0055)	ND (0.0056)
2-Butanone (MEK)	NA	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	ND (0.014)	0.023	ND (0.014)
4-Ethyltoluene	NA	ND (0.0056)	ND (0.0058)	ND (0.0059)	0.012	0.022	0.0071	ND (0.0059)	0.0072	0.014
4-Isopropyltoluene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	ND (0.011)	0.014 UN	0.014 UN	ND (0.028)	ND (0.028)	0.048	0.058	ND (0.028)	ND (0.028)
Benzene	ND (0.008)	ND (0.0036)	ND (0.0038)	ND (0.0039)	0.0070	0.0042	ND (0.0038)	ND (0.0038)	ND (0.0038)	0.0054
Bromodichloromethane	ND (0.008)	ND (0.0077)	ND (0.0079)	ND (0.0081)	ND (0.0079)	ND (0.0079)	ND (0.0080)	ND (0.0080)	ND (0.0079)	ND (0.0080)
n-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	ND (0.008)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.015)
Carbon tetrachloride	ND (0.008)	ND (0.0072)	ND (0.0074)	ND (0.0076)	ND (0.0074)	ND (0.0074)	ND (0.0076)	ND (0.0075)	ND (0.0074)	ND (0.0075)
Chloroform	ND (0.008)	ND (0.0056)	ND (0.0057)	ND (0.0059)	ND (0.0058)	ND (0.0058)	ND (0.0058)	ND (0.0058)	ND (0.0057)	ND (0.0058)
Cyclohexane	NA	ND (0.0039)	ND (0.0040)	ND (0.0042)	0.027	0.022	0.026	0.025	0.015	0.0099
Dichlorodifluoromethane (Freon 12)	ND (0.008)	ND (0.0057)	ND (0.0058)	ND (0.0060)	ND (0.0059)	ND (0.0058)	ND (0.0059)	ND (0.0059)	ND (0.0058)	ND (0.0059)
Ethanol	NA	ND (0.0086)	ND (0.0088)	ND (0.0091)	ND (0.0089)	0.11	ND (0.0090)	ND (0.0090)	ND (0.0088)	0.010
Ethylbenzene	0.285	ND (0.0050)	ND (0.0051)	ND (0.0052)	0.022	0.016	0.010	ND (0.0052)	0.0053	0.012
Heptane	NA	ND (0.0047)	ND (0.0048)	ND (0.0050)	0.062	0.0084	0.042	0.023	0.059	0.058
Hexane	NA	ND (0.0040)	ND (0.0041)	ND (0.0043)	0.024	0.005	0.019	0.013	0.027	0.027
Isopropylbenzene (Cumene)	0.031	ND (0.0056)	ND (0.0058)	ND (0.0059)	0.029	ND (0.0058)	0.010	ND (0.0059)	ND (0.0058)	0.011
Methylene chloride	ND (0.008)	ND (0.0040)	ND (0.0041)	ND (0.0042)	ND (0.041)	ND (0.041)	ND (0.042)	ND (0.042)	ND (0.041)	ND (0.041)
Naphthalene	0.217	ND (0.024)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
n-Propylbenzene	ND (0.008)	ND (0.0056)	ND (0.0058)	ND (0.0059)	0.012	ND (0.0058)	ND (0.0059)	ND (0.0059)	ND (0.0058)	0.0071
Styrene	ND (0.008)	ND (0.0049)	ND (0.0050)	ND (0.0052)	ND (0.0050)	ND (0.0050)	ND (0.0051)	ND (0.0051)	ND (0.0050)	ND (0.0051)
Tetrachloroethene	ND (0.008)	ND (0.0078)	ND (0.0080)	ND (0.0082)	ND (0.0080)	ND (0.0080)	ND (0.0081)	ND (0.0081)	ND (0.0080)	ND (0.0081)
Toluene	0.156	ND (0.0043)	ND (0.0044)	ND (0.0046)	0.013	0.048	0.0060	ND (0.0045)	0.013	0.018
Trichlorofluoromethane (Freon 11)	ND (0.008)	ND (0.0064)	ND (0.0066)	ND (0.0068)	ND (0.0066)	ND (0.0066)	ND (0.0067)	ND (0.0067)	ND (0.0066)	ND (0.0067)
Vinyl Chloride	ND (0.008)	ND (0.0029)	ND (0.0030)	ND (0.0031)	ND (0.0030)	ND (0.0030)	ND (0.0031)	ND (0.0030)	ND (0.0030)	ND (0.0030)
m,p-Xylene	NA	ND (0.0050)	ND (0.0051)	ND (0.0052)	0.052	0.075	0.036	0.017	0.023	0.032
o-Xylene	NA	ND (0.0050)	ND (0.0051)	ND (0.0052)	0.026	0.025	0.011	ND (0.0052)	0.0064	0.017
Xylenes (total)	1.27	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other VOCs	ND	ND	ND	ND	ND	ND	0.0044 <sup>a</sup>	0.0051 <sup>b</sup>	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-9												
	SG-9A			SG-9									
Probe Location ID	10	10	10	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Sample Depth (feet bgs)	10	10	10	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
EPA Analytical Method	TO-15	TO-15	TO-15	8260B	8260B	8260B	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	10/24/11	11/8/12	4/8/14	10/12/09	4/26/10	4/26/10	10/13/10	6/27/11	10/4/11	11/8/12	4/19/13	10/15/13	4/8/14
TPHg	NS	NS	NS	<b>6.2</b>	<b>5.58</b>	<b>6.52</b>	NS	<b>3.7</b>	NS	<b>1.1</b>	ND (0.22)	ND (0.25)	NS
1,2,4-Trichlorobenzene	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.034)	NS	ND (0.036)	ND (0.032)	ND (0.036)	NS
1,2,4-Trimethylbenzene	NS	NS	NS	<b>0.229</b>	<b>0.251</b>	<b>0.251</b>	NS	ND (0.0056)	NS	<b>0.0090</b>	<b>0.0064</b>	ND (0.0060)	NS
1,3,5-Trimethylbenzene	NS	NS	NS	ND (0.008)	<b>0.070</b>	<b>0.085</b>	MS	ND (0.0056)	NS	ND (0.0060)	ND (0.0054)	ND (0.0060)	NS
1,3-Butadiene	NS	NS	NS	NA	NA	NA	NS	ND (0.0025)	NS	ND (0.0027)	ND (0.0024)	ND (0.0027)	NS
2,2,4-Trimethylpentane	NS	NS	NS	NA	NA	NA	NS	ND (0.0053)	NS	ND (0.0057)	ND (0.0051)	ND (0.0057)	NS
2-Butanone (MEK)	NS	NS	NS	NA	NA	NA	NS	ND (0.014)	NS	ND (0.014)	ND (0.013)	ND (0.014)	NS
4-Ethyltoluene	NS	NS	NS	NA	NA	NA	NS	<b>0.0088</b>	NS	<b>0.0070</b>	ND (0.0054)	ND (0.0060)	NS
4-Isopropyltoluene	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	NA	NS	NA	NA	NA	NS
Acetone	NS	NS	NS	NA	NA	NA	NS	0.012 UN	NS	ND (0.029)	ND (0.026)	ND (0.029)	NS
Benzene	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	<b>0.0062</b>	NS	ND (0.0039)	ND (0.0035)	ND (0.0039)	NS
Bromodichloromethane	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.0077)	NS	ND (0.0082)	ND (0.0073)	ND (0.0081)	NS
n-Butylbenzene	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	NA	NS	NA	NA	NA	NS
sec-Butylbenzene	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	NA	NS	NA	NA	NA	NS
tert-Butylbenzene	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	NA	NS	NA	NA	NA	NS
Carbon disulfide	NS	NS	NS	NA	NA	NA	NS	ND (0.014)	NS	ND (0.015)	ND (0.014)	ND (0.015)	NS
Carbon tetrachloride	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.0072)	NS	ND (0.0077)	ND (0.0069)	ND (0.0076)	NS
Chloroform	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.0056)	NS	ND (0.0060)	ND (0.0053)	ND (0.0059)	NS
Cyclohexane	NS	NS	NS	NA	NA	NA	NS	<b>0.020</b>	NS	ND (0.0042)	ND (0.0038)	ND (0.0042)	NS
Dichlorodifluoromethane (Freon 12)	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.0057)	NS	ND (0.0060)	ND (0.0054)	ND (0.0060)	NS
Ethanol	NS	NS	NS	NA	NA	NA	NS	ND (0.0086)	NS	<b>0.011</b>	<b>0.038 UN</b>	ND (0.0092)	NS
Ethylbenzene	NS	NS	NS	ND (0.008)	<b>0.022</b>	<b>0.011</b>	NS	<b>0.017</b>	NS	<b>0.011</b>	ND (0.0048)	ND (0.0053)	NS
Heptane	NS	NS	NS	NA	NA	NA	NS	<b>0.036</b>	NS	ND (0.0050)	ND (0.0045)	ND (0.0050)	NS
Hexane	NS	NS	NS	NA	NA	NA	NS	<b>0.014</b>	NS	ND (0.0043)	ND (0.0038)	ND (0.0043)	NS
Isopropylbenzene (Cumene)	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	<b>0.029</b>	NS	ND (0.0060)	ND (0.0054)	ND (0.0060)	NS
Methylene chloride	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.0040)	NS	ND (0.042)	ND (0.038)	ND (0.042)	NS
Naphthalene	NS	NS	NS	ND (0.008)	<b>0.195</b>	<b>0.170</b>	NS	ND (0.024)	NS	ND (0.026)	ND (0.023)	ND (0.025)	NS
n-Propylbenzene	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	<b>0.0095</b>	NS	ND (0.0060)	ND (0.0054)	ND (0.0060)	NS
Styrene	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.0049)	NS	ND (0.0052)	ND (0.0047)	ND (0.0052)	NS
Tetrachloroethene	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.0078)	NS	ND (0.0083)	ND (0.0074)	ND (0.0082)	NS
Toluene	NS	NS	NS	ND (0.008)	<b>0.340</b>	<b>0.371</b>	NS	<b>0.013</b>	NS	<b>0.018</b>	ND (0.0041)	ND (0.0046)	NS
Trichlorofluoromethane (Freon 11)	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.0064)	NS	ND (0.0068)	ND (0.0062)	ND (0.0068)	NS
Vinyl Chloride	NS	NS	NS	ND (0.008)	ND (0.008)	ND (0.008)	NS	ND (0.0029)	NS	ND (0.0031)	ND (0.0028)	ND (0.0031)	NS
m,p-Xylene	NS	NS	NS	NA	NA	NA	NS	<b>0.047</b>	NS	<b>0.047</b>	<b>0.0052</b>	ND (0.0053)	NS
o-Xylene	NS	NS	NS	NA	NA	NA	NS	<b>0.028</b>	NS	<b>0.018</b>	ND (0.0048)	ND (0.0053)	NS
Xylenes (total)	NS	NS	NS	ND (0.007)	<b>1.79</b>	<b>1.88</b>	NS	NA	NS	NA	NA	NA	NS
Other VOCs	NS	NS	NS	ND	ND	ND	NS	ND	NS	NS	ND	ND	NS



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Probe Group	SG-9		SG-10										
Probe Location ID	SG-9		SG-10										
Sample Depth (feet bgs)	14.5	14.5	5	5	5	5	5	5	5	5	5	5	5
EPA Analytical Method	TO-15	TO-15	8260B	8260B	8260B	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	10/8/14	4/15/15	10/12/09	4/26/10	10/13/10	10/13/10	6/27/11	6/27/11	10/24/11	11/8/12	4/19/13	10/16/13	4/9/14
TPHg	ND (0.24)	ND (0.49)	<b>1.26</b>	<b>3.22</b>	<b>1,480</b>	<b>1,300</b>	ND (0.25)	ND (0.25)	ND (0.16)	ND (0.24)	<b>0.47</b>	ND (0.24)	ND (0.24)
1,2,4-Trichlorobenzene	ND (0.035)	ND (0.036)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	ND (0.037)	ND (0.037)	ND (0.024)	ND (0.034)	ND (0.033)	ND (0.035)	ND (0.035)
1,2,4-Trimethylbenzene	ND (0.0059)	ND (0.0059)	<b>0.113</b>	<b>0.092</b>	<b>43.5</b>	<b>39.8</b>	ND (0.0061)	ND (0.0061)	ND (0.0039)	ND (0.0056)	<b>0.0090</b>	ND (0.0058)	ND (0.0058)
1,3,5-Trimethylbenzene	ND (0.0059)	ND (0.0059)	<b>0.030</b>	ND (0.008)	<b>24.5</b>	<b>21.9</b>	ND (0.0061)	ND (0.0061)	ND (0.0039)	ND (0.0056)	ND (0.0054)	ND (0.0058)	ND (0.0058)
1,3-Butadiene	ND (0.0026)	ND (0.0027)	NA	NA	NA	NA	ND (0.0027)	ND (0.0027)	ND (0.0018)	ND (0.0025)	ND (0.0024)	ND (0.0026)	ND (0.0026)
2,2,4-Trimethylpentane	ND (0.0056)	ND (0.0056)	NA	NA	NA	NA	ND (0.0058)	ND (0.0058)	ND (0.0037)	ND (0.0054)	ND (0.0052)	<b>0.035</b>	ND (0.0055)
2-Butanone (MEK)	ND (0.014)	ND (0.014)	NA	NA	NA	NA	ND (0.014)	ND (0.014)	ND (0.0094)	ND (0.014)	ND (0.013)	ND (0.014)	ND (0.014)
4-Ethyltoluene	ND (0.0059)	ND (0.0059)	NA	NA	NA	NA	ND (0.0061)	ND (0.0061)	ND (0.0039)	ND (0.0056)	<b>0.0073</b>	ND (0.0058)	ND (0.0058)
4-Isopropyltoluene	NA	NA	<b>0.090</b>	ND (0.008)	ND (0.008)	ND (0.4)	NA	NA	NA	NA	NA	NA	NA
Acetone	ND (0.028)	<b>0.044</b>	NA	NA	NA	NA	ND (0.012)	ND (0.012)	ND (0.0076)	ND (0.027)	<b>0.027</b>	ND (0.028)	ND (0.028)
Benzene	ND (0.0038)	ND (0.0038)	<b>0.050</b>	ND (0.008)	<b>0.580</b>	<b>0.500</b>	ND (0.0039)	ND (0.0039)	ND (0.0028)	ND (0.0037)	ND (0.0035)	ND (0.0038)	ND (0.0038)
Bromodichloromethane	ND (0.0080)	ND (0.0081)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	ND (0.0083)	ND (0.0083)	ND (0.0054)	ND (0.0077)	ND (0.0074)	ND (0.0079)	ND (0.0079)
n-Butylbenzene	NA	NA	<b>0.060</b>	ND (0.008)	ND (0.008)	ND (0.4)	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	<b>0.120</b>	ND (0.008)	ND (0.008)	ND (0.4)	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	NA	NA	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	ND (0.015)	ND (0.015)	NA	NA	NA	NA	ND (0.015)	ND (0.015)	ND (0.010)	ND (0.014)	ND (0.014)	ND (0.015)	ND (0.015)
Carbon tetrachloride	ND (0.0075)	ND (0.0076)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	ND (0.0078)	ND (0.0078)	ND (0.0050)	ND (0.0072)	ND (0.0070)	ND (0.0074)	ND (0.0074)
Chloroform	ND (0.0058)	ND (0.0059)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	ND (0.0060)	ND (0.0060)	ND (0.0039)	ND (0.0056)	ND (0.0054)	ND (0.0058)	<b>0.0069</b>
Cyclohexane	ND (0.0041)	ND (0.0041)	NA	NA	NA	NA	ND (0.0042)	ND (0.0042)	ND (0.0028)	ND (0.0040)	<b>0.0055</b>	ND (0.0041)	ND (0.0041)
Dichlorodifluoromethane (Freon 12)	ND (0.0059)	ND (0.0060)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	ND (0.0061)	ND (0.0061)	ND (0.0040)	ND (0.0057)	ND (0.0055)	ND (0.0059)	ND (0.0058)
Ethanol	ND (0.0090)	ND (0.0091)	NA	NA	NA	NA	ND (0.0093)	ND (0.0093)	ND (0.0060)	ND (0.0087)	<b>0.18</b>	ND (0.0089)	ND (0.0089)
Ethylbenzene	ND (0.0052)	ND (0.0052)	<b>0.201</b>	<b>0.283</b>	<b>152</b>	<b>132</b>	ND (0.0054)	ND (0.0054)	ND (0.0035)	ND (0.0050)	ND (0.0048)	ND (0.0051)	ND (0.0051)
Heptane	ND (0.0049)	ND (0.0049)	NA	NA	NA	NA	ND (0.0051)	ND (0.0051)	ND (0.0033)	ND (0.0047)	ND (0.0045)	<b>0.011</b>	ND (0.0048)
Hexane	ND (0.0042)	ND (0.0042)	NA	NA	NA	NA	ND (0.0044)	ND (0.0044)	ND (0.0028)	ND (0.0040)	ND (0.0039)	<b>0.014</b>	ND (0.0042)
Isopropylbenzene (Cumene)	ND (0.0059)	ND (0.0059)	<b>0.024</b>	ND (0.008)	<b>3.95</b>	<b>2.66</b>	ND (0.0061)	ND (0.0061)	ND (0.0039)	ND (0.0056)	ND (0.0054)	ND (0.0058)	ND (0.0058)
Methylene chloride	ND (0.042)	ND (0.042)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	0.0056 UN	0.0050 UN	ND (0.0028)	ND (0.040)	ND (0.038)	ND (0.041)	ND (0.041)
Naphthalene	ND (0.025)	ND (0.025)	ND (0.008)	ND (0.008)	<b>18.5</b>	<b>22.5</b>	ND (0.026)	ND (0.026)	ND (0.017)	ND (0.024)	ND (0.023)	ND (0.025)	ND (0.025)
n-Propylbenzene	ND (0.0059)	ND (0.0059)	ND (0.008)	ND (0.008)	<b>2.69</b>	<b>2.03</b>	ND (0.0061)	ND (0.0061)	ND (0.0039)	ND (0.0056)	ND (0.0054)	ND (0.0058)	ND (0.0058)
Styrene	ND (0.0051)	ND (0.0051)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	ND (0.0053)	ND (0.0053)	ND (0.0034)	ND (0.0049)	ND (0.0047)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	ND (0.0081)	ND (0.0082)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	ND (0.0084)	ND (0.0084)	ND (0.0054)	ND (0.0078)	ND (0.0075)	ND (0.0080)	ND (0.0080)
Toluene	ND (0.0045)	ND (0.0045)	<b>0.129</b>	<b>0.290</b>	<b>60.3</b>	<b>54.6</b>	ND (0.0046)	ND (0.0046)	ND (0.0030)	ND (0.0043)	<b>0.020</b>	ND (0.0045)	ND (0.0044)
Trichlorofluoromethane (Freon 11)	ND (0.0067)	ND (0.0068)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	ND (0.0069)	ND (0.0069)	ND (0.0045)	ND (0.0065)	ND (0.0062)	ND (0.0066)	ND (0.0066)
Vinyl Chloride	ND (0.0030)	ND (0.0031)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.4)	ND (0.0032)	ND (0.0032)	ND (0.0020)	ND (0.0029)	ND (0.0028)	ND (0.0030)	ND (0.0030)
m,p-Xylene	ND (0.0052)	ND (0.0052)	NA	NA	NA	NA	ND (0.0054)	ND (0.0054)	ND (0.0035)	ND (0.0050)	<b>0.015</b>	ND (0.0051)	ND (0.0051)
o-Xylene	ND (0.0052)	ND (0.0052)	NA	NA	NA	NA	ND (0.0054)	ND (0.0054)	ND (0.0035)	ND (0.0050)	<b>0.0053</b>	ND (0.0051)	ND (0.0051)
Xylenes (total)	NA	NA	<b>0.291</b>	<b>0.963</b>	<b>360</b>	<b>322</b>	NA	NA	NA	NA	NA	NA	NA
Other VOCs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
 Former Watsonville-1 MGP  
 Watsonville, California

Probe Group	SG-10													
Probe Location ID	SG-10													
Sample Depth (feet bgs)	5	5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
EPA Analytical Method	TO-15	TO-15	8260B	8260B DUP	8260B	8260B	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15	TO-15
Sample Date	10/9/14	4/16/15	10/12/09	10/12/09	4/26/10	10/13/10	6/27/11	10/24/11	11/18/12	4/19/13	10/16/13	4/9/14	10/9/14	4/16/15
TPHg	ND (0.24)	ND (0.47)	4.03	4.55	2.77	10.2	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	ND (0.035)	ND (0.034)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	ND (0.0058)	ND (0.0056)	ND (0.02)	ND (0.008)	ND (0.008)	0.552	NS	NS	NS	NS	NS	NS	NS	NS
1,3,5-Trimethylbenzene	ND (0.0058)	ND (0.0056)	ND (0.02)	ND (0.008)	ND (0.008)	0.090	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Butadiene	ND (0.0026)	ND (0.0025)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
2,2,4-Trimethylpentane	ND (0.0056)	ND (0.0054)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
2-Butanone (MEK)	ND (0.014)	ND (0.014)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
4-Ethyltoluene	ND (0.0058)	ND (0.0056)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
4-Isopropyltoluene	NA	NA	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Acetone	ND (0.028)	ND (0.027)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
Benzene	ND (0.0038)	ND (0.0037)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Bromodichloromethane	ND (0.0080)	ND (0.0077)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
n-Butylbenzene	NA	NA	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	NA	NA	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
tert-Butylbenzene	NA	NA	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Carbon disulfide	ND (0.015)	ND (0.014)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
Carbon tetrachloride	ND (0.0075)	ND (0.0072)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	0.025	0.012	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Cyclohexane	ND (0.0041)	ND (0.0040)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
Dichlorodifluoromethane (Freon 12)	ND (0.0059)	ND (0.0057)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Ethanol	ND (0.0090)	ND (0.0087)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	ND (0.0052)	ND (0.0050)	ND (0.02)	ND (0.008)	ND (0.008)	0.357	NS	NS	NS	NS	NS	NS	NS	NS
Heptane	ND (0.0049)	ND (0.0047)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
Hexane	ND (0.0042)	ND (0.0040)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
Isopropylbenzene (Cumene)	ND (0.0058)	ND (0.0056)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Methylene chloride	ND (0.041)	ND (0.040)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ND (0.025)	ND (0.024)	ND (0.02)	ND (0.008)	0.034	1.73	NS	NS	NS	NS	NS	NS	NS	NS
n-Propylbenzene	ND (0.0058)	ND (0.0056)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Styrene	ND (0.0051)	ND (0.0049)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	ND (0.0081)	ND (0.0078)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	ND (0.0045)	ND (0.0043)	ND (0.02)	ND (0.008)	0.201	0.113	NS	NS	NS	NS	NS	NS	NS	NS
Trichlorofluoromethane (Freon 11)	ND (0.0067)	ND (0.0065)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	ND (0.0030)	ND (0.0029)	ND (0.02)	ND (0.008)	ND (0.008)	ND (0.008)	NS	NS	NS	NS	NS	NS	NS	NS
m,p-Xylene	ND (0.0052)	ND (0.0050)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
o-Xylene	ND (0.0052)	ND (0.0050)	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes (total)	NA	NA	0.205	0.191	0.771	1.07	NS	NS	NS	NS	NS	NS	NS	NS
Other VOCs	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS



**Table 5**  
**Summary of TPHg and Detected VOCs in Soil Gas**  
**Former Watsonville-1 MGP**  
**Watsonville, California**

Notes:

Analytical results are presented in micrograms per liter (ug/L).

"ND (##)" indicates the constituent was not detected at or above the laboratory reporting limit.

On 2/12/08 and 2/13/08, a purge test was conducted on soil gas samples collected from 15 feet at probe SG-7. Sample volumes were collected at 1, 3 and 7 volumes (1P, 3P and 7P, respectively). The highest concentrations for the compounds of interest were detected in the 1-purge-volume sample. As a result, soil gas samples from all remaining probes were collected after purging 1 volume of air.

On 10/12/09, a purge test was conducted on soil gas samples collected from 5 feet and 15 feet at probe SG-6A. Sample volumes were collected at 1, 3 and 10 volumes (1P, 3P and 10P, respectively). The highest concentrations for the compounds of interest were detected in the 3-purge-volume and 10-purge-volume samples, respectively. As a result, soil gas samples from all remaining probes were collected after purging 3 volumes of air for the 5-foot samples and 10 volumes of air for the 9-foot or 15-foot samples.

On 4/26/10, a purge test was conducted on soil gas samples collected from 5 feet and 15 feet at probe SG-4A. Sample volumes were collected at 1, 3 and 10 volumes (1P, 3P and 10P, respectively). The highest concentrations for the compounds of interest were detected in the 3-purge-volume and 10-purge-volume samples, respectively. As a result, soil gas samples from all remaining probes were collected after purging 3 volumes of air for the 5-foot samples and 10 volumes of air for the 9-foot or 15-foot samples.

On 10/13/10, a purge test was conducted on soil gas samples collected from 5 feet and 15 feet at probe SG-4A. Sample volumes were collected at 1, 3, 7 and 10 volumes (1P, 3P, 7P and 10P, respectively). The highest concentrations for the compounds of interest were detected in the 3-purge-volume samples. As a result, soil gas samples from all remaining probes were collected after purging 3 volumes of air.

Samples taken since June 2011 were collected after purging 3 volumes of air per the TO-15 Method guidance.

CONF = confirmation sample

DUP = duplicate sample

REP = replicate sample

NA = not analyzed

TPHg = Total petroleum hydrocarbons quantified as gasoline

VOC = volatile organic compound

EPA = United States Environmental Protection Agency

JA = estimated value because of interference by non-target compounds

J- = Estimated value with a potential low bias.

J = estimated value; analyte detected at a concentration less than the reporting limit and greater than or equal to the method detection limit

J+ = estimated value; analyte detected at a concentration between 5 and 20 times the value detected in the associated field blank.

UN = Result is estimated due to possible contamination in the field QC blanks. Result is less than five times the amount reported in the blank(s).

NS = Not sampled due to no or low flow conditions or shallow water in probe tubing.

E = Exceeds instrument calibration range.

UJ = Non-detected compound associated with low bias in the CCV and/or LCS

1 = Bromomethane (USEPA Method TO-15)

2 = Chloroethane (USEPA Method TO-15)

3 = Chlorobenzene (USEPA Method TO-15)

4 = Tetrahydrofuran (USEPA Method TO-15)

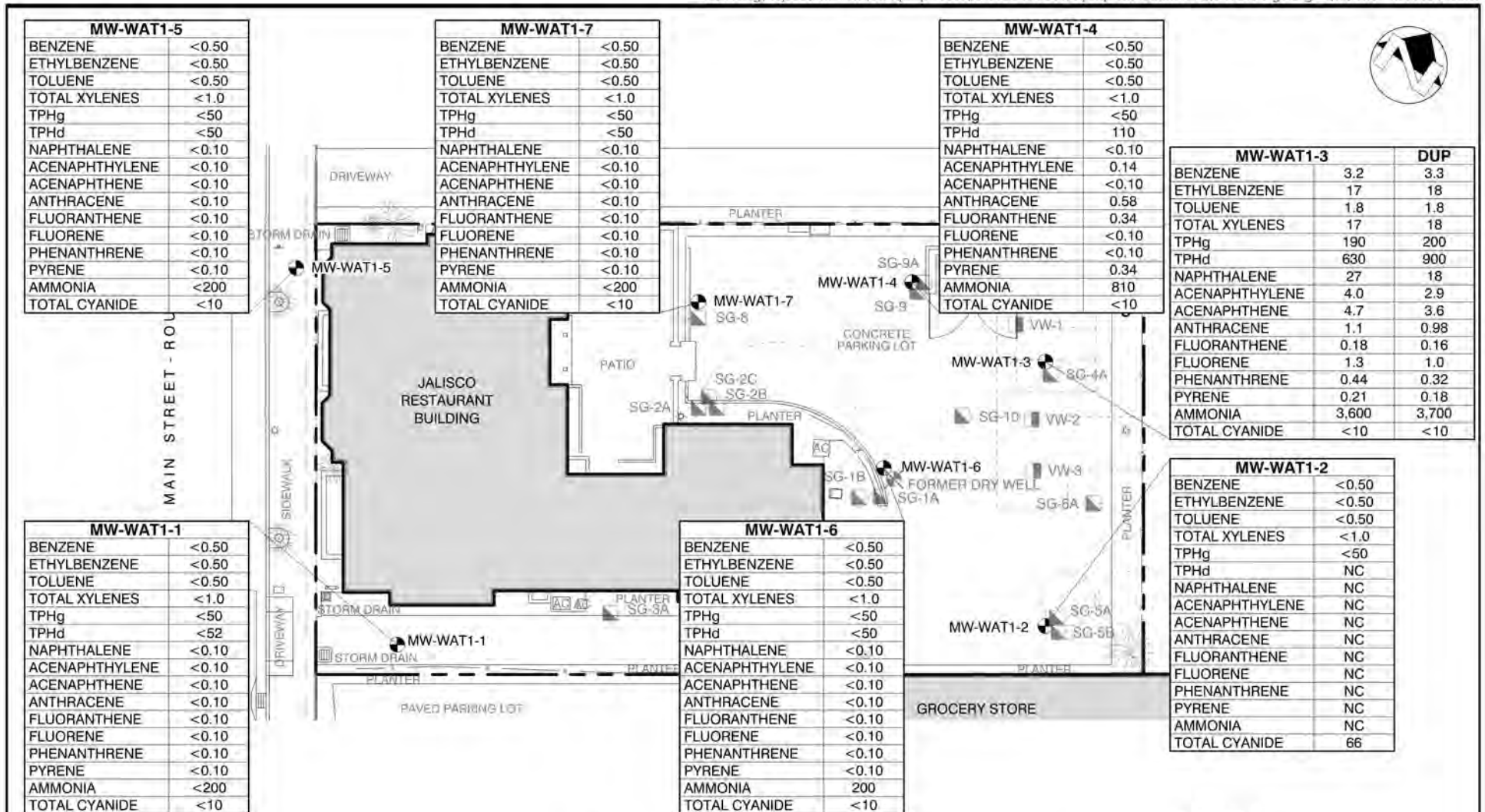
5 = 1,4-Dioxane (USEPA Method TO-15)

6 = Trichloroethene (USEPA Method TO-15)

7 = 2-Propanol (USEPA Method TO-15)

8 = Methyl tert-butyl ether (USEPA Method TO-15)





MW-WAT1-5	
BENZENE	<0.50
ETHYLBENZENE	<0.50
TOLUENE	<0.50
TOTAL XYLENES	<1.0
TPHg	<50
TPHd	<50
NAPHTHALENE	<0.10
ACENAPHTHYLENE	<0.10
ACENAPHTHENE	<0.10
ANTHRACENE	<0.10
FLUORANTHENE	<0.10
FLUORENE	<0.10
PHENANTHRENE	<0.10
PYRENE	<0.10
AMMONIA	<200
TOTAL CYANIDE	<10

MW-WAT1-7	
BENZENE	<0.50
ETHYLBENZENE	<0.50
TOLUENE	<0.50
TOTAL XYLENES	<1.0
TPHg	<50
TPHd	<50
NAPHTHALENE	<0.10
ACENAPHTHYLENE	<0.10
ACENAPHTHENE	<0.10
ANTHRACENE	<0.10
FLUORANTHENE	<0.10
FLUORENE	<0.10
PHENANTHRENE	<0.10
PYRENE	<0.10
AMMONIA	<200
TOTAL CYANIDE	<10

MW-WAT1-4	
BENZENE	<0.50
ETHYLBENZENE	<0.50
TOLUENE	<0.50
TOTAL XYLENES	<1.0
TPHg	<50
TPHd	110
NAPHTHALENE	<0.10
ACENAPHTHYLENE	0.14
ACENAPHTHENE	<0.10
ANTHRACENE	0.58
FLUORANTHENE	0.34
FLUORENE	<0.10
PHENANTHRENE	<0.10
PYRENE	0.34
AMMONIA	810
TOTAL CYANIDE	<10

MW-WAT1-3		DUP
BENZENE	3.2	3.3
ETHYLBENZENE	17	18
TOLUENE	1.8	1.8
TOTAL XYLENES	17	18
TPHg	190	200
TPHd	630	900
NAPHTHALENE	27	18
ACENAPHTHYLENE	4.0	2.9
ACENAPHTHENE	4.7	3.6
ANTHRACENE	1.1	0.98
FLUORANTHENE	0.18	0.16
FLUORENE	1.3	1.0
PHENANTHRENE	0.44	0.32
PYRENE	0.21	0.18
AMMONIA	3,600	3,700
TOTAL CYANIDE	<10	<10

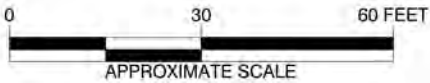
MW-WAT1-1	
BENZENE	<0.50
ETHYLBENZENE	<0.50
TOLUENE	<0.50
TOTAL XYLENES	<1.0
TPHg	<50
TPHd	<52
NAPHTHALENE	<0.10
ACENAPHTHYLENE	<0.10
ACENAPHTHENE	<0.10
ANTHRACENE	<0.10
FLUORANTHENE	<0.10
FLUORENE	<0.10
PHENANTHRENE	<0.10
PYRENE	<0.10
AMMONIA	<200
TOTAL CYANIDE	<10

MW-WAT1-6	
BENZENE	<0.50
ETHYLBENZENE	<0.50
TOLUENE	<0.50
TOTAL XYLENES	<1.0
TPHg	<50
TPHd	<50
NAPHTHALENE	<0.10
ACENAPHTHYLENE	<0.10
ACENAPHTHENE	<0.10
ANTHRACENE	<0.10
FLUORANTHENE	<0.10
FLUORENE	<0.10
PHENANTHRENE	<0.10
PYRENE	<0.10
AMMONIA	200
TOTAL CYANIDE	<10

MW-WAT1-2	
BENZENE	<0.50
ETHYLBENZENE	<0.50
TOLUENE	<0.50
TOTAL XYLENES	<1.0
TPHg	<50
TPHd	NC
NAPHTHALENE	NC
ACENAPHTHYLENE	NC
ACENAPHTHENE	NC
ANTHRACENE	NC
FLUORANTHENE	NC
FLUORENE	NC
PHENANTHRENE	NC
PYRENE	NC
AMMONIA	NC
TOTAL CYANIDE	66

**EXPLANATION**

- MW-WAT1-7 MONITORING WELL
- SG-6B PERMANENT SOIL GAS PROBE
- VW-3 VAPOR WELL
- FORMER DRY WELL
- HISTORICAL FEATURE
- PROPERTY LINE



- NOTES:
- <"x" INDICATES NOT DETECTED AT OR ABOVE THE STATED LABORATORY REPORTING LIMIT OF "x"
  - ALL RESULTS PRESENTED IN MICROGRAMS PER LITER
  - ANALYTES TESTED FOR BUT NOT DETECTED IN ANY SAMPLES ARE NOT PRESENTED ON THIS FIGURE.
  - RESULTS PRESENTED ON THIS FIGURE MAY BE ESTIMATED; SEE TABLES 3 AND 4 FOR DATA QUALIFIER DEFINITIONS.
  - NC INDICATES SAMPLE WAS NOT COLLECTED DUE TO INSUFFICIENT WATER COLUMN.

FIGURE 4  
**DETECTED CHEMICAL CONCENTRATIONS IN GROUNDWATER APRIL 2015**

FORMER WATSONVILLE-1 MANUFACTURED GAS PLANT  
 WATSONVILLE, CALIFORNIA





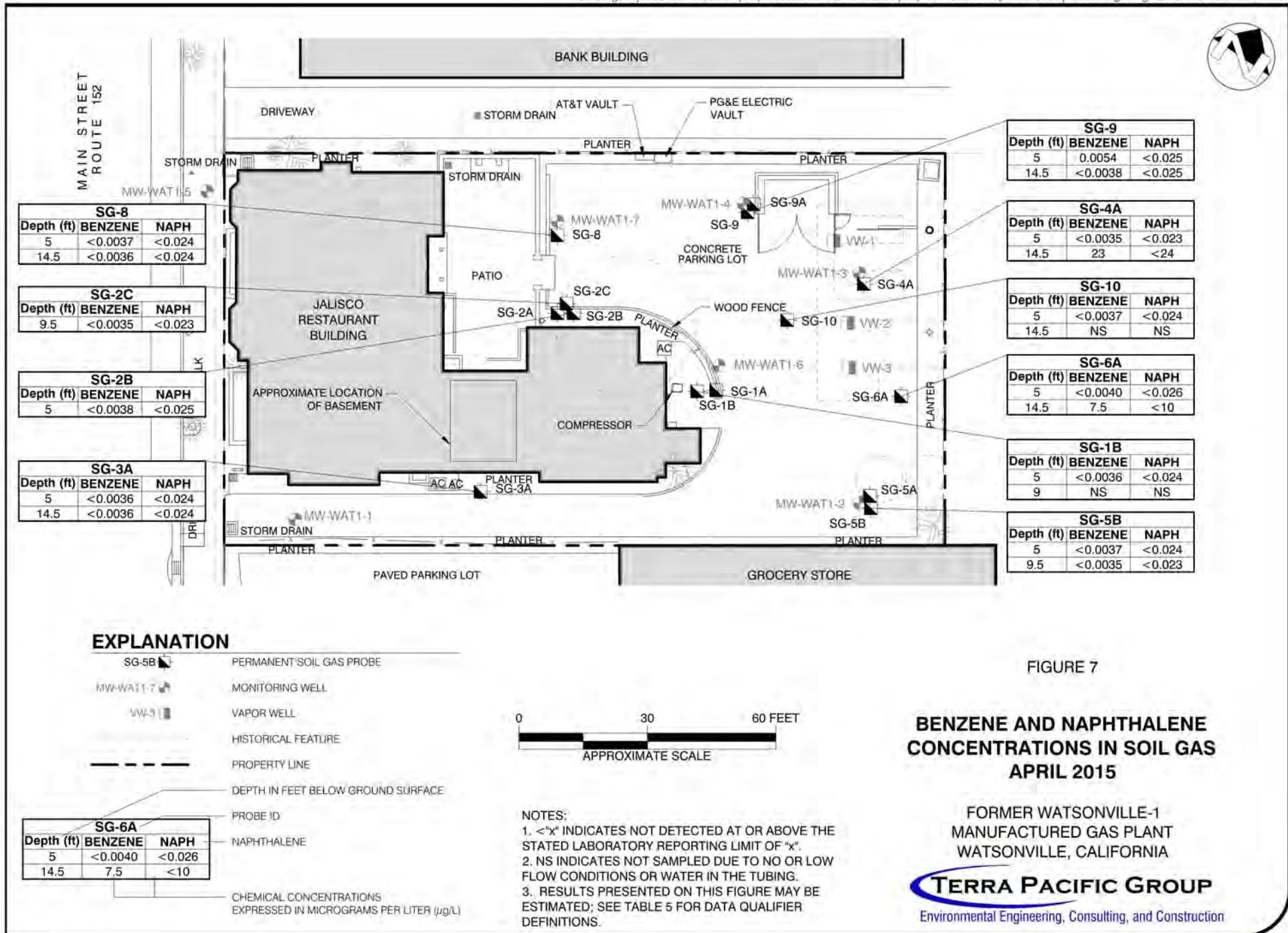


FIGURE 7

**BENZENE AND NAPHTHALENE CONCENTRATIONS IN SOIL GAS APRIL 2015**

FORMER WATSONVILLE-1  
MANUFACTURED GAS PLANT  
WATSONVILLE, CALIFORNIA



**Table and Figure – Residual Soil PAHs (Post Removal Action)**

*Final Removal Action Completion Report,*  
Terra Pacific Group, dated October 27, 2011.



**TABLE 10**  
**SUMMARY OF REPRESENTATIVE POST-EXCAVATION CPAH DATA FOR ON-SITE SOIL**  
**Former Watsonville-1 MGP Site**  
**Watsonville, California**

Sample ID <sup>a</sup>	Sample Depth (ft bgs)	Sample Date	Benzo(a)pyrene Equivalent <sup>b</sup> (mg/kg)
B-WAT1-1-10-11.5	11.5	6/23/1991	0.069
B-WAT1-1-15-16.5	16.5	6/23/1991	0.067
B-WAT1-1-3.5-5	5	6/23/1991	0.068
B-WAT1-2-1-10	10.0	3/13/2001	0.0055
B-WAT1-2-1-15	15.0	3/13/2001	0.0055
B-WAT1-2-1-6.5	6.5	3/13/2001	0.0055
B-WAT1-3-1-10	10.0	3/13/2001	0.0055
B-WAT1-3-1-15	15.0	3/13/2001	0.0055
B-WAT1-3-1-6.5	6.5	3/13/2001	0.0055
DSS-WAT1-1	0.0	6/24/1991	0.24
DSS-WAT1-4	0.0	6/24/1991	0.30
GP1-10-10.5	10.5	5/11/2004	0.43
GP1-15-15.5	15.5	5/11/2004	21
GP1-2.5-3	3	5/11/2004	1.6
GP1-20-20.5	20.5	5/11/2004	0.75
GP1-24-24.5	24.5	5/11/2004	0.0029
GP1-5-5.5	5.5	5/11/2004	0.073
GP2-10-10.5	10.5	5/11/2004	0.0029
GP2-15-15.5	15.5	5/11/2004	1.6
GP2-2.5-3	3	5/11/2004	6.4
GP2-5-5.5	5.5	5/11/2004	1.1
GP3-10-10.5	10.5	5/11/2004	0.0029
GP3-15-15.5	15.5	5/11/2004	0.0029
GP3-2.5-3	3	5/11/2004	0.0033
GP3-20-20.5	20.5	5/11/2004	7.4
GP3-23.5-24	24	5/11/2004	0.0058
GP3-5-5.5	5.5	5/11/2004	0.0029
GP4-10-10.5	10.5	5/11/2004	3.4
GP4-15-15.5	15.5	5/11/2004	18
GP4-2.5-3	3	5/11/2004	1.0
GP4-20-20.5	20.5	5/11/2004	0.0029
GP4-23.5-24	24	5/11/2004	0.0029
GP4-5-5.5	5.5	5/11/2004	3.8
HA1-0-0.5	0.5	5/10/2004	0.61
HA10-0-0.5	0.5	5/10/2004	0.32
HA10-1.5-2	2	5/10/2004	0.087
HA10-2.5-3	3	5/10/2004	0.017
HA1-2.5-3	3	5/10/2004	0.0087
HA1-4-4.5	4.5	5/10/2004	0.0029
HA2-0-0.5	0.5	5/10/2004	1.3
HA2-1-1.5	1.5	5/10/2004	0.010
HA2-2.5-3	3	5/10/2004	0.0036



**TABLE 10**  
**SUMMARY OF REPRESENTATIVE POST-EXCAVATION CPAH DATA FOR ON-SITE SOIL**  
**Former Watsonville-1 MGP Site**  
**Watsonville, California**

Sample ID <sup>a</sup>	Sample Depth (ft bgs)	Sample Date	Benzo(a)pyrene Equivalent <sup>b</sup> (mg/kg)
HA2-4-4.5	4.5	5/10/2004	0.0029
HA3-2.5-3	3	5/10/2004	0.17
HA3-4-4.5	4.5	5/10/2004	0.0029
HA4-2.5-3	3	5/10/2004	0.0029
HA4-4-4.5	4.5	5/10/2004	0.0029
HA5-2.5-3	3	5/10/2004	0.0029
HA5-4-4.5	4.5	5/10/2004	0.0029
HA6-0-0.5	0.5	5/10/2004	0.78
HA6-1-1.5	1.5	5/10/2004	0.24
HA6-2.5-3	3	5/10/2004	0.015
HA6-3-3.5	3.5	5/10/2004	0.0084
HA6-4-4.5	4.5	5/10/2004	0.0029
HA7-2.5-3	3	5/10/2004	0.0029
HA7-4-4.5	4.5	5/10/2004	0.0029
HA8-0-0.5	0.5	5/10/2004	0.12
HA8-1.5-2	2	5/10/2004	0.86
HA8-2.5-3	3	5/10/2004	0.0029
HA8-4-4.5	4.5	5/10/2004	0.033
MW-WAT1-1-12-13	13.0	6/22/1991	0.067
MW-WAT1-1-18-19	19.0	6/22/1991	0.066
MW-WAT1-1-20-21.5	21.5	6/22/1991	0.065
MW-WAT1-1-3-5	5.0	6/22/1991	0.068
MW-WAT1-1-8-10	10.0	6/22/1991	0.068
MW-WAT1-2-10-11.5	11.5	6/23/1991	0.067
MW-WAT1-2-11.5-13	13	6/23/1991	0.067
MW-WAT1-2-13-15	15	6/23/1991	10
MW-WAT1-2-15-16.5	16.5	6/23/1991	0.067
MW-WAT1-2-4-5	5.0	6/23/1991	10
MW-WAT1-2-5-6.5	6.5	6/23/1991	5.9
MW-WAT1-3-10-11.5	11.5	6/24/1991	12
MW-WAT1-3-13-15	15	6/24/1991	17
MW-WAT1-3-15-16.5	16.5	6/24/1991	14
MW-WAT1-3-18-20	20	6/24/1991	0.67
MW-WAT1-3-20-21.5	21.5	6/24/1991	0.069
MW-WAT1-3-23-25	25	6/24/1991	0.067
MW-WAT1-3-25-26.5	26.5	6/24/1991	0.067
MW-WAT1-3-3.5-6	6	6/24/1991	0.068
MW-WAT1-4-1-10	10.0	3/13/2001	0.0058
MW-WAT1-4-1-15	15.0	3/13/2001	0.0055
MW-WAT1-4-1-20	20.0	3/13/2001	0.59
MW-WAT1-4-1-6.5	6.5	3/13/2001	0.0078
MW-WAT1-5-1-10	10.0	3/14/2001	0.0055



**TABLE 10**  
**SUMMARY OF REPRESENTATIVE POST-EXCAVATION CPAH DATA FOR ON-SITE SOIL**  
**Former Watsonville-1 MGP Site**  
**Watsonville, California**

Sample ID <sup>a</sup>	Sample Depth (ft bgs)	Sample Date	Benzo(a)pyrene Equivalent <sup>b</sup> (mg/kg)
MW-WAT1-5-1-15	15.0	3/14/2001	0.0055
MW-WAT1-5-1-20	20.0	3/14/2001	0.0055
MW-WAT1-5-1-6.5	6.5	3/14/2001	0.039
P1-1.5	1.5	3/13/2012	0.0080
P2-1.5	1.5	3/13/2012	0.0050
P3-1.5	1.5	3/13/2012	0.083
P4-1.5	1.5	3/22/2012	0.16
P5-1.5	1.5	3/22/2012	15
P6-1.5	1.5	3/22/2012	0.017
P7-1.5	1.5	3/29/2012	0.028
P8-1.5	1.5	3/29/2012	2.0
P9-1.5	1.5	4/2/2012	0.0040
P10-1.5	1.5	4/2/2012	0.0040
P11-1.5	1.5	4/3/2012	0.0050
P12-1.5	1.5	4/3/2012	0.0050
P13-2	2.0	4/19/2012	1.1
P14-2	2.0	4/19/2012	0.036
P15-2	2.0	4/19/2012	0.041
P16-2	2.0	4/19/2012	0.20
P17-2	2.0	4/19/2012	53
P18-2	2.0	4/25/2012	0.095
SS-WAT1-0401	2.5	3/26/2001	5.3
SS-WAT1-0501	2.5	3/26/2001	0.030
SS-WAT1-1-1-12"	1.0	3/14/2001	0.0060
SS-WAT1-1-1-30"	2.5	3/14/2001	0.0060
SS-WAT1-2-1-30"	2.5	3/14/2001	0.0055
SS-WAT1-2-2-12"	1.0	3/14/2001	0.027
SS-WAT1-3-1-30"	2.5	3/14/2001	0.0060
SS-WAT1-6-1-30"	2.5	3/14/2001	0.62
SS-WAT1-7-1-12"	1.0	3/14/2001	0.0050
SS-WAT1-7-1-30"	2.5	3/14/2001	0.0090
SS-WAT1-8-1-12"	1.0	3/14/2001	0.0050
SS-WAT1-8-1-30"	2.5	3/14/2001	0.15
SS-WAT1-9-1-30"	2.5	3/14/2001	0.0050
TPG-1-10	10.0	2/13/2008	0.00032
TPG-1-16	16.0	2/13/2008	0.00091
TPG-1-19.5	19.5	2/13/2008	0.00034
TPG-1-2	2.0	2/13/2008	0.011
TPG-1-23.5	23.5	2/13/2008	0.00036
TPG-1-5	5.0	2/13/2008	0.12
TPG-2-10	10.0	2/13/2008	0.98
TPG-2-15	15.0	2/13/2008	0.074



**TABLE 10**  
**SUMMARY OF REPRESENTATIVE POST-EXCAVATION CPAH DATA FOR ON-SITE SOIL**  
**Former Watsonville-1 MGP Site**  
**Watsonville, California**

Sample ID <sup>a</sup>	Sample Depth (ft bgs)	Sample Date	Benzo(a)pyrene Equivalent <sup>b</sup> (mg/kg)
TPG-2-2	2.0	2/13/2008	0.81
TPG-2-20	20.0	2/13/2008	0.00037
TPG-2-24.5	24.5	2/13/2008	0.00034
TPG-2-5	5.0	2/13/2008	8.0
TPG-3-12	12.0	2/12/2008	2.1
TPG-3-15	15.0	2/12/2008	0.0045
TPG-3-2	2.0	2/12/2008	0.81
TPG-3-20	20.0	2/12/2008	0.013
TPG-3-24.5	24.5	2/12/2008	0.0012
TPG-3-5	5.0	2/12/2008	0.0024
TPG-4-10	10.0	2/13/2008	0.00080
TPG-4-15	15.0	2/13/2008	0.0081
TPG-4-2	2.0	2/13/2008	0.42
TPG-4-20	20.0	2/13/2008	0.27
TPG-4-24.5	24.5	2/13/2008	0.00029
TPG-4-5	5.0	2/13/2008	0.024
TPG-5-10	10.0	2/13/2008	0.0030
TPG-5-15	15.0	2/13/2008	0.0047
TPG-5-2	2.0	2/13/2008	0.0028
TPG-5-20	20.0	2/13/2008	0.00039
TPG-5-24.5	24.5	2/13/2008	0.00098
TPG-5-5	5.0	2/13/2008	0.0029

**Notes:**

mg/kg = milligrams per kilogram

ft = feet

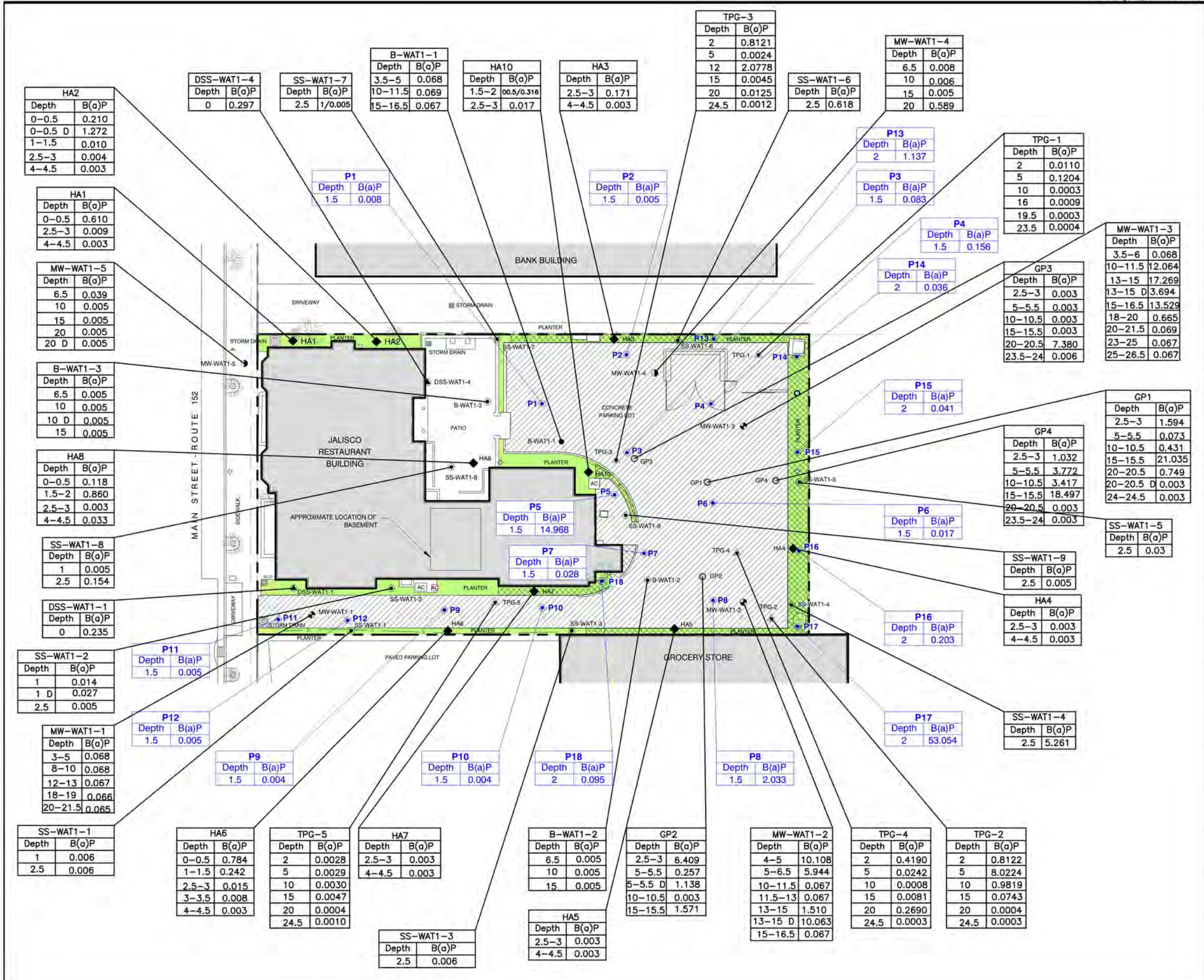
bgs = below ground surface

CPAH = Carcinogenic Polycyclic Aromatic Hydrocarbons (expressed in benzo(a)pyrene equivalents)

<sup>a</sup> Higher benzo(a)pyrene equivalent value from the primary or duplicate sample is included in the

<sup>b</sup> Values in bold and italics are based on non-detects for all seven carcinogenic polycyclic aromatic





### EXPLANATION

- P18 ● CONFIRMATION SOIL SAMPLE LOCATION
- MW-WAT1-1 ● MONITORING WELL (CH2M HILL 1991)
- DSS-WAT1-9 ▲ SURFACE SOIL SAMPLE LOCATION (CH2M HILL 1991)
- B-WAT1-1 ● SOIL BORING (CH2M HILL 1991)
- MW-WAT1-5 ● MONITORING WELL (IT CORP. 2001)
- B-WAT1-3 ● SOIL BORING (IT CORP. 2001)
- GP4 ○ SOIL BORING (ENV AMERICA 2004)
- HA10 ◆ HAND-AUGER BORING (ENV AMERICA 2004)
- TPG-5 ▲ SOIL BORING (TPG 2008)

— DEPTH IN FEET BELOW GROUND SURFACE

— BORING/WELL ID.

DSS-WAT1-1

Depth	B(a)P
0	0.235

— BENZO(a)PYRENE EQUIVALENT CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/kg)

- EXISTING FENCE
- PROPERTY LINE
- LANDSCAPED PLANTER AREA
- BUILDING
- 1.5-FOOT EXCAVATION
- 2-FOOT EXCAVATION/SOIL CAP

0 20 40 FEET  
APPROXIMATE SCALE

FIGURE 4  
**PROPERTY PLAN SHOWING POST-REMEDIATION SOIL PAH CONCENTRATIONS**  
 FORMER WATSONVILLE-1 MANUFACTURED GAS PLANT WATSONVILLE, CALIFORNIA  
**TERRA PACIFIC GROUP**  
 Environmental Engineering, Consulting, and Construction



**Table – Risk-Based Soil Gas Screening Levels**

*Draft Screening Levels for Chemicals in Soil Gas, Sub-Slab Soil Gas, and Indoor Air,*

Iris Environmental, dated September 29, 2009.



**Table 8. Risk-based Soil Gas Screening Levels**

Chemical of Potential Concern	Basement Scenario						Slab-on-grade Scenario					
	Screening Level at 10 ft bgs			Screening Level at 15 ft bgs			Screening Level at 5 ft bgs			Screening Level at 15 ft bgs		
	Cancer ( $\mu\text{g}/\text{m}^3$ )	Noncancer ( $\mu\text{g}/\text{m}^3$ )	Controlling ( $\mu\text{g}/\text{m}^3$ )	Cancer ( $\mu\text{g}/\text{m}^3$ )	Noncancer ( $\mu\text{g}/\text{m}^3$ )	Controlling ( $\mu\text{g}/\text{m}^3$ )	Cancer ( $\mu\text{g}/\text{m}^3$ )	Noncancer ( $\mu\text{g}/\text{m}^3$ )	Controlling ( $\mu\text{g}/\text{m}^3$ )	Cancer ( $\mu\text{g}/\text{m}^3$ )	Noncancer ( $\mu\text{g}/\text{m}^3$ )	Controlling ( $\mu\text{g}/\text{m}^3$ )
<i>Total Petroleum Hydrocarbons (TPH)</i>												
C5-C8 Aliphatic	NC	1.2E+06	1.2E+06	NC	2.6E+06	2.6E+06	NC	2.1E+06	2.1E+06	NC	4.8E+06	4.8E+06
C9-C18 Aliphatic	NC	5.3E+05	5.3E+05	NC	1.1E+06	1.1E+06	NC	8.8E+05	8.8E+05	NC	2.0E+06	2.0E+06
C9-C16 Aromatic	NC	8.9E+04	8.9E+04	NC	1.8E+05	1.8E+05	NC	1.5E+05	1.5E+05	NC	3.4E+05	3.4E+05
TPH-g	NC	5.2E+05	5.2E+05	NC	1.1E+06	1.1E+06	NC	8.5E+05	8.5E+05	NC	2.0E+06	2.0E+06
<i>Volatile Organic Compounds (VOCs)</i>												
Acetone	NC	5.5E+07	5.5E+07	NC	1.0E+08	1.0E+08	NC	8.0E+07	8.0E+07	NC	1.8E+08	1.8E+08
Benzene	1.7E+03	5.3E+04	1.7E+03	3.8E+03	1.2E+05	3.8E+03	3.1E+03	9.5E+04	3.1E+03	7.3E+03	2.3E+05	7.3E+03
2-Butanone (methyl ethyl ketone)	NC	8.9E+06	8.9E+06	NC	2.0E+07	2.0E+07	NC	1.7E+07	1.7E+07	NC	4.0E+07	4.0E+07
Carbon disulfide	NC	1.2E+06	1.2E+06	NC	2.5E+06	2.5E+06	NC	2.0E+06	2.0E+06	NC	4.6E+06	4.6E+06
Cumene	NC	7.1E+05	7.1E+05	NC	1.9E+06	1.9E+06	NC	1.5E+06	1.5E+06	NC	3.9E+06	3.9E+06
Dichlorodifluoromethane (Freon 12)	NC	3.6E+05	3.6E+05	NC	9.2E+05	9.2E+05	NC	7.6E+05	7.6E+05	NC	1.9E+06	1.9E+06
Ethylbenzene	2.0E+04	1.8E+06	2.0E+04	4.8E+04	4.3E+06	4.8E+04	3.9E+04	3.5E+06	3.9E+04	9.7E+04	8.7E+06	9.7E+04
4-Ethyltoluene	NC	1.8E+05	1.8E+05	NC	4.5E+05	4.5E+05	NC	3.7E+05	3.7E+05	NC	9.4E+05	9.4E+05
Methylene chloride	5.0E+04	7.1E+05	5.0E+04	1.0E+05	1.5E+06	1.0E+05	8.2E+04	1.2E+06	8.2E+04	1.9E+05	2.7E+06	1.9E+05
Naphthalene	1.5E+03	5.3E+03	1.5E+03	4.1E+03	1.5E+04	4.1E+03	3.4E+03	1.2E+04	3.4E+03	8.8E+03	3.2E+04	8.8E+03
Styrene	NC	1.6E+06	1.6E+06	NC	4.0E+06	4.0E+06	NC	3.3E+06	3.3E+06	NC	8.2E+06	8.2E+06
Toluene	NC	5.3E+05	5.3E+05	NC	1.2E+06	1.2E+06	NC	9.6E+05	9.6E+05	NC	2.3E+06	2.3E+06
Trichlorofluoromethane (Freon 11)	NC	1.2E+06	1.2E+06	NC	2.8E+06	2.8E+06	NC	2.2E+06	2.2E+06	NC	5.3E+06	5.3E+06
1,2,4-Trimethylbenzene	NC	1.2E+04	1.2E+04	NC	3.4E+04	3.4E+04	NC	2.8E+04	2.8E+04	NC	7.3E+04	7.3E+04
1,3,5-Trimethylbenzene	NC	1.1E+04	1.1E+04	NC	2.9E+04	2.9E+04	NC	2.4E+04	2.4E+04	NC	6.3E+04	6.3E+04
Xylenes	NC	1.8E+05	1.8E+05	NC	4.0E+05	4.0E+05	NC	3.2E+05	3.2E+05	NC	7.8E+05	7.8E+05

Notes:

- (1) For the basement scenario, risk-based soil gas screening levels developed for soil gas depths of 10 feet bgs (*i.e.*, just below the basement slab) and 15 feet bgs. These screening levels are appropriate for evaluating soil gas data collected at 5 and 15 feet bgs, respectively, at locations near the basement; the data collected near the basement at 5 feet bgs may be compared against the soil gas screening levels developed for 10 feet bgs. Note that this conservative approach also accounts for potential vapor intrusion through the sidewalls of the basement from soil gas present at 5 feet bgs.
- (2) For the slab-on-grade scenario, risk-based soil gas screening levels developed for soil gas depths of 5 and 15 feet bgs. These screening levels are appropriate for evaluating soil gas data collected at 5 and 15 feet bgs, respectively, at locations away from the basement.



**Table 8. Risk-based Soil Gas Screening Levels**

Chemical of Potential Concern	Basement Scenario						Slab-on-grade Scenario					
	Screening Level at 10 ft bgs			Screening Level at 15 ft bgs			Screening Level at 5 ft bgs			Screening Level at 15 ft bgs		
	Cancer ( $\mu\text{g}/\text{m}^3$ )	Noncancer ( $\mu\text{g}/\text{m}^3$ )	Controlling ( $\mu\text{g}/\text{m}^3$ )	Cancer ( $\mu\text{g}/\text{m}^3$ )	Noncancer ( $\mu\text{g}/\text{m}^3$ )	Controlling ( $\mu\text{g}/\text{m}^3$ )	Cancer ( $\mu\text{g}/\text{m}^3$ )	Noncancer ( $\mu\text{g}/\text{m}^3$ )	Controlling ( $\mu\text{g}/\text{m}^3$ )	Cancer ( $\mu\text{g}/\text{m}^3$ )	Noncancer ( $\mu\text{g}/\text{m}^3$ )	Controlling ( $\mu\text{g}/\text{m}^3$ )

Notes (continued):

(3) Each risk-based 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 appropriate J&E-modeled attenuation factor (see Table 7):

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

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

(4) Cancer-based screening levels are based on a target risk of  $1 \times 10^{-5}$ . Noncancer-based screening levels are based on a target hazard quotient of 1.0.

(5) "NC" = noncarcinogenic.

(6) The noncancer-based soil gas screening level for TPH-g is calculated as a weighted average of the noncancer-based soil gas screening levels for the TPH-g subgroups by the following equation (see text for details):

$$SL_{SG,nc,TPH-g} = \frac{1}{\sum \frac{x_i}{SL_{SG,nc,i}}}$$

where:

$SL_{SG,nc,TPH-g}$  = noncancer-based soil gas screening level for TPH-g ( $\mu\text{g}/\text{m}^3$ )

$x_i$  = mass fraction of TPH-g within subgroup  $i$  (unitless); and

$SL_{SG,nc,i}$  = noncancer-based soil gas screening level for subgroup  $i$  ( $\mu\text{g}/\text{m}^3$ )



## **APPENDIX C**

### **FIELD DOCUMENTATION**

#### **SOIL VAPOR MONITORING WELL DESTRUCTION**

*Monitoring Well Destruction Permits*

*Field Notes*

*Photo Sheets*

#### **REMEDIAL EXCAVATION & SITE RESTORATION / CAPPING**

*City of Watsonville Grading Permit, Encroachment Permit & Building Permit*

*Field Notes*

*Photo Sheets*

## APPLICATION FOR SITE-MITIGATION-PROGRAM WELL PERMIT

New    Replacement    Supplemental    Destruction    Other \_\_\_\_\_      WELL NUMBER: SV-2

018-151-39 \_\_\_\_\_  
 Well APN \_\_\_\_\_ Site Mit Case APN (if diff.) \_\_\_\_\_  
 Well Site Address 25 E. 5th Street, Watsonville, CA  
 Well Site Property Owner Phil & Martha Oneto Address (if diff.) 102 Carl Avenue, Santa Cruz, CA  
 Site Mit Case Address (if different) \_\_\_\_\_  
 Consultant Weber, Hayes & Associates Address 120 Westgate Drive, Watsonville, CA 95076  
 Drilling Contractor Environmental Control Associates, Inc. License # 695970 Phone 831.662.8178  
 Mail Correspondence To: Jered Weber, Hayes & Associates, 120 Westgate Drive, Watsonville, CA 95076

**WELL INFORMATION (Complete for All Permit Applications):**

**WELL TYPE (check all that apply)**

- Groundwater Monitoring
- Soil Gas Monitoring
- Remediation
- Groundwater Extraction
- Dual Phase Extraction
- Vapor Extraction
- Air Sparge
- Test Well
- Other \_\_\_\_\_

**WELL CONSTRUCTION METHOD**

- Hollow Stem
- Rotary
- Cable
- Sonic
- Direct Push
- Other \_\_\_\_\_

**WELL SPECIFICATIONS**

Borehole Diameter (in.) 2.25  
 Depth of Borehole (ft.) ~10.5  
 Depth of Well (ft.) ~5 & 10 (Probe Tip)  
 Cap, Lock, Vault Box:  Yes  No  
**Seal Material(s)** \_\_\_\_\_  
 Depth of Seal (ft.) 3.5 & 8.5  
 Cement Interval (ft.) 0.5-3.5 & 5.5-8.5  
 Hydrated Bentonite Int. (ft.) NA  
 Dry Granular Bentonite Int. (ft.) 3.5-4.5 & 8.5-9.5  
 Other Seal Material Int. (ft.) n/a  
**Filter Pack Material(s)** #3 Sand  
 Sand Interval (ft.) 4.5-5.5 & 9.5-10.5  
 Other Filter Pack Interval (ft.) n/a

**WELL CASING SPECIFICATIONS**

Material Teflon tubing  
 Gauge or Wall Thickness \_\_\_\_\_  
 Internal Diameter (in.) 3/16  
 Type of Joint NA  
 Perforation Interval (ft.) NA  
 Perforation Size (in.) NA

**DISTANCE FROM WELL TO (ft.):**

Septic Systems n/a  
 Sewer n/a  
 Nearest Property Line ~25 feet

**WELL SETTING (Complete for all Permit Applications):**

WITHIN WATER DISTRICT SERVICE AREA?  Yes  No      Name: City of Watsonville  
 OTHER WELLS ON PROPERTY?  Yes  No      Number: 24      Types: Domestic \_\_\_\_\_ Irrigation \_\_\_\_\_ Monitoring 24 Other \_\_\_\_\_  
 CONDITION OF OTHER WELLS ON PROPERTY: In Use 2      To Be Destroyed 2      Other \_\_\_\_\_  
**Attach 2 copies of a plot plan (see attached for requirements)**

**ADDITIONAL WELL DESTRUCTION INFORMATION:**

Proposed Destruction Method: Drill-Out      Attach original well construction log and a description of the proposed destruction method.

**WORKER'S COMPENSATION CERTIFICATE**

- A CURRENTLY EFFECTIVE CERTIFICATION OF WORKERS COMPENSATION INSURANCE FOR THE DRILLER IS ATTACHED OR ON FILE WITH EHS. INSURANCE CARRIER State Fund POLICY # 1972096-17
- SIGNED CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED SIGNED SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA

**Signees agree to the following statements:** I hereby agree to comply with all laws and regulations of the County of Santa Cruz and State of California pertaining to wells, and declare under penalty of perjury the information submitted on this application is true and correct. I will notify EHS at least 5 business days prior to commencing work. Within 60 days after completion of work, I will furnish EHS with a report of the work performed. I understand this permit expires one year from date of issuance.

Signatures: \_\_\_\_\_  
 WELL SITE PROP. OWNER [Signature] DRILLING CONTRACTOR [Signature] For: ECA 8/22/17

FOR DEPARTMENT USE ONLY:

CASH REGISTER VALIDATION

DATE	EHS SPECIALIST	SEAL PLACEMENT WITNESSED:
INITIAL SITE INSPECTION	_____	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
APPLICATION APPROVAL	<u>8/28/17</u> <u>[Signature]</u>	DATE _____
INSTALLATION INSPECTION	_____	DEPTH _____
RECEIPT OF WELL LOG	_____	SEAL MATERIAL _____
FINAL	_____	_____

08/24/2017      000000  
 #1339      9:24AM      Glenna 0002  
 PE # 2381      \$222.00  
 CHECK 1      \$222.00

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

032677  
09/22/17      2381



## APPLICATION FOR SITE-MITIGATION-PROGRAM WELL PERMIT

New    Replacement    Supplemental    Destruction    Other \_\_\_\_\_      WELL NUMBER: SV-3

018-151-39 \_\_\_\_\_  
 Well APN \_\_\_\_\_ Site Mit Case APN (if diff.) \_\_\_\_\_  
 Well Site Address 25 E. 5th Street, Watsonville, CA  
 Well Site Property Owner Phil & Martha Oneto Address (if diff.) 102 Carl Avenue, Santa Cruz, CA  
 Site Mit Case Address (if different) \_\_\_\_\_  
 Consultant Weber, Hayes & Associates Address 120 Westgate Drive, Watsonville, CA 95076  
 Drilling Contractor Environmental Control Associates, Inc. License # 695970 Phone 831.662.8178  
 Mail Correspondence To: Jered Weber, Hayes & Associates, 120 Westgate Drive, Watsonville, CA 95076

**WELL INFORMATION (Complete for All Permit Applications):**

**WELL TYPE (check all that apply)**

- Groundwater Monitoring
- Soil Gas Monitoring
- Remediation
- Groundwater Extraction
- Dual Phase Extraction
- Vapor Extraction
- Air Sparge
- Test Well
- Other \_\_\_\_\_

**WELL CONSTRUCTION METHOD**

- Hollow Stem
- Rotary
- Cable
- Sonic
- Direct Push
- Other \_\_\_\_\_

**WELL CASING SPECIFICATIONS**

Material Teflon tubing  
 Gauge or Wall Thickness \_\_\_\_\_  
 Internal Diameter (in.) 3/16  
 Type of Joint NA  
 Perforation Interval (ft.) NA  
 Perforation Size (in.) NA

**WELL SPECIFICATIONS**

Borehole Diameter (in.) 2.25  
 Depth of Borehole (ft.) ~10.5  
 Depth of Well (ft.) ~5 & 10 (Probe Tip)  
 Cap, Lock, Vault Box:  Yes  No  
**Seal Material(s)** \_\_\_\_\_  
 Depth of Seal (ft.) 3.5 & 8.5  
 Cement Interval (ft.) 0.5-3.5 & 5.5-8.5  
 Hydrated Bentonite Int. (ft.) NA  
 Dry Granular Bentonite Int. (ft.) 3.5-4.5 & 8.5-9.5  
 Other Seal Material Int. (ft.) n/a  
**Filter Pack Material(s)** #3 Sand  
 Sand Interval (ft.) 4.5-5.5 & 9.5-10.5  
 Other Filter Pack Interval (ft.) n/a

**DISTANCE FROM WELL TO (ft.):**

Septic Systems n/a  
 Sewer n/a  
 Nearest Property Line ~25 feet

**WELL SETTING (Complete for all Permit Applications):**

WITHIN WATER DISTRICT SERVICE AREA?  Yes  No      Name: City of Watsonville  
 OTHER WELLS ON PROPERTY?  Yes  No      Number: 24      Types: Domestic \_\_\_\_\_ Irrigation \_\_\_\_\_ Monitoring 24 Other \_\_\_\_\_  
 CONDITION OF OTHER WELLS ON PROPERTY: In Use 2      To Be Destroyed 2      Other \_\_\_\_\_  
**Attach 2 copies of a plot plan (see attached for requirements)**

**ADDITIONAL WELL DESTRUCTION INFORMATION:**

Proposed Destruction Method: Drill-Out      Attach original well construction log and a description of the proposed destruction method.

**WORKER'S COMPENSATION CERTIFICATE**

- A CURRENTLY EFFECTIVE CERTIFICATION OF WORKERS COMPENSATION INSURANCE FOR THE DRILLER IS ATTACHED OR ON FILE WITH EHS. INSURANCE CARRIER State Fund POLICY # 1972096-17
- SIGNEEES CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED SIGNEEES SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA

Signees agree to the following statements: I hereby agree to comply with all laws and regulations of the County of Santa Cruz and State of California pertaining to wells, and declare under penalty of perjury the information submitted on this application is true and correct. I will notify EHS at least 5 business days prior to commencing work. Within 60 days after completion of work, I will furnish EHS with a report of the work performed. I understand this permit expires one year from date of issuance.

Signatures: \_\_\_\_\_  
 WELL SITE PROP. OWNER [Signature] for: Owner 8/22/17      DRILLING CONTRACTOR [Signature] for: ECA 8/22/17

**FOR DEPARTMENT USE ONLY:**

	DATE	EHS SPECIALIST
INITIAL SITE INSPECTION		
APPLICATION APPROVAL	<u>8/28/17</u>	<u>SR</u>
INSTALLATION INSPECTION		
RECEIPT OF WELL LOG		
FINAL		

**SEAL PLACEMENT WITNESSED:**  
 YES    NO    N/A  
 DATE \_\_\_\_\_  
 DEPTH \_\_\_\_\_  
 SEAL MATERIAL \_\_\_\_\_

SM27-17A  
 (EHS Permit #)

CASH REGISTER VALIDATION

08/24/2017      00000  
 #1340      9:25AM      Glenna 000  
 FE # 2381      \$222.00  
 CHECK 1      \$222.00

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

032677  
08/22/17      2381

## APPLICATION FOR SITE-MITIGATION-PROGRAM WELL PERMIT

New    Replacement    Supplemental    Destruction    Other \_\_\_\_\_ WELL NUMBER: SV-5

018-151-39 \_\_\_\_\_  
 Well APN \_\_\_\_\_ Site Mit Case APN (if diff.) \_\_\_\_\_  
 Well Site Address 25 E. 5th Street, Watsonville, CA  
 Well Site Property Owner Phil & Martha Oneto Address (if diff.) 102 Carl Avenue, Santa Cruz, CA  
 Site Mit Case Address (if different) \_\_\_\_\_  
 Consultant Weber, Hayes & Associates Address 120 Westgate Drive, Watsonville, CA 95076  
 Drilling Contractor Environmental Control Associates, Inc. License # 695970 Phone 831.662.8178  
 Mail Correspondence To: Jered Weber, Hayes & Associates, 120 Westgate Drive, Watsonville, CA 95076

**WELL INFORMATION (Complete for All Permit Applications):**

**WELL TYPE (check all that apply)**

- Groundwater Monitoring
- Soil Gas Monitoring
- Remediation
- Groundwater Extraction
- Dual Phase Extraction
- Vapor Extraction
- Air Sparge
- Test Well
- Other \_\_\_\_\_

**WELL CONSTRUCTION METHOD**

- Hollow Stem
- Rotary
- Cable
- Sonic
- Direct Push
- Other \_\_\_\_\_

**WELL CASING SPECIFICATIONS**

Material Teflon tubing  
 Gauge or Wall Thickness \_\_\_\_\_  
 Internal Diameter (in.) 3/16  
 Type of Joint NA  
 Perforation Interval (ft.) NA  
 Perforation Size (in.) NA

**WELL SPECIFICATIONS**

Borehole Diameter (in.) 2.25  
 Depth of Borehole (ft.) -10.5  
 Depth of Well (ft.) -5 & 10 (Probe Tip)  
 Cap, Lock, Vault Box:  Yes  No  
**Seal Material(s)** \_\_\_\_\_  
 Depth of Seal (ft.) 3.5 & 8.5  
 Cement Interval (ft.) 0.5-3.5 & 5.5-8.5  
 Hydrated Bentonite Int. (ft.) NA  
 Dry Granular Bentonite Int. (ft.) 3.5-4.5 & 8.5-9.5  
 Other Seal Material Int. (ft.) n/a  
**Filter Pack Material(s)** #3 Sand  
 Sand Interval (ft.) 4.5-5.5 & 9.5-10.5  
 Other Filter Pack Interval (ft.) n/a

**DISTANCE FROM WELL TO (ft.):**

Septic Systems n/a  
 Sewer n/a  
 Nearest Property Line -25 feet

**WELL SETTING (Complete for all Permit Applications):**

WITHIN WATER DISTRICT SERVICE AREA?  Yes  No Name: City of Watsonville  
 OTHER WELLS ON PROPERTY?  Yes  No Number: 24 Types: Domestic \_\_\_\_\_ Irrigation \_\_\_\_\_ Monitoring 24 Other \_\_\_\_\_  
 CONDITION OF OTHER WELLS ON PROPERTY: In Use 2 To Be Destroyed 2 Other \_\_\_\_\_  
**Attach 2 copies of a plot plan (see attached for requirements)**

**ADDITIONAL WELL DESTRUCTION INFORMATION:**

Proposed Destruction Method: Drill-Out Attach original well construction log and a description of the proposed destruction method.

**WORKER'S COMPENSATION CERTIFICATE**

- A CURRENTLY EFFECTIVE CERTIFICATION OF WORKERS COMPENSATION INSURANCE FOR THE DRILLER IS ATTACHED OR ON FILE WITH EHS. INSURANCE CARRIER State Fund POLICY # 1972096-17
- SIGNEE'S CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS ISSUED SIGNEE'S SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S COMPENSATION LAWS OF CALIFORNIA

**Signees agree to the following statements:** I hereby agree to comply with all laws and regulations of the County of Santa Cruz and State of California pertaining to wells, and declare under penalty of perjury the information submitted on this application is true and correct. I will notify EHS at least 5 business days prior to commencing work. Within 60 days after completion of work, I will furnish EHS with a report of the work performed. I understand this permit expires one year from date of issuance.

Signatures: \_\_\_\_\_  
 WELL SITE PROP. OWNER [Signature] DRILLING CONTRACTOR [Signature]  
8/22/17 8/22/17

FOR DEPARTMENT USE ONLY:

DATE	EHS SPECIALIST	SEAL PLACEMENT WITNESSED:
<u>8/28/17</u>	<u>[Signature]</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
_____	_____	DATE _____
_____	_____	DEPTH _____
_____	_____	SEAL MATERIAL _____
_____	_____	_____

SM17-170  
 (EHS Permit #) 08/24/2017


CASH REGISTER VALIDATION  
 000000  
 #1741 9:25AM Glenn 0002  
 PE # 2381 \$222.00  
 CHECK 1 \$222.00

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


032677  
08/22/17 2381




**EXPLANATION OF SYMBOLS**


SV-1  Multi-Depth Soil Vapor Well (5 and 10 feet bgs)

**Former Watsonville-1 MGP Site Existing Sample Locations**

 Groundwater Monitoring Well (Terra Pacific Group)

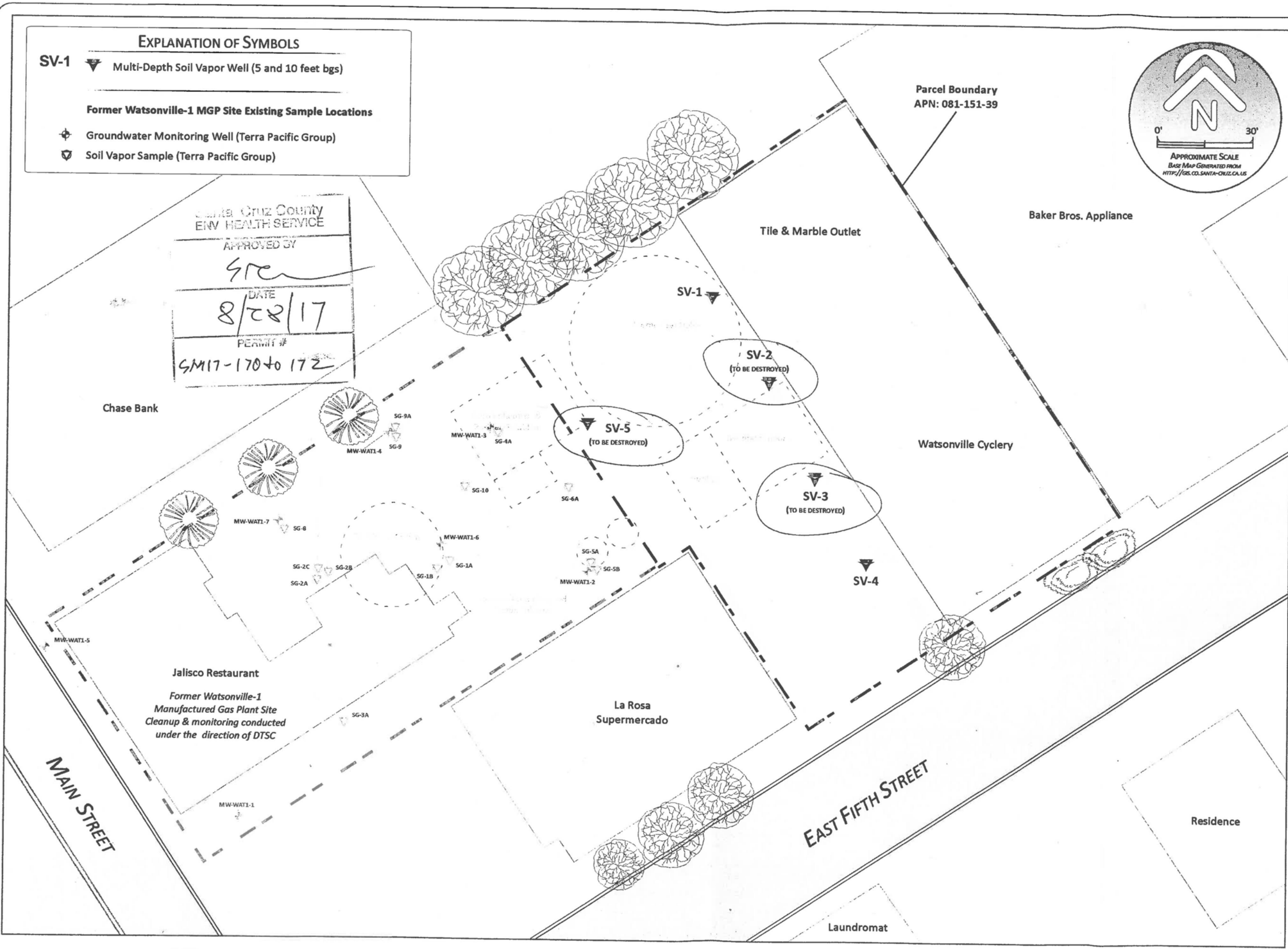
 Soil Vapor Sample (Terra Pacific Group)

SANTA CRUZ COUNTY  
ENV. HEALTH SERVICE

APPROVED BY  


DATE  
8/22/17

PERMIT #  
SM17-170 to 172



**SITE MAP WITH SOIL VAPOR WELL LOCATIONS**

**FIGURE 1**  
Project  
2X404

**SITE: COMMERCIAL-ZONED WAREHOUSE PROPERTY**  
**ADDRESS: 25 EAST FIFTH STREET, WATSONVILLE, CA**

DATE: AUG. 2017

FILE: 2X404.01(ETO-WATSONVILLE)PERMITS(SV)DESTRUCTIONS



**WEBER, HAYES & ASSOCIATES**  
Hydrogeology and Environmental Engineering  
120 Westgate Drive, Watsonville, CA  
831.722.3580 / www.weber-hayes.com



INDICATE ATTACHMENTS THAT APPLY

- Site Map
- Data Sheets
- Geologic Logs
- Photo Sheets
- COC's
- Chargeable Materials

Client: <b>Phil &amp; Martha Oneto</b>	Date: <b>September 6, 2017</b>
Site Location: <b>25 E. Fifth Street, Watsonville, CA</b>	Study #: <b>2X404.C</b>
Field Tasks: <input checked="" type="checkbox"/> Drilling <input checked="" type="checkbox"/> Sampling <input type="checkbox"/> Other (see below):	Weather Conditions: <b>Foggy + Cool (~65°F)</b>
SV Well Destructions	
Personnel / Company On-Site: <b>Jered Chaney (Weber, Hayes and Associates: WHA)</b>	

TIME:

0740	⇒ Arrive onsite. Environmental Control Associates (Driller - Jeff Edmond) onsite • Prep for: 1) Collect shallow soil samples (0.5 + 1.5') at former boring B-7 + B-11 for VOC analysis as required for land fill acceptance. 2) Drill out destruction of vapor wells SV-2, 3 + 5.
0820	⇒ Stage rig at B-11 ⇒ Core to 2' bgs + Collect soil samples
0830	⇒ Stage rig at B-7 ⇒ Core to 2' bgs + collect soil samples
0835	⇒ Stage rig at SV-5; Prep for drill out destruction. ↳ Use rig to pull up on tubing.
0840	⇒ both 5' + 10' tubing removed intact. ↳ Commerce w/ drill out to 10.5' w/ 6" diameter augers.
0930	⇒ SV-5 augered out to 11' bgs → borehole open to 11' bgs Box completely removed. - Free fall vent cement to ~ 3" bgs
0950	⇒ SV-5 sealed w/ vent cement to w/in ~ 3" of surface. Used ~ 3.5 42# bags (~ 16-17 gallons)
1000	⇒ Stage rig at SV-2 - Prep for destruction. • Use rig to pull tubing
1010	⇒ Tubing completely removed intact. - break out well box
1055	⇒ SV-2 drilled out to 10.5' → boring open to 10.5' - Scott Carson (SCHSA) - inspector onsite.
1100	⇒ Seal borehole w/ vent cement
1110	⇒ SV-2 borehole sealed to w/in ~ 2-3" of surface. ~ 13-15 gallons.
1115	⇒ Scott Carson leaves site
1130	⇒ Stage rig @ SV-3; Prep for drill out destruction.

*Jered Chaney* 9/6/17  
 Signature of Field Personnel & Date