Weiss Associates

APPENDIX D

STATUS REPORT OF THE ENHANCED ***IN-SITU***
BIOREMEDIATION PILOT TEST

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IMPLEMENTATION AND PERFORMANCE MONITORING REPORT FOR ENHANCED *IN-SITU* BIOREMEDIATION PILOT TEST

for

Former Intel Mountain View Facility
365 East Middlefield Road
Mountain View, CA 94043

Prepared for

Intel Corporation
2200 Mission College Boulevard
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April 15, 2009

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Weiss Project No. 008-0228-29

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Sr. Staff Engineer

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1. INTRODUCTION

Weiss Associates (Weiss) has prepared this status report on behalf of Intel Corporation (Intel) and Raytheon Company (Raytheon) summarizing the implementation and performance monitoring activities of Phase I and Phase II of the Enhanced *In-Situ* Bioremediation Pilot Test at Lot 4 (hereafter referred to as the Site) located between 365 and 401 East Middlefield Road in Mountain View, California (Figure 1). The objective of the pilot test is to accelerate cleanup of volatile organic compounds (VOCs) in ground water at Lot 4. The former Intel Mountain View facility at 365 East Middlefield Road, where the company was founded in 1968, is also known as Lot 3, and the former Raytheon facility was located on Lots 4 and 5 (401 and 415 East Middlefield Road). Lots 3, 4, and 5 are part of the Middlefield-Ellis-Whisman (MEW) Superfund site.

This report documents the application and performance monitoring activities of Phase I and II of the *In-Situ* Bioremediation Pilot Test for voluntary accelerated cleanup of trichloroethene (TCE) "hot spots" in ground water at the Site. Further details are supplied in the *Workplan for Enhanced In-Situ Bioremediation Pilot Test* (Weiss, 2005a), the *Addendum to Workplan for Enhanced In-Situ Bioremediation Pilot Test* (Weiss, 2006c), *Fourth Quarterly Status Report* (Weiss, 2006d), the *2006 Annual Progress Report* (Weiss, 2007), the *2007 Annual Progress Report* (Weiss, 2008a), the *Optimization Evaluation Report* (Weiss, 2008b), and the *Addendum to Workplan for Enhanced In-Situ Bioremediation Pilot Test* (Weiss, 2008c).

1.1 Background

Intel manufactured semiconductors in a leased building at 365 East Middlefield Road from 1968 until 1981. The former Intel facility (Figure 2) is one of approximately ten former manufacturing or industrial facilities that comprise the MEW study area. These facilities, while in operation, required the storage, handling, and use of a variety of chemicals, particularly solvents and other chemicals used in manufacturing processes, some of which were required at the time to be piped and stored underground. In 1981, Intel learned of chemical contamination of soil and ground water adjacent to an underground concrete storage vault that contained solvent waste storage tanks. Upon learning of the contamination, Intel notified the San Francisco Bay Regional Water Quality Control Board and conducted sampling to characterize the problem at the Site[1]. Potential sources at or near the Site that may have contributed to the soil and ground water contamination include onsite manufacturing activities (Union Carbide from 1965-1968; Intel from 1968-1981; Raytheon from 1968-1983); the acid waste neutralization system on Lot 3; the chemical storage yard and acid neutralization vault on Lot 4 (used by Union Carbide from 1965-1968, Raytheon and Intel from 1968-1973, and Raytheon from 1973-1983); the cross-gradient Tracor facility at 345 East Middlefield Road; the upgradient City of Mountain View's Municipal Operation Center at 231 North Whisman Road; and the upgradient GTE site at 100 Ferguson Drive.

[1] After discovery of the release, Intel immediately evaluated all of its worldwide facilities with underground tanks and determined that the design and construction standards for chemical handling and storage, though state of the art for that time and in compliance with environmental regulations, were not adequate in all instances to prevent releases to the environment. Intel immediately took action to upgrade all of its facilities and has been active in improving industry and regulatory standards (e.g., Intel led the industry effort to establish the technical criteria for the Santa Clara County Model Underground Tank Ordinance of 1982). Intel also worked with the State of California to add appropriate safeguards in its legislation. In 1984, California's Health and Safety Code (§25280) was amended to include Chapter 6.7, entitled "*Underground Storage of Hazardous Substances*".

In addition to the removal of approximately 4,600 cubic yards of soil, Intel began extracting and treating ground water from Lots 3 and 4 in 1982 as a remediation and containment measure. The existing pump and treat system has been successful at containing and reducing the VOC plume on Lot 3. However, the VOC mass on Lot 4 was not being optimally remediated, rather, VOCs from Lot 4 were slowly being pulled onto Lot 3. Due to the Site's hydrogeology and the chemical properties of the contaminants, the VOC concentrations on Lot 4 would require long-term operation of the pump and treat system to reach cleanup standards.

A feasibility study, conducted to determine whether an alternative remedial technology would provide a cost-effective option to pump and treat and hasten progress toward cleanup standards, concluded that *in-situ* bioremediation may be the most appropriate remedial option for reducing VOC concentrations in ground water at the Site. The recommended remedial technology calls for *in-situ* bioremediation using edible emulsified oil to promote and accelerate the reductive dechlorination process. Very favorable conditions for reductive dechlorination already existed at the Site prior to initiating the Enhanced *In-Situ* Bioremediation Pilot Test. The pilot test is being conducted in three phases to systematically assess some of the site-specific applicability concerns such as plume mobility and containment, bioaugmentation, delivery methodology, geochemical limitations, and concentration rebound. Phase I was implemented in August and September 2005, and Phase II was implemented in July 2006.

Additional information regarding former Site use, source investigations, ground water extraction and VOC mass removal, historic VOC concentration trends, the feasibility study, and the remedial action objectives of the pilot test are provided in the *Workplan for Enhanced In-Situ Bioremediation Pilot Test* (Weiss, 2005a) and the *2004 Annual Progress Report* (Weiss, 2005b).

2. PHASE I OF THE ENHANCED *IN-SITU* BIOREMEDIATION PILOT TEST

Implementation of the first phase of the Enhanced *In-Situ* Bioremediation Pilot Test included planning and permitting, installation of temporary monitoring wells, substrate injection, and ground water monitoring. Details of the substrate injections, baseline results, and first quarterly performance monitoring results are supplied in the *First Quarterly Status Report* (Weiss, 2006a). The second, third, and fourth quarterly performance monitoring results are presented in the *Second Quarterly Status Report, Third Quarterly Status Report,* and *Fourth Quarterly Status Report*, respectively (Weiss, 2006b, 2006c, 2006d).

2.1 Substrate Application

The selected emulsified oil amendment (50% soybean oil by volume) was shipped to the Site in four 258-gallon totes. The concentrated oil-in-water emulsion was diluted to approximately 2% oil by volume with ground water extracted from the Site. Extracted ground water was accumulated in one 21,000-gallon trailer and one 6,900-gallon polyethylene tank temporarily stored adjacent to the treatment system. After filling the storage tanks, the treatment system was shut down on August 28, 2005.

On August 29 and 30, 2005, Precision Sampling of Richmond, California (Precision), installed nine injection points by direct-push technology (Figure 3). The two lines of injection points were installed 10-ft on center in a staggered row perpendicular to ground water flow. Drive rods (1.5-inch diameter black iron pipe) were pushed to a total depth of 35 feet below ground surface (ft bgs) at all nine locations and screened piping (1-inch PVC with 0.020-inch slot size) was inserted into the drive rods to the depth of 35 ft bgs. The drive rods were retracted to 20 ft bgs, which allowed the emulsion to be distributed throughout a 15-ft screened interval.

Two treatment system transfer pumps were used to deliver extracted ground water from the storage tanks to the Newman Zone injection manifold. The injection manifold is a proportional feed system that allows continuous injection of oil emulsion into multiple injection points. Flow meters and pressure gauges precisely controlled injection volumes and pressures. Approximately 2,800 gallons of 2% emulsified oil solution was injected at each of the nine injection points, totaling approximately 25,000 gallons of emulsified oil injected during Phase I. Injection rates were approximately 3 gallons per minute (gpm) per point.

2.2 Ground Water Monitoring

Weiss collected baseline ground water samples on August 17, 18, and 26, 2005, before injecting the emulsified oil solution on August 30, 31, and September 1, 2005. The first quarterly performance monitoring samples were collected on September 29 and 30, October 25 and 26, and November 29 and 30, 2005. The second and third quarterly performance monitoring samples were collected on February 8, and May 10 and 11, 2006, respectively. The fourth quarterly performance monitoring samples were collected on August 30 and 31, 2006, and annual samples were collected on July 25, 2007, and May 20 and 21, 2008 (Figure 4). Additionally, samples were collected from guard wells E-14A, TW-2A, TW-3A, and TW-4A, boundary wells E-9A, IIW-1A, IOW-4A,

IOW-4B1, PW-3A, and PW-4B1, and upgradient wells M-8A and TW-1A during the annual site-wide November 2007 and December 2008 monitoring events (Figure 3). The low-flow/micropurge sampling method, following United States Environmental Protection Agency (USEPA) guidance[2], was used to collect all ground water samples. Field duplicate samples and equipment blanks were collected and analyzed for field quality assurance/quality control (QA/QC). Ground water elevations measurements were also collected quarterly through 2008. Results are presented in Table 1.

Samples were decanted into the appropriate containers as supplied by the analytical labs (Test America San Francisco [TA] located in Pleasanton, California, Microseeps located in Pittsburgh, Pennsylvania, and Curtis and Tompkins [C&T] located in Berkeley, California), stored on ice, and transported under chain-of-custody documentation. All ground water samples and equipment blanks were analyzed for VOCs by USEPA Method 8260B. Ground water samples from guard and/or boundary wells were analyzed for alkalinity by USEPA Method 310.1, ferrous iron, total iron, dissolved and total manganese by USEPA Method 6010B, nitrate, nitrite, and chloride by USEPA Method 300.0, sulfate by USEPA Method 375.4, sulfide by USEPA Method 376.1, methane, ethene, and ethane by Method AM20GAX, and total organic carbon (TOC) by USEPA Method 415.1. Temperature, pH, dissolved oxygen (DO), oxidation reduction potential (ORP) and specific conductance of water samples were measured in the field. Historic and current results of VOC analyses are summarized in Table 2, and bioremediation parameters are summarized in Table 3.

2.2.1 Baseline Monitoring Results

2.2.1.1 Guard Wells

In August 2005, total VOC concentrations in guard wells E-14A, TW-2A, TW-3A, and TW-4A ranged from 49 micro grams per liter (µg/L) to 1,810 µg/L (Table 2, Figure 5). The highest VOC concentration was detected in well E-14A. The only VOCs detected in well E-14A were trichloroethene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE) at concentrations of 1,300 µg/L and 510 µg/L, respectively.

In addition to VOCs, guard wells were also analyzed for geochemical parameters, including dissolved gases (Table 3). Nitrate concentrations in wells TW-2A, TW-3A, and TW-4A ranged from 30 milligrams per liter (mg/L) to 46 mg/L. Ground water from well E-14A was depleted of nitrate. Concentrations of sulfate ranged from 110 mg/L to 220 mg/L. Chloride concentrations were in the range of 35 mg/L to 45 mg/L and dissolved iron and dissolved manganese concentrations ranged from 0.11 mg/L to 0.71 mg/L. TOC was not detected above the 1.0 mg/L detection limit in wells TW-2A, TW-3A, and TW-4A. Only well E-14A contained TOC at 1.4 mg/L. Dissolved gases results indicated ethene concentrations in the range of 0.11 µg/L to 0.78 µg/L, and methane concentrations in the range of 1.1 µg/L to 1.9 µg/L. Positive ORP was measured in all four guard wells, and DO concentrations ranged from 0.63 mg/L to 2.66 mg/L.

[2] USEPA, 1996, Low-Flow (Minimal Drawdown) Ground Water Sampling Procedures, Office of Solid Waste and Emergency Response, EPA/540/S-94/504, April 1996.

2.2.1.2 Boundary Wells

Analytic results for A-zone boundary wells E-9A, IIW-1A, IOW-4A, and PW-3A ranged from 68 µg/L to 189 µg/L total VOCs (Table 2, Figure 5). TCE concentrations were in the range of 34 µg/L to 170 µg/L. Cis-1,2-DCE concentrations in these wells ranged from 4.2 µg/L to 27 µg/L. IOW-4A was the only A-zone boundary well where vinyl chloride was detected (5.5 µg/L).

Total VOC concentrations in B-zone boundary wells IOW-4B1 and PW-4B1 were 3.6 µg/L and 47 µg/L, respectively. TCE was not detected in IOW-4B1 above the 0.5 µg/L detection limit and cis-1,2-DCE and vinyl chloride were detected at 2.5 µg/L and 1.1 µg/L, respectively. TCE, cis-1,2-DCE, and vinyl chloride were detected in well PW-4B1 at 19 µg/L, 25 µg/L, and 3.1 µg/L, respectively.

2.2.1.3 Upgradient Wells

Baseline monitoring of upgradient well M-8A indicated a total VOC concentration of 31 µg/L (Table 2, Figure 5). TCE was detected at 29 µg/L and cis-1,2-DCE was detected at 1.0 µg/L. These results are consistent with historical data. The total VOC concentration in newly installed upgradient monitoring well TW-1A was 67 µg/L. TCE and cis-1,2-DCE were detected at 59 µg/L and 6.3 µg/L, respectively.

2.2.2 Performance Monitoring Results

2.2.2.1 Guard Wells

TCE concentrations in guard well E-14A before and two months after the emulsified oil injection ranged from 1,300 µg/L to 1,400 µg/L, and cis-1,2-DCE concentrations ranged from 510 µg/L to 960 µg/L (Table 2, Figure 5). After 90 days, TCE concentrations in well E-14A had decreased to 620 µg/L, while cis-1,2-DCE concentrations concomitantly increased to 1,400 µg/L. After this, concentrations of cis-1,2-DCE in well E-14A remained approximately the same and then increased slightly to 1,900 µg/L in November 2007. By December 2008, TCE and cis-1,2-DCE had decreased to 510 µg/L and 920 µg/L, respectively, in this well. December 2008 was also the first time since the emulsified oil injection that vinyl chloride concentrations were detected slightly above the laboratory reporting limit in well E-14A. During the approximately three-year performance monitoring period, ethene has only been detected in well E-14A at concentrations less than 1.0 µg/L (Table 3).

Following the oil injection, rapid degradation of TCE in guard well TW-2A was observed within the first two months along with production of daughter product cis-1,2-DCE (Table 2, Figure 5). The TCE concentration decreased from the baseline level of 23 µg/L to 0.9 µg/L after 54 days (October 2005) and was 0.5 µg/L after 251 days (May 2006). Cis-1,2-DCE concentrations initially increased from 17 µg/L to 92 µg/L after 160 days (February 2006), before decreasing to 4.2 µg/L (July 2007). In November 2007, the TCE and cis-1,2-DCE concentrations were 4.5 µg/L and 36 µg/L, respectively. In 2008, TCE and cis-1,2-DCE were detected at 6.7 µg/L and 36 µg/L, respectively, in May, and at 6.9 µg/L and 27 µg/L, respectively, in December. Vinyl chloride concentrations increased from a baseline level of 8.7 µg/L to 42 µg/L by May 2008, and slightly decreased to 30 µg/L by December 2008. Ethene concentrations of 5.3 µg/L and 1.4 µg/L were detected in July 2007 and May 2008, respectively (Table 3).

The concentration of TCE in guard well TW-3A decreased from the baseline level of 200 µg/L to 22 µg/L 55 days after injection (Table 2, Figure 5). TCE further decreased to 5.4 µg/L by day 363 (August 2006) and 2.6 µg/L by day 817 (November 2007). The concentration of cis-1,2-DCE concomitantly increased from 57 µg/L to 320 µg/L, but then declined to 70 µg/L on day 817 (November 2007). In May 2008, 992 days after injection, TCE and cis-1,2-DCE concentrations had increased to 18 µg/L and 120 µg/L, respectively; however, concentrations decreased by December 2008 to 0.8 µg/L of TCE and 13 µg/L of cis-1,2-DCE. Vinyl chloride concentrations increased after 252 days (May 2006) and peaked at 93 µg/L in May 2008. Observed ethene production however, was limited for well TW-3A (Table 3).

TCE concentrations before and 40 months after the emulsified oil injection remained relatively constant in guard well TW-4A (Table 2, Figure 5). TCE concentrations as low as 77 µg/L and 12 µg/L were detected in September 2006 and April 2007, respectively, however, for most of the duration of the pilot test, TCE levels ranged from 220 µg/L to 570 µg/L. Cis-1,2-DCE concentrations showed a modest increase over the 817-day test period. After 817 days, cis-1,2-DCE had increased from the baseline level of 230 µg/L to 350 µg/L, further increased to 430 µg/L after 992 days and peaked at 590 µg/L after 1195 days (December 2008). Vinyl chloride increased from below the 5.0 µg/L analytical reporting limit to 29 µg/L after 600 days (April 2007), further increased to 100 µg/L after 692 days (July 2007), and reached 180 µg/L on day 817 (November 2007). During 2008, vinyl chloride slightly decreased to 87 µg/L (May 2008) and 97 µg/L (December 2008). Ethene concentrations were low for well TW-4A (Table 3).

In addition to VOCs, guard wells were also analyzed for geochemical parameters (Table 3). Geochemical parameters including dissolved iron, nitrate, methane, sulfate, and sulfide demonstrated the creation of reducing conditions in wells TW-2A and TW-3A. Nitrate concentrations were rapidly depleted and dissolved iron concentrations increased in both wells one month after injections, indicating the occurrence of electron donor degradation and the establishment of reducing conditions. Sulfate concentrations decreased significantly in both wells and the production of sulfide indicates the presence of sulfate reducing bacteria. Methane concentrations as high as 16,000 µg/L in well TW-2A and 15,000 µg/L in well TW-3A are indicative of methanogenesis. A negative ORP and low DO concentrations were also observed. Sulfate concentrations in well TW-2A decreased from a baseline level of 110 mg/L to below the laboratory reporting limit in February 2006, but increased to 69 mg/L by July 2007 and to 110 mg/L by May 2008. A similar trend was observed in well TW-3A, were sulfate concentrations decreased from a baseline level of 140 mg/L to 34 mg/L by February 2006. Since then sulfate levels have consistently increased and were detected at 130 mg/L in May 2008. Sulfate concentration in well TW-4A initially decreased from the baseline level of 130 mg/L to 30 mg/L by May 2006, but increased to 81 mg/L by November 2007 and 110 mg/L by May 2008. As of May 2008, nitrate concentrations are still depleted in wells TW-2A, TW-3A, and TW-4. No increases in sulfide concentrations and dissolved iron concentrations were observed in well TW-4A, however, methane concentrations increased to 9,600 µg/L by August 2006. The increase in methanogenesis coincided with the onset of vinyl chloride formation in this well, although only low electron donor concentrations were detected. Geochemical parameters in guard well E-14A indicate that the electron donor injection failed to create reducing conditions surrounding this well. No significant increases in dissolved iron and methane concentrations were observed. The lack of sulfate reduction in well E-14A may be due to the low concentrations of electron donor detected in this well. The highest TOC concentration in well E-14A of 2.6 mg/L was detected one month after the emulsified oil injection. TOC concentrations in well TW-2A were observed at 82 mg/L on day 29, before decreasing to 1.2 mg/L on day 692 (July 2007). Over the same time period, TOC concentrations in well TW-3A declined from 13 mg/L to 1.3 mg/L. Very low TOC

concentrations were also detected in May 2008 in wells E-14A, TW-2A, TW-3A, and TW-4A, indicating that the electron donor is likely depleted.

2.2.2.2 Boundary Wells

Total VOC, TCE and cis-1,2-DCE concentrations in A-zone boundary wells E-9A and IIW-1A before and 12 months after the emulsified oil injection remained relatively constant (Table 2). However, rapid degradation of TCE with concomitant increases in cis-1,2-DCE, vinyl chloride and ethene was observed after the initiation of Phase II of the pilot test, which included injection of emulsified oil and bioaugmention with *dehalococcoides* culture KB-1. Further monitoring results of these wells and well IOW-4A are provided below in Section 3.3.2 *Performance Monitoring Results*, where IIW-1A and IOW-4A are depicted as guard wells and E-9A as a boundary well for Phase II (Figure 4).

Total VOC concentrations in boundary well PW-3A also remained relatively constant during the duration of the Phase I pilot test (Table 2, Figure 5). TCE concentrations ranged between 120 µg/L and 210 µg/L and cis-1,2-DCE concentrations ranged between 18 µg/L and 39 µg/L. Vinyl chloride was not detected above the laboratory reporting limits. However, after the implementation of Phase II, TCE concentrations rapidly decreased from 140 µg/L in May 2006 to 2.5 µg/L in August 2006. Over the same time period, cis-1,2-DCE concentrations increased to 550 µg/L and vinyl chloride concentrations increased to 19 µg/L. In November 2007, TCE concentrations were 2.6 µg/L, cis-1,2-DCE declined to 7.0 µg/L, and vinyl chloride was detected at 19 µg/L. By December 2008, TCE concentrations further decreased to below the 0.5 µg/L laboratory reporting limit, cis-1,2-DCE declined to 5.5 µg/L, and vinyl chloride increased to 99 µg/L. Ethene was detected at concentrations of 45 µg/L in July 2007, and 16 µg/L in May 2008 (Table 3).

Total VOC concentrations before and after the amendment injection were approximately the same in B-zone boundary wells IOW-4B1 and PW-4B1. TCE concentrations in well IOW-4B1 were at or below the reporting limit, while cis-1,2-DCE and vinyl chloride first increased slightly but subsequently decreased. As of December 2008, TCE and cis-1,2-DCE were detected at 1.0 µg/L and 2.5 µg/L, respectively, and vinyl chloride was below the reporting limit of 0.5 µg/L. No significant changes in contaminant concentrations were observed for well PW-4B1 (Table 2, Figure 6).

2.2.2.3 Upgradient Wells

Performance monitoring of upgradient well M-8A indicated a slight increase in total VOC concentrations, due to an increase in TCE concentrations from 29 µg/L to 40 µg/L between baseline sampling and the December 2008 annual monitoring event. TCE concentrations in well M-8A peaked at 62 µg/L in January 2007 (Table 2, Figure 7). TCE concentrations in upgradient well TW-1A increased from baseline levels of 59 µg/L to 83 µg/L in July 2007, with a maximum of 93 µg/L in May 2006. In December 2008, however, TCE was detected in well TW-1 at 1.7 µg/L in the original sample and at 1.9 µg/L in the field duplicate. For most of the duration of the pilot test, cis-1,2-DCE concentrations in well TW-1A remained relatively constant, ranging from 5.0 µg/L to 8.3 µg/L. In December 2008, cis-1,2-DCE was not detected above the 0.5 µg/L laboratory reporting limits in both the sample and field duplicate (Table 2).

3. PHASE II OF THE ENHANCED *IN-SITU* BIOREMEDIATION PILOT TEST

Implementation of the second phase of the Enhanced *In-Situ* Bioremediation Pilot Test included substrate injection, bioaugmentation and baseline ground water monitoring. No permits were required for the injection of the emulsified soy bean oil and *dehalococcoides ethenogenes* culture KB-1™[3].

3.1 Substrate Application

On July 17 and 18, 2006, Enprob of Oroville, California, installed 40 injection points by direct-push technology (Figure 8). Four double rows of injection points with a point-to-point spacing of ten feet were installed in staggered rows perpendicular to ground water flow to treat an area of approximately 11,400 square feet (ft^2). Drive rods (2.5-inch diameter iron pipe) were pushed to a total depth of 35 ft bgs at all 40 locations. The drive rods were retracted and ¾-inch PVC piping was inserted to a depth of 35 ft bgs. The ¾-inch PVC pipes were screened between 35 ft bgs and 20 ft bgs with 0.020-inch slot screen. Silica sand was poured into the annular space until the filter pack extended 1-2 ft above the screened interval at 20 ft bgs. The remaining annular space was filled with hydrated bentonite to create a seal on the surface. This allowed for the distribution of the oil emulsion throughout the 15-ft screened interval.

3.1.1 Emulsified Oil Injection

The total volume of 3,700 gallons of emulsified oil amendment (50% soybean oil by volume) was shipped to the Site in fourteen 264-gallon totes. The concentrated oil-in-water emulsion was diluted to approximately 2% oil by volume with ground water extracted from the Site. The Site ground water was extracted from onsite wells R-50A, IOW-4A, IOW-4B1, and PW-5B1. The combined ground water extraction flow rate was approximately 25 gpm and the total volume of extracted ground water was approximately 91,000 gallons. The extracted ground water was accumulated in two 21,000-gallon tanks temporarily stored onsite. To minimize the storage capacity needed for the total injection volume, ground water extraction and emulsified oil injection occurred simultaneously. A diesel pump capable of delivering 100 gpm was used to deliver extracted ground water from the storage tanks to two Newman Zone injection manifolds. The injection manifolds are proportional feed systems that allow continuous injection of oil emulsion into multiple injection points. Flow meters and pressure gauges control injection volumes and pressures.

On July 19, 2006, approximately 1,100 gallons of 2% emulsion were injected at each point of the two northernmost injection rows to create appropriate redox conditions for later bioaugmention (Figure 8). On July 20 and 21, approximately 2,300 gallons of 2% oil emulsion were injected into each point in rows 3 and 4, totaling 46,000 gallons. On July 26, after the bioaugmentation with KB-1™ described below, the remaining 22,000 gallons of emulsion were injected into rows 1 and 2. Overall injection rates were approximately 4 gpm per point.

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[3] Per a July 6, 2006 telephone conversation between Anja Verce, Weiss Associates, and George Cook, Santa Clara Valley Water District, no permits are required for the injection of emulsified oil and bioaugmentation. A permit is only required if direct push borings are deeper than 45 ft bgs.

3.2 Bioaugmentation with KB-1™

Prior to the bioaugmentation, two 200-gallon tanks were filled onsite with ground water extracted from well R-50A to prepare anaerobic chase water. Since previous monitoring results indicated that reductive dechlorination is occurring in the area surrounding well R-50A (low ORP, and high concentrations of cis-1,2-DCE, vinyl chloride and ethene), only ground water from R-50A was used to prepare the anaerobic chase water. Based on stoichiometry, approximately 500 mL of 60% commercially available lactate solution was added to each tank to create anaerobic conditions. After an incubation of 11 days, the ORP of water in both tanks was sufficiently reduced, with -110 mV and -211 mV, respectively.

Commercially available dechlorinating bacteria, known as KB-1™ and distributed by SIREM of Guelph, Canada, were injected into rows 1 and 2 on July 25 (Figure 8). KB-1™ is a natural, non-pathogenic microbial culture which contains various species of *dehalococcoides*, the only group of microorganisms documented to promote the complete dechlorination of chlorinated ethenes to non-toxic ethene. Delivering and injection of KB-1™ is accomplished using a specialized stainless steel vessel designed to maintain anaerobic conditions under a nitrogen and carbon dioxide atmosphere. Field parameters DO and ORP were monitored prior to injecting the culture. Establishing appropriate redox conditions is essential for effective bioaugmentation and once anaerobic and reducing conditions were present (ORP less than -75 mV; DO less than 0.2 mg/L), the treatment area was inoculated with the KB-1™ culture by a SIREM field technician (Marc Leisenring, Geosyntec Consultant, Portland, Oregon). If field measurements indicated that reducing conditions were not observed, approximately ten gallons of previously prepared anaerobic chase water were injected at these locations prior to KB-1™ injection. In addition, the water column and air above the water column at each injection point were purged with argon to reduce the amount of oxygen prior to adding the KB-1™ culture. The culture was injected using argon-flushed delivery tubing, which was submerged in the injection well. KB-1™ was pushed through the tubing and into each injection point by pressurizing the stainless steel vessel with argon delivered from a gas cylinder connected to the KB-1™ vessel. Approximately 1.1 Liter of the KB-1™ culture was injected into each point at rows 1 and 2. Following the inoculation with KB-1™, anaerobic chase water was added to each injection point and the remaining volume of emulsion was injected into both rows.

3.3 Ground Water Monitoring

Baseline ground water samples were collected on July 17, 2006, before injecting the emulsified oil solution between July 19 and 26, 2006. Performance monitoring samples were collected monthly during the first quarter after injection, on August 30 and 31, September 25, and October 25, 2006. The second, third, and fourth quarterly performance monitoring samples were collected on January 24, April 24, and July 25, 2007 (Figure 4). Samples were collected from guard wells IOW-4A, R-50A, and IIW-1A, boundary wells E-9A, M-6A, W-1A, IOW-4B1, and PW-4B1, and upgradient wells M-8A and TW-4A. As part of the annual site-wide sampling event, samples were also collected on November 27 and 28, 2006, November 26 and 27, 2007, and December 9 and 10, 2008. On October 25, 2006, ground water was also collected from guard wells IIW-1A and R-50A for a quantitative Gene-Trac *Dehalococcoides* assay. The low-flow/micropurge sampling method, following USEPA guidance (USEPA, 1996), was used to collect all ground water samples. Field duplicate samples were collected and analyzed for field quality assurance/quality control (QA/QC). Ground water elevations were also measured during these sampling events (Table 1).

Samples were decanted into the appropriate containers as supplied by the analytical labs (Microseeps located in Pittsburgh, Pennsylvania, Curtis and Tompkins [C&T] located in Berkeley, California, and Sirem located in Guelph, Canada), stored on ice, and transported under chain-of-custody documentation. All ground water samples were analyzed for VOCs by USEPA Method 8260B. Ground water samples from guard and/or boundary wells were analyzed for alkalinity by USEPA Method 310.1, ferrous iron by Method SM3500Fe-D, nitrate and chloride by USEPA Method 300.0, sulfate by USEPA Method 375.4, sulfide by USEPA Method 376.1, methane, ethene, and ethane by Method AM20GAX, and total organic carbon (TOC) by USEPA Method 415.1. Temperature, pH, DO, ORP and specific conductance of water samples were measured in the field.

3.3.1 Baseline Monitoring Results

3.3.1.1 Guard Wells

In July 2006 total VOC concentrations in guard wells IOW-4A, R-50A, and IIW-1A ranged from 166 µg/L to 14,146 µg/L. The highest VOC concentration was detected in well R-50A. VOCs detected in well R-50A were TCE, cis-1,2-DCE, and vinyl chloride at concentrations of 20 µg/L, 2,400 µg/L, and 1,600 µg/L, respectively. Additionally, toluene, ethylbenzene, and xylene were detected at 26 µg/L, 2,500 µg/L, and 7,600 µg/L, respectively (Table 2, Figure 7).

In addition to VOCs, guard wells were also analyzed for bioremediation parameters, including dissolved gases (Table 3). Nitrate concentrations in wells IOW-4A and R-50A were depleted and only well IIW-1A contained nitrate at 11 mg/L. Concentrations of sulfate ranged from 17 mg/L to 130 mg/L, and sulfide was not detected above the 0.04 mg/L detection limit in all three guard wells. Chloride concentrations were in the range of 41 mg/L to 57 mg/L and ferrous iron was only detected in wells IOW-4A at 0.15 mg/L and in well R-50A at 0.63 mg/L. TOC was detected in wells IOW-4A and R-50A at 1.2 mg/L and 5.3 mg/L, respectively. Dissolved gases results indicated ethene concentrations in the range of 0.34 µg/L to 2,200 µg/L, with the highest ethene concentration detected in guard well R-50A. The significant ethene concentration in well R-50A indicates the presence of a very active *dehalococcoides ethenogenes* population in this portion of the Site. Methane concentrations ranged from 0.27 µg/L to 1,000 µg/L.

3.3.1.2 Boundary Wells

Baseline analytic results for A-zone boundary wells E-9A, M-6A, and W-1A ranged from 4 µg/L to 203 µg/L total VOCs in July 2006. TCE concentrations were in the range of 1 µg/L to 180 µg/L. Cis-1,2-DCE concentrations in these wells ranged from below the detection limit of 0.5 µg/L to 17 µg/L. E-9A was the only A-zone boundary well where vinyl chloride was detected (2.0 µg/L). Results of dissolved gas analyses indicated ethene concentrations in the range of 0.32 µg/L to 1.8 µg/L and methane concentrations in the range of 0.35 µg/L to 770 µg/L (Table 3, Figure 6).

Total VOC concentrations in B-zone boundary wells IOW-4B1 and PW-4B1 were 1.0 µg/L and 20 µg/L, respectively. Cis-1,2-DCE was detected in IOW-4B1 at 1.1 µg/L and TCE was not detected above the 0.5 µg/L detection limit. TCE and cis-1,2-DCE were detected in well PW-4B1 at 12 µg/L and 8 µg/L, respectively. No vinyl chloride was detected above the 0.5 µg/L detection limit in both boundary wells.

3.3.1.3 Upgradient Wells

July 2006 baseline monitoring of upgradient well M-8A indicated a total VOC concentration of 48 µg/L. TCE was detected at 45 µg/L and cis-1,2-DCE was detected at 1.5 µg/L. These results are consistent with historical data. The total VOC concentration in upgradient monitoring well TW-4A was 771 µg/L. TCE, cis-1,2-DCE, and vinyl chloride were detected at 460 µg/L, 270 µg/L, and 23 µg/L, respectively (Table 3, Figure 7).

3.3.2 Performance Monitoring Results

3.3.2.1 Guard Wells

Total VOC concentrations before and one month after the emulsified oil injection were approximately the same in guard well IOW-4A. Rapid degradation of TCE was observed within the first month along with the production of daughter products cis-1,2-DCE and vinyl chloride (Table 3, Figure 7). The TCE concentration in IOW-4A decreased from 17 µg/L to below the detection limit of 1.7 µg/L in 44 days (August 2006), while cis-1,2-DCE concentrations increased from 140 µg/L to 200 µg/L. Vinyl chloride increased from 17 µg/L to 29 µg/L over the same time period. By January 2007 (191 days after injection), the TCE concentration remained below the detection limit, the cis-1,2-DCE concentration had decreased to 43 µg/L and the vinyl chloride concentration had increased to 130 µg/L. Cis-1,2-DCE concentrations further decreased to 9.9 µg/L by November 2007 (497 days after injection), while vinyl chloride concentration increased to 170 µg/L. Vinyl chloride further increased to 210 µg/L by May 2008, but decreased to 110 µg/L in December 2008. After 877 days (December 2008), TCE and cis-1,2-DCE concentrations were detected at 1.2 µg/L and 4.5 µg/L, respectively. The ethene concentration increased from a baseline of 6.5 µg/L to 38 µg/L 281 days after injection and was 21 µg/L on day 673 (May 2008).

The total VOC concentration in guard well IIW-1A increased by approximately threefold within the first month after injection. The concentration increase was due to an increase in cis-1,2-DCE from 17 µg/L to 470 µg/L, while TCE rapidly decreased from 140 µg/L to 17 µg/L. The cis-1,2-DCE concentration increase was also accompanied by an increase in vinyl chloride from below the detection limit of 1.0 µg/L to 15 µg/L within the first month. By January 2007 (191 days after injection), TCE and cis-1,2-DCE concentrations decreased to 0.6 µg/L and 89 µg/L, respectively. In November 2007, TCE and cis-1,2-DCE were detected at 7.7 µg/L and 30 µg/L, respectively. In May 2008, TCE concentrations increased to 39 µg/L, while cis-1,2-DCE remained constant at 30 µg/L. By December 2008 however, TCE concentrations decreased to 1.6 µg/L in the original sample and 1.5 µg/L in the field duplicate, and cis-1,2-DCE decreased to 3.9 µg/L in the original sample and field duplicate. The vinyl chloride concentration initially increased to 100 µg/L after 133 days (November 2006), but has since decreased to 21 µg/L (December 2008). The *Dehalococcoides* Gene-Trac assay collected 100 days after the bioaugmentation, revealed a value of $7x10^4$ gene copies per liter in well IIW-1A. This value indicates that the sample contains moderate concentrations of *Dehalococcoides ethenogenes* (Sirem, 2006), as also indicated by ethene concentrations of 110 µg/L 191 days after the injections (Table 3, Figure 7).

The total VOC concentration in guard well R-50A decreased after the oil injections due to a decrease in cis-1,2-DCE and xylene concentrations. Except for the baseline sampling and the November 2007 annual sampling event, TCE was not observed above the detection limits in R-50A. By November 2006 (133 days after injection), cis-1,2-DCE had decreased from a pre-injection concentration of 2,400 µg/L to 650 µg/L, but rebounded to 4,600 µg/L in January 2007 (Table 3, Figure 7). By April 2007, cis-1,2-DCE decreased to 260 µg/L, however, concentrations rebounded

again to 9,300 µg/L by day 373 (July 2007), decreased to 3,000 µg/L by day 497 (November 2007), and were still at 5,600 µg/L by day 673 (May 2008). However, December 2008 data show that cis-1,2-DCE has declined to 27 µg/L in well R-50A. Vinyl chloride concentrations increased from the baseline level of 1,600 µg/L to 4,800 µg/L on day 373, and were 4,300 µg/L on day 497, and 4,500 µg/L on day 673. Similarly to the cis-1,2-DCE concentrations, vinyl chloride decreased significantly in December 2008 and was detected at 740 µg/L (Table 3). July 2006 baseline sampling indicated a large production of ethene, with a measured concentration of 2,200 µg/L in R-50A. Monthly and quarterly sampling results for August 2006 through September 2007 indicated ethene concentrations ranging from 580 µg/L to 1,400 µg/L, and 1,600 µg/L ethene was detected in May 2008. Cis-1,2-DCE, vinyl chloride and ethene concentrations of this magnitude are in stoichiometric excess of the initial dissolved TCE concentration, indicating dissolution of the parent compound from the sorbed phase. The *Dehalococcoides* Gene-Trac assay collected 100 days after the bioaugmentation, revealed a value of $3x10^7$ gene copies per liter in well R-50A, which is indicative of high numbers of *Dehalococcoides ethenogenes* organisms and high rates of dechlorination and ethene production. Test results seldom exceed 10^9 gene copies/liter (Sirem, 2006).

After the emulsified oil injection, the ground water geochemistry in guard wells indicated a strongly anaerobic environment with decreasing levels of DO, ORP, nitrate and sulfate, and increasing concentrations of ferrous iron, sulfide, and methane (Table 3). The ORP in guard well IIW-1A decreased from 169 mV pre-injection to -114 mV, and the ferrous iron and methane concentrations increased to 5.7 mg/L and 18,000 µg/L, respectively and 2.7 mg/L of sulfide formation occurred. Decreasing values for ORP were also observed in well IOW-4A, while the methane concentration increased to 23,000 µg/L and ferrous iron as high as 34 mg/L was detected. The ORP value in well R-50A decreased to -281 mV, with methane concentrations detected at 1,100 µg/L. Additionally, January 2007 TOC concentrations of 110 mg/L in well IIW-1A and 24 mg/L in well IOW-4A indicated that fermentation of the emulsified soybean oil continued to provide a sufficient electron donor source for reductive dechlorination activities. However, low TOC concentrations detected in July 2007 and May 2008 likely indicates that the electron donor source is depleted.

3.3.2.2 Boundary Wells

The total VOC concentration in A-zone boundary well E-9A increased by approximately twofold after the amendment injection, due to an increase in degradation daughter products cis-1,2-DCE and vinyl chloride (Table 3, Figure 6). While the TCE concentration decreased from 180 µg/L pre-injection to 100 µg/L in January 2007 (191 days after injection), the cis-1,2-DCE concentration increased from 17 µg/L to 340 µg/L and the vinyl chloride concentration increased from 2.0 µg/L to 60 µg/L in well E-9A during that same period. After 281 days (April 2007), the TCE and cis-1,2-DCE levels decreased to 2.7 µg/L and 180 µg/L, respectively, and were 31 µg/L and 36 µg/L, respectively, on day 497 (November 2007). By May and December 2008, TCE decreased to 26 µg/L and 17 µg/L, respectively, while cis-1,2-DCE slightly increased to 85 µg/L and 93 µg/L, respectively. Vinyl chloride peaked at 170 µg/L on day 281, before decreasing to 46 µg/L on day 497. In December 2008, vinyl chloride was detected at 51 µg/L in well E-9A (Table 3). The ethene level also increased from 0.4 µg/L pre-baseline to a maximum concentration of 97 µg/L on day 281. Total VOC concentrations in well W-1A remained approximately the same, while concentrations decreased in well M-6A. The TCE concentration in well M-6A initially increased slightly after the emulsified oil injection, but decreased from 21 µg/L to 1 µg/L 120 days after the injection and was 3.9 µg/L on day 497 (Table 3, Figure 6). In May 2008, TCE and cis-1,2-DCE were not detected above the 0.5 µg/L laboratory reporting limit in well M-6A, and as of December 2008, only TCE

was detected, at 0.7 µg/L. E-9A was the only A-zone boundary well where significant methane concentrations were detected after the emulsified oil injection. Methane in this well increased from 770 µg/L to 13,000 µg/L within 281 days following injection.

Total VOC concentrations before and after the amendment injection were approximately the same in B-zone boundary wells IOW-4B1 and PW-4B1. TCE concentrations in well IOW-4B1 were at or below the detection limit, while cis-1,2-DCE and vinyl chloride concentrations initially increased slightly, before decreasing to 2.5 µg/L and less than the reporting limit of 0.5 µg/L, respectively. No changes in contaminant concentrations were observed for well PW-4B1 (Table 3, Figure 6).

3.3.2.3 Upgradient Wells

Performance monitoring of upgradient well M-8A indicated a slight increase in total VOC concentrations, due to an increase in TCE concentrations from 45 µg/L to 57 µg/L between baseline sampling and the May 2008 monitoring event. As of December 2008 however, the total VOC concentrations in M-8A decreased to 43 µg/L. In December 2008, the total VOC concentration in well TW-4A was 932 µg/L, similar to November 2007 concentrations (Table 3, Figure 7). Vinyl chloride increased from non-detect (5.0 µg/L laboratory reporting limit) to 100 µg/L by July 2007, and peaked at 180 µg/L by November 2007, demonstrating reductive dechlorination of cis-1,2-DCE. As of December 2008, vinyl chloride and TCE concentrations decreased to 97 µg/L and 220 µg/L, respectively, whereas cis-1,2-DCE concentrations increased to 590 µg/L in TW-4A (Table 2). During Phase I of the pilot test, TW-4A served as a guard well, since emulsified oil was injected upgradient of this well.

3.3.3 Contingency Plan Trigger Levels

The quarterly and annually performance monitoring results for Phases I and II of the pilot test were in compliance with the Contingency Plan trigger levels for all wells except for boundary well E-9A and upgradient well M-8A. Cis-1,2-DCE concentrations as high as 340 µg/L (January 2007) and a vinyl chloride concentration of 170 µg/L (April 2007) in boundary well E-9A exceeded the trigger levels of 44 µg/L and 5.0 µg/L, respectively, during these performance monitoring events. By November 2007, cis-1,2-DCE and vinyl chloride concentrations had decreased to 36 µg/L and 46 µg/L, respectively, but concentrations then increased to 93 µg/L and 51 µg/L, respectively by December 2008. Additionally, a TCE concentration as high as 62 µg/L (January 2007) in upgradient well M-8A exceeded the trigger level of 36 µg/L. As of December 2008, the TCE concentration in M-8A is 40 µg/L, only slightly above the trigger level. The Monitoring and Contingency Plan originally called for sampling monthly in response to these trigger levels being exceeded. However, since cis-1,2-DCE and vinyl chloride are desirable intermediate daughter products of reductive TCE dechlorination, the Monitoring and Contingency Plan was amended to maintain monitoring at a quarterly frequency for the boundary. Monitoring of upgradient well M-8A also continued on a quarterly frequency[4]. An addendum to the Monitoring and Contingency Plan summarizing these changes was submitted as Attachment B in the *Third Quarterly Status Report* (Weiss, 2006c).

[4] As discussed and approved during June 5 and 6, 2006 telephone conversations between Maile Smith, Weiss Associates, and Alana Lee, USEPA.

4. CONCLUSIONS AND NEXT STEPS

4.1 Phase I

The application of emulsified oil was very successful in inducing highly reducing conditions in areas surrounding guard wells TW-2A and TW-3A, as indicated by the occurrence of sulfate reduction and methanogenesis. Sequential dechlorination of TCE to cis-1,2-DCE to vinyl chloride to ethene was clearly observed in both wells, with temporal accumulations and subsequent reductions of cis-1,2-DCE and vinyl chloride in well TW-2A. As of December 2008, the vinyl chloride concentration in well TW-3A was still elevated at 64 µg/L, an increase from baseline levels by a factor of 25. A 96% decrease in TCE concentration was observed in well TW-2A within a short time after the electron donor injection. A rapid 91% decrease in TCE concentrations was also observed in well TW-3A, with a 99% reduction after day 817. Cis-1,2-DCE in wells TW-2A and TW-3A reached concentrations greater than those of the parent TCE compound, indicating the dissolution of TCE from the sorbed phase. If only dissolved phase TCE was converted to cis-1,2-DCE, the latter would be present at approximately 75% of the TCE concentration, due to differences in molecular weight. The TCE concentration in guard well TW-3A is currently below the 5 µg/L MCL, and in guard well TW-2A is slightly above the MCL.

Three months after substrate injection, reductive dechlorination in guard well E-14A resulted in a 56% decrease of TCE concentrations and a 44% concomitant increase in cis-1,2-DCE concentrations, although strongly reducing conditions were never observed. However, reductive dechlorination in well E-14A appears to have "stalled" at cis-1,2-DCE, which suggests that the appropriate dechlorinating microorganisms *Dehalococcoides ethenogenes* are not present in the area surrounding this well. The low levels of organic carbon detected also suggest that the emulsified oil substrate was not effectively distributed in this area, although the oil was injected approximately ten feet upgradient of this well. TCE and cis-1,2-DCE concentrations in guard well TW-4A remained relatively constant throughout the 817-day test period and no significant degradation was observed. However, after 1196 days, TCE concentrations had started to decrease, while cis-1,2-DCE concentrations concomitantly increased. A significant increase in vinyl chloride concentrations was detected 252 days after injection, and vinyl chloride was still elevated when last measured in December 2008, indicating that dechlorinating microorganisms are present, but that the activity of the existing population is low. Low TOC levels also suggest that the electron donor has been spent. While reductive dechlorination is occurring within the Phase I pilot test area, additional VOC mass is simultaneously entering the test area from upgradient sources, as indicated by wells M-8A and TW-1A.

4.2 Phase II

Geochemical parameters in guard wells IIW-1A, IOW-4A, and R-50A, downgradient of the emulsified oil barriers, demonstrated the creation of favorable anaerobic reducing conditions 30 days after the oil emplacement. Dissolved oxygen concentrations and ORP readings decreased rapidly, and significant increases in ferrous iron and methane concentrations were detected and some sulfide formation occurred. Sampling at six and nine months indicated that TCE concentrations were near or below the analytical reporting limits and more than 99% of the TCE has been converted to cis-1,2-DCE and vinyl chloride and ethene. The conclusion that the rate of reductive dechlorination in the treatment area increased dramatically following the emulsified oil injections is based on the

decrease in TCE concentrations, the increase and subsequent decrease of cis-1,2-DCE and vinyl chloride concentrations (wells E-9A, IIW-1A and IOW-4A), and the increase in ethene concentrations (wells IIW-1A, and IOW-4A). Ongoing ground water monitoring indicates that more than two years after injection, the majority of the treated area remains anaerobic and TCE, cis-1,2-DCE and vinyl chloride concentrations continue to decrease. However, the July 2007 and May 2008 analysis of TOC indicated low levels of organic carbon, which suggests that the electron donor source has been depleted. The July 2007 and May 2008 increase in sulfate concentrations in some Site wells might also be an indication that the emulsified oil has been spent. As with Phase I guard wells TW-2A and TW-3A, cis-1,2-DCE in Phase II guard wells IIW-1A, IOW-4A, R-50A, and boundary well E-9A, reached concentrations greater than those of the parent TCE compound, indicating the dissolution of TCE from the sorbed phase. The vicinity of well R-50A has often shown high, in the mg/L range, but variable concentrations of cis-1,2-DCE, vinyl chloride, ethylbenzene, and xylenes, and lower or non-detectable concentrations of TCE. Based on this, a saturated zone residual source consisting of a mixture of TCE, ethylbenzene and xylenes is suspected near this well. Even before the enhanced bioremediation pilot test, the presence of the aromatic hydrocarbons apparently fostered an active bacterial reductive dechlorination population and very effective degradation of TCE to cis-1,2-DCE kept pace with the dissolution of TCE into the ground water. The sequential reduction of TCE to cis-1,2-DCE to vinyl chloride to ethene also still appears to be very effective based on the significant concentrations of vinyl chloride and ethene that were measured.

A comparison of the VOC distribution in the A water-bearing zone based on the 2005, 2006 and 2008 sampling events is provided as Figure 9. TCE reductions in Site guard and boundary wells are also shown in Figure 10. These results indicate that enhanced reductive dechlorination is a very effective approach for reducing the TCE concentrations in Site ground water. As of December 2008, TCE concentrations are below the 5 µg/L MCL in Site wells E-15D, E-10A, IIW-1A, IOW-4A, M-6A, PW-1A, PW-2A, PW-3A, R-50A, TW-1A, TW-3A, IOW-4B1, M-19B1, M-10B2, and IOW-3B2.

4.3 Additional Electron Donor Injections

Since low TOC levels in Phase I and II monitoring wells suggest that the electron donor has been spent, additional electron donor in the form of sodium lactate will be injected in the Phase I and II areas in June 2009. A total of 35 additional temporary injection points will be installed at Lot 4. Fifteen injection points will be located at the upgradient portion of the Site, centered near well E-14A, and close to the previous Phase I area injection locations. Twenty injection points will be installed in the downgradient Phase II portion of the Site; ten injection locations south of monitoring well IIW-1A, and ten injection locations north of monitoring well IOW-4A (Figure 11). These three groups of injection points will be installed into the A water-bearing zone. Additionally, commercially available dechlorinating bacteria will be injected at the upgradient portion of the Site, since reductive dechlorination near well E-14A appears to have “stalled” at cis-1,2-DCE. Following the injections, quarterly performance monitoring will be scheduled for September and December 2009, and March and June 2010. It is estimated that additional electron donor will be injected six months after the initial injections, however, performance monitoring results will dictate if and when these additional electron donor injections are necessary. Further details on the additional electron donor injections are provided in the *Addendum to the Workplan for Enhanced In-Situ Bioremediation Pilot Test* (Weiss, 2008c).

4.4 Remedial Action Objectives Evaluation

In order to gauge progress toward achieving Site cleanup standards and obtaining final Site closure from USEPA, interim remedial action objectives (RAOs) were established (Weiss, 2005a). The recommended, interim RAOs for this Enhanced *In-Situ* Bioremediation Pilot Test are to reduce onsite VOC concentrations such that VOC concentrations in Site boundary wells decrease over time at a similar or greater rate than they were when the ground water extraction and treatment system was operating, and to achieve these VOC concentration reductions within a short (four-year) time frame (Weiss, 2005a).

Due to the complex hydrogeology and contaminant distribution at the Site, it was infeasible to establish numerical concentration cleanup objectives that would not require the use of a large number of invalid assumptions and introduce a high degree of uncertainty. No single interim VOC concentration "goal" or target level was assigned at the Site given the broad range of initial VOC concentrations and separate phases of this project. Therefore, a "similar decrease in VOC concentrations" in the boundary and downgradient wells of the long-term monitoring network (Table 4) was defined as VOC concentrations less than the 75% upper confidence level (UCL) of VOC concentrations for the previous five years prior to initiating the Project (Weiss, 2005a). As shown on Table 4, the December 2008 VOC concentrations in the boundary and downgradient wells were below the 75% UCL for all wells, except for one or more VOC in wells E-9A, M-5A, M-5B1, PW-3A and W-1B. The vinyl chloride concentration of 51 µg/L exceeded the 75% UCL of 4 µg/L in well E-9A, and the vinyl chloride concentration of 99 µg/L exceeded the 75% UCL of 25 µg/L in well PW-3A. However, since the area upgradient of wells E-9A and PW-3A is still undergoing very active complete reductive dechlorination, vinyl chloride concentrations are expected to decrease significantly after cis-1,2-DCE has been depleted. Cis-1,2-DCE concentrations of 8 µg/L slightly exceeded the 75% UCL of 7 µg/L in well M-5A, and cis-1,2-DCE concentrations of 50 µg/L slightly exceeded the 75% UCL of 49 µg/L in well W-1B in December 2008. The trigger levels in well M-5B1 were exceeded for TCE, cis-1,2-DCE and vinyl chloride in December 2008. The TCE concentration of 62 µg/L exceeded the 75% UCL of 31 µg/L, the cis-1,2-DCE concentration of 100 µg/L exceeded the 75% UCL of 45 µg/L, and the vinyl chloride concentration of 5 µg/L exceeded the 75% UCL of 2 µg/L. These December 2008 concentrations however, were very similar to the pre-injection VOC concentrations in November 2004, when TCE, cis-1,2-DCE and vinyl chloride were detected at 64 µg/L, 96 µg/L, and 4.2 µg/L, respectively (Table 4).

Overall, the monitoring results to date indicate that the VOC concentration trends in boundary wells under pumping and non-pumping, enhanced bioremediation conditions are comparable. However, because these 75% UCL concentrations have been exceeded, VOC trends in these wells will be further evaluated after the additional electron donor injections and performance monitoring events to determine whether they indicate any significant increasing concentration trends.

In addition to measuring the performance of the Enhanced *In-Situ* Bioremediation Pilot Test based on the 75% UCL concentrations for individual wells as established in the work plan (Weiss, 2005a), the pilot test effectiveness has also been assessed based on the RAO of "remediating or controlling the ground water that contains elevated concentrations of chemicals" that is established in the Record of Decision (ROD). This assessment was presented in the 2008 Optimization Evaluation Report (Weiss, 2008b). Based on calculations presented in that report, VOC mass removal and mass flux reduction has been at least as robust under *in-situ* bioremediation as it was under ground water extraction. This report also showed that TCE concentrations have been reduced at rates significantly exceeding those observed under pump-and-treat in most monitored wells within the enhanced bioremediation zones (Weiss, 2008b).

4.5 Summary Observations

The key observations from this Enhanced *In-Situ* Bioremediation Pilot Test can be summarized as follows:

- Enhanced *In-Situ* Bioremediation is effectively breaking down TCE to cis-1,2-DCE, cis-1,2-DCE to vinyl chloride, and vinyl chloride to its non-toxic end product, ethene.
- Enhanced *In-Situ* Bioremediation appears to be at least as effective as pump and treat at containing VOCs, as indicated by decreased concentrations in downgradient Site A-zone and B-zone boundary wells.
- TCE concentrations have been significantly reduced in all monitored wells within the enhanced bioremediation zones, generally at rates significantly exceeding reductions under pump and treat. The site-wide reductive dechlorination has been shown to rapidly and effectively reduce TCE to very low or non-detectable levels.
- Enhanced *In-Situ* Bioremediation appears to have increased the dissolution and desorption of VOCs from the soil matrix at a more rapid rate than pump and treat.
- All wells within the enhanced bioremediation zones, with the exception of guard well R-50A, showed significant increases in cis-1,2-DCE, vinyl chloride and ethene concentrations following the injections. Cis-1,2-DCE concentrations subsequently declined, and in the most recent samples (December 2008) were at levels similar to the pre-injection cis-1,2-DCE concentrations in these wells. Vinyl chloride concentrations had begun to decline in most wells by the December 2008 sampling event, but generally remained above the pre-injection levels.
- There is a continuing influx of VOCs into the ground water in the wells monitored for this pilot test and this influx is generally keeping pace with the complete dechlorination process. This influx is either from ground water migrating from upgradient of the well, desorption from the local soil matrix, diffusion from surrounding lower permeability areas and/or continued dissolution of local residual NAPL.

4.6 Next Steps

Currently, performance monitoring results for B1-zone wells show a significant reduction in total VOC concentrations, and if B1-zone VOC concentrations continue to decline or remain stable, the originally-planned Phase III implementation of the Enhanced *In-Situ* Bioremediation Pilot Test (Weiss, 2005a) may not be warranted. However, Weiss will inject additional electron donor into the A-zone Phase I and II areas in June 2009, and will continue to monitor the effectiveness and progress of current remedial actions in 2009 by semiannually measuring water levels and analyzing water samples during performance monitoring sampling in September and December (Table 5). Because the originally-planned Phase III is not being implemented, the planned sampling differs from that originally presented in the pilot test work plan (Weiss, 2005a).

5. REFERENCES

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FIGURES

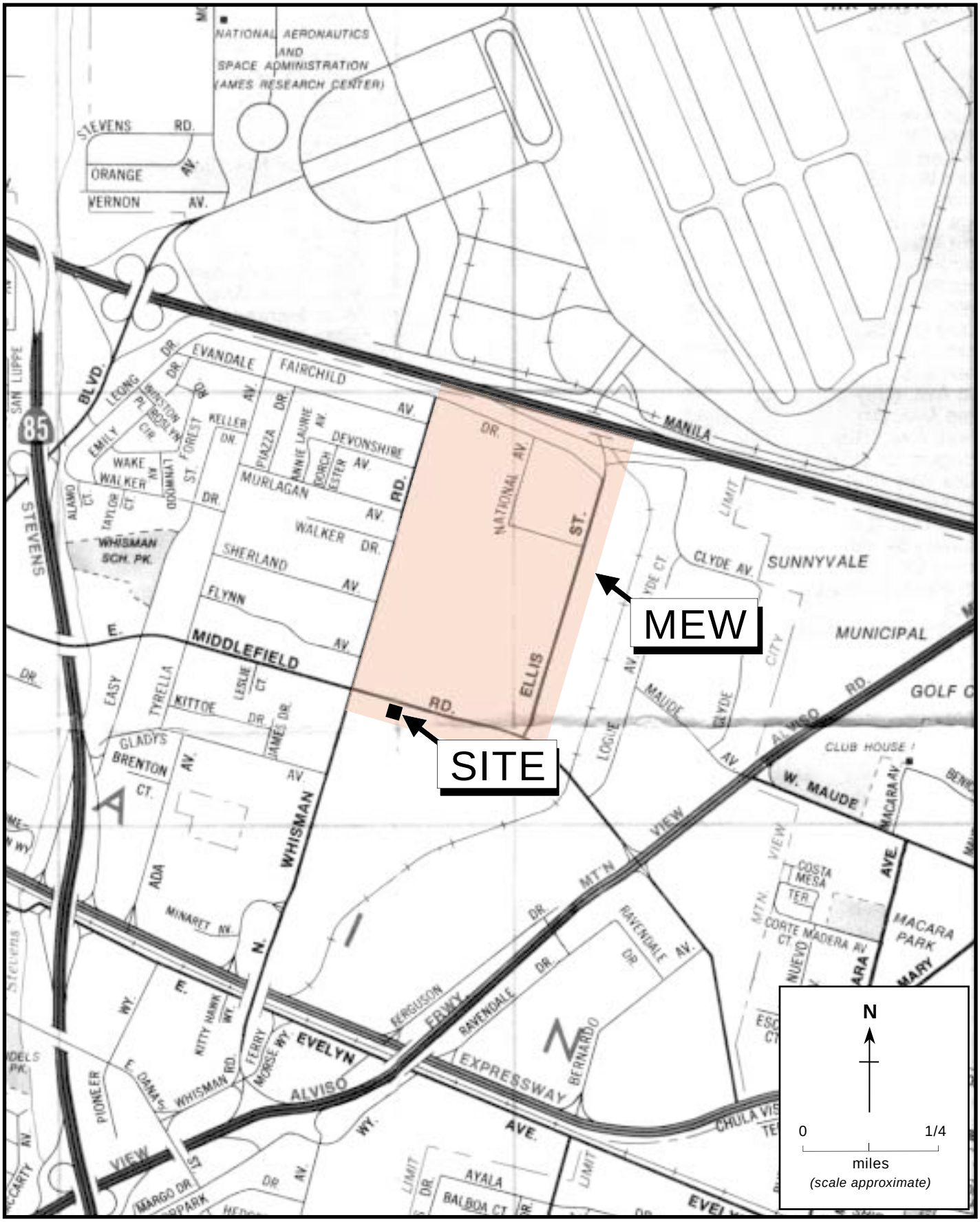


Figure 1. Site Location Map, Former Intel Facility, 365 East Middlefield Road, and Middlefield-Ellis-Whisman Study Area, Mountain View, California

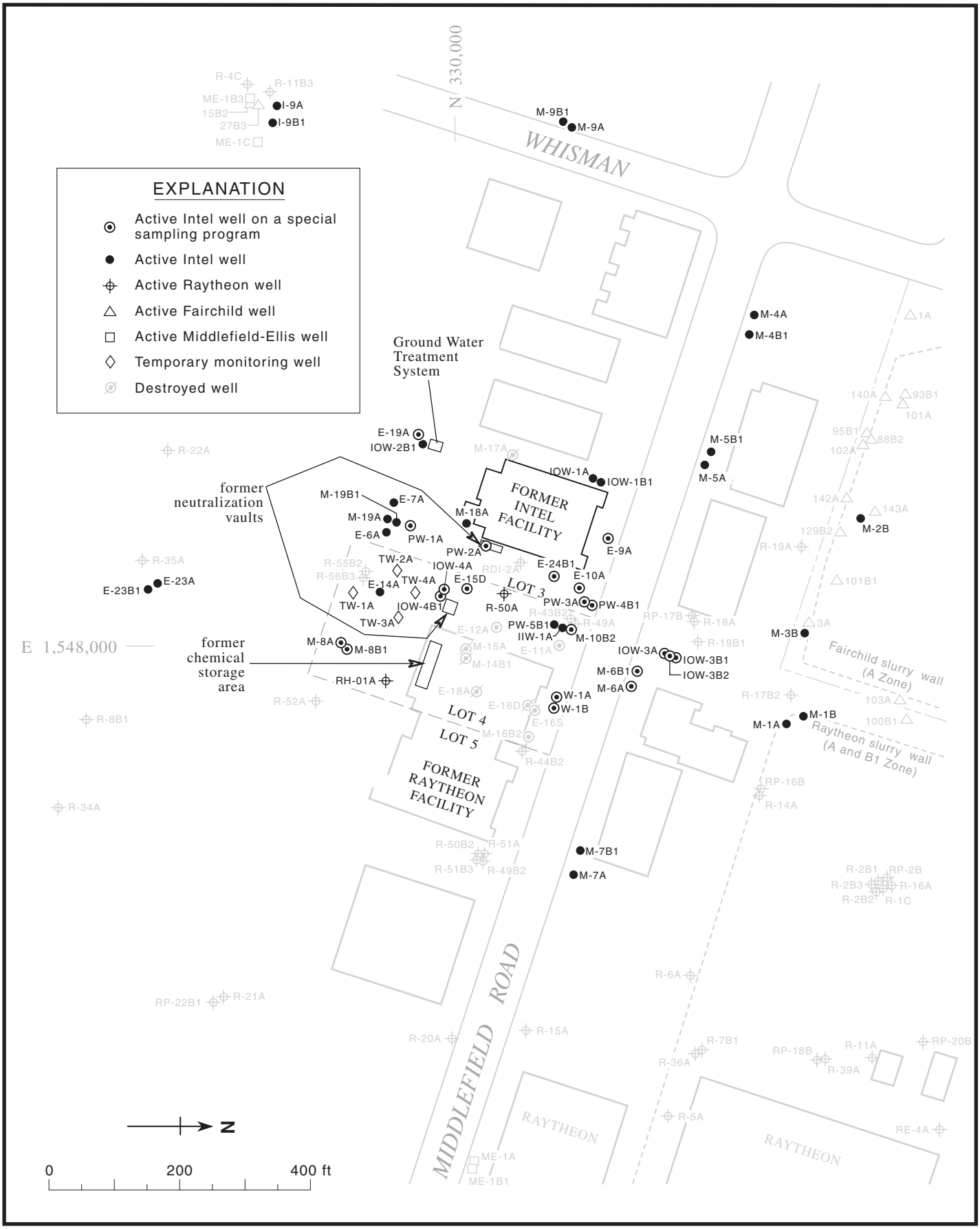


Figure 2. Site Plan and Monitoring Well Locations, Former Intel Facility, Mountain View, California

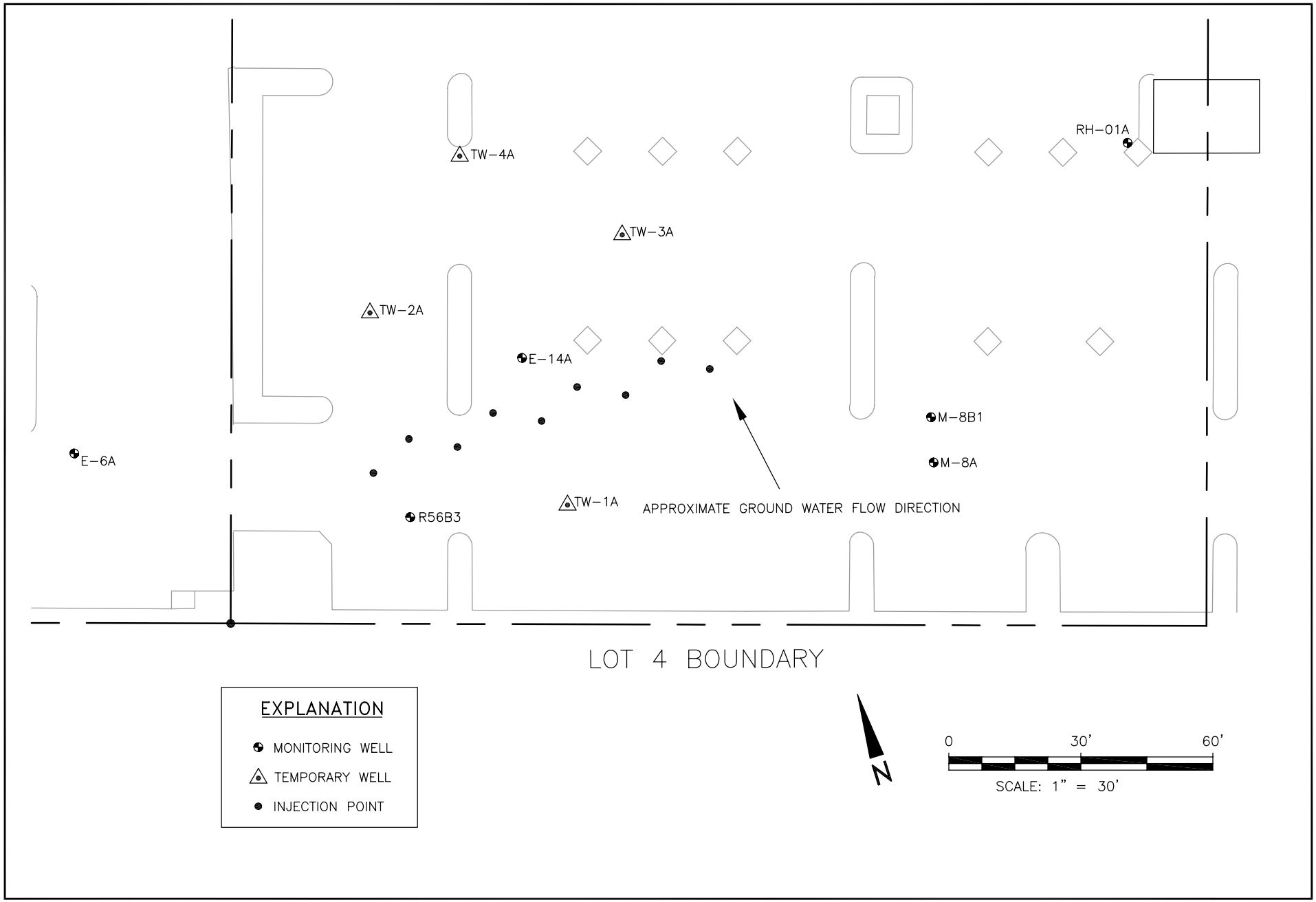


Figure 3. Phase I Injection Locations, Lot 4, Former Intel Facility, Mountain View, California

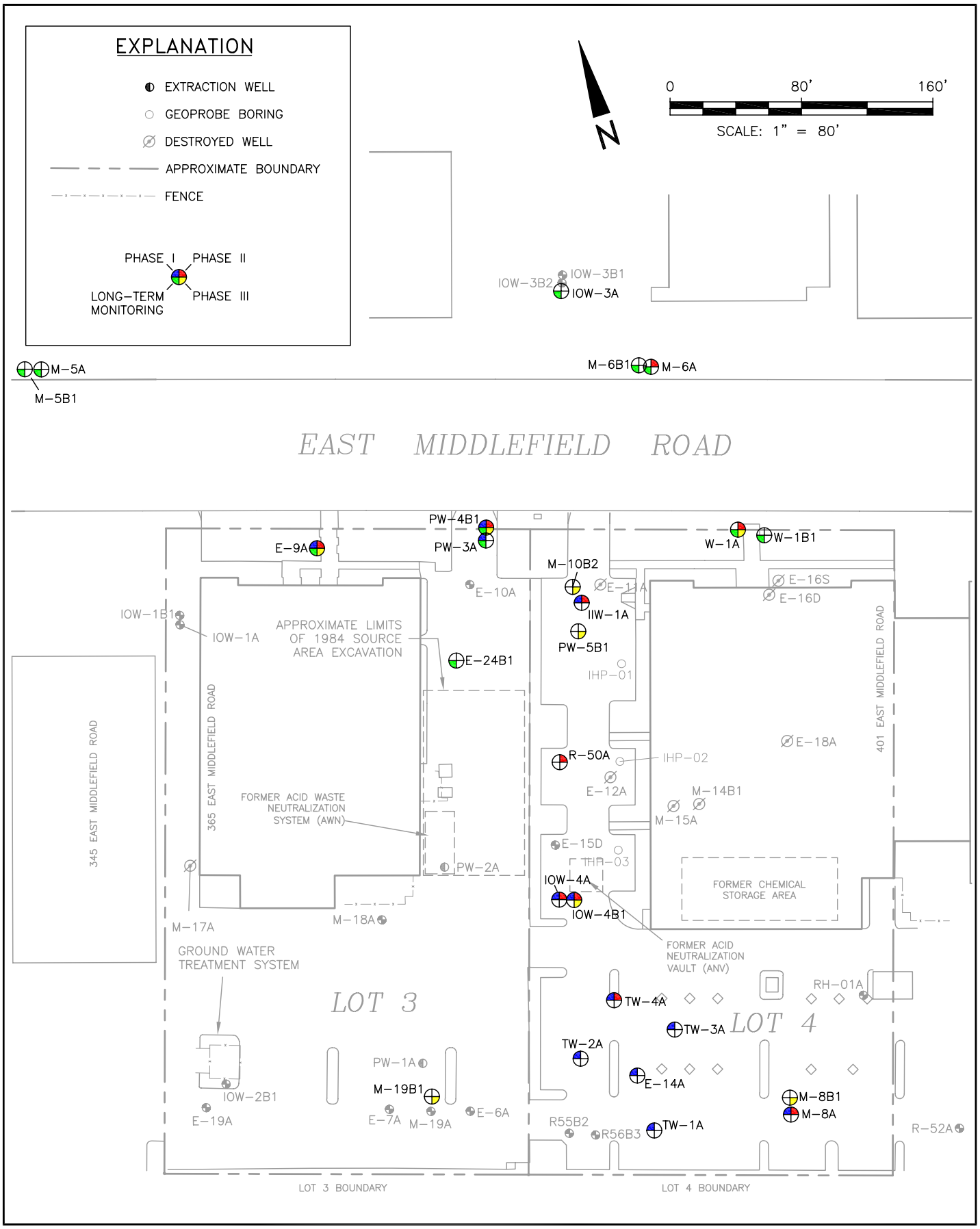
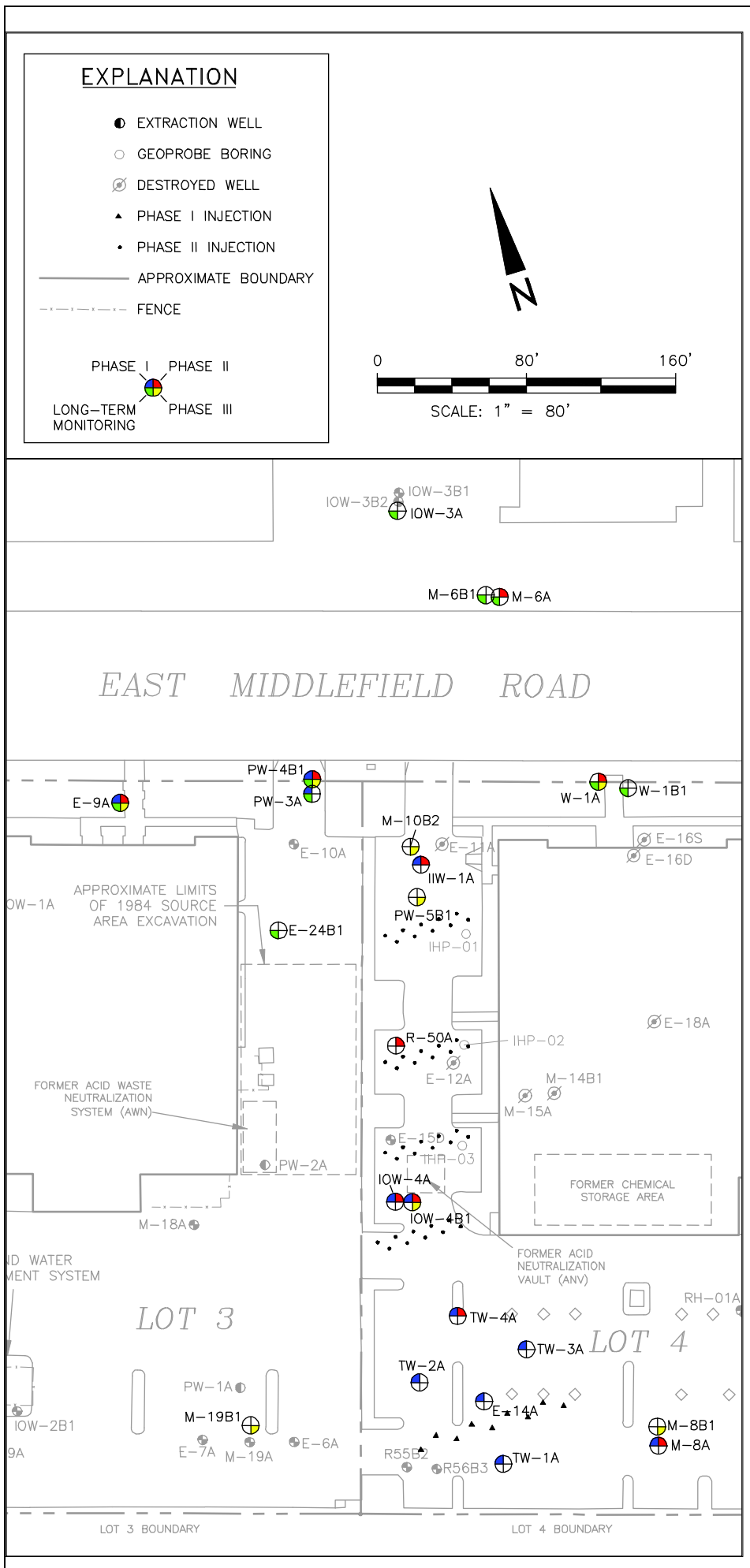
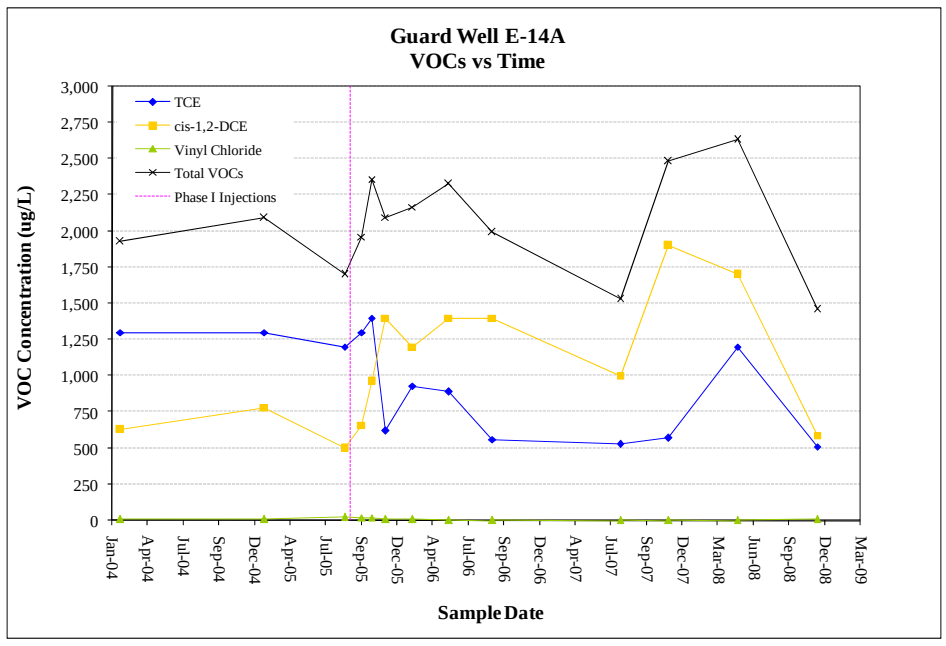
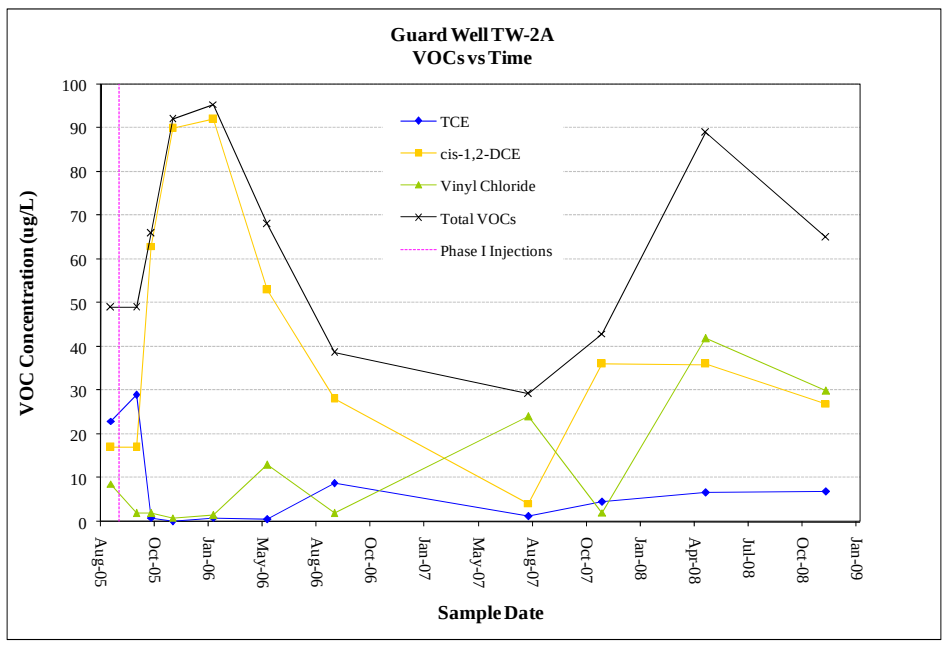
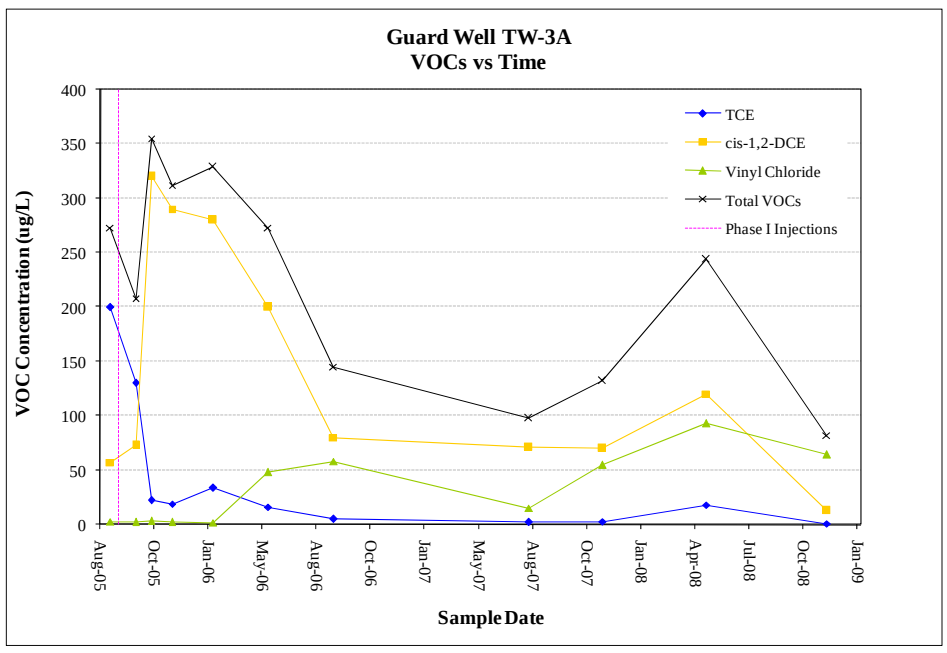


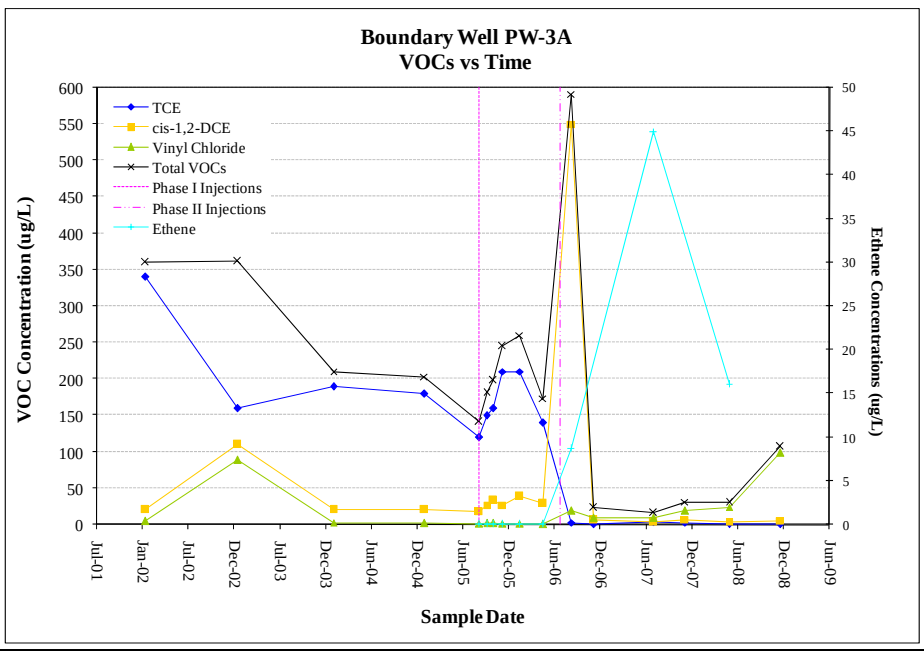
Figure 4. Performance and Long-Term Monitoring Well Network, Lots 3 and 4, Former Intel Facility, Mountain View, California











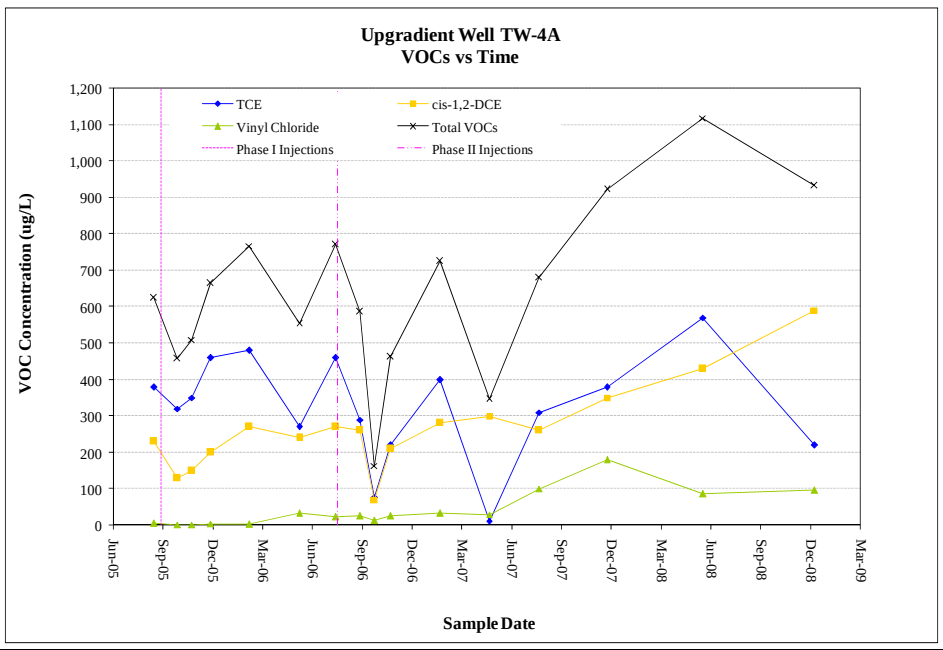
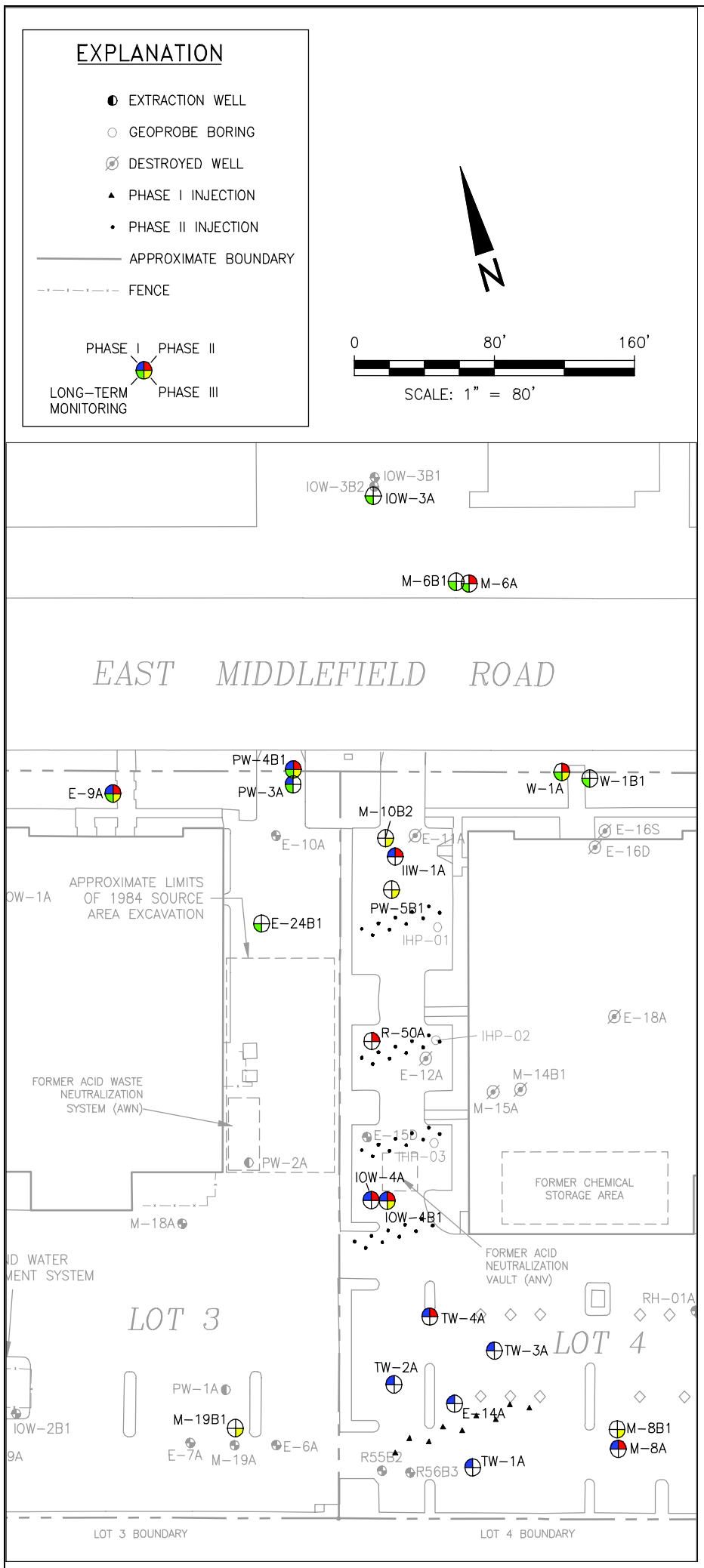
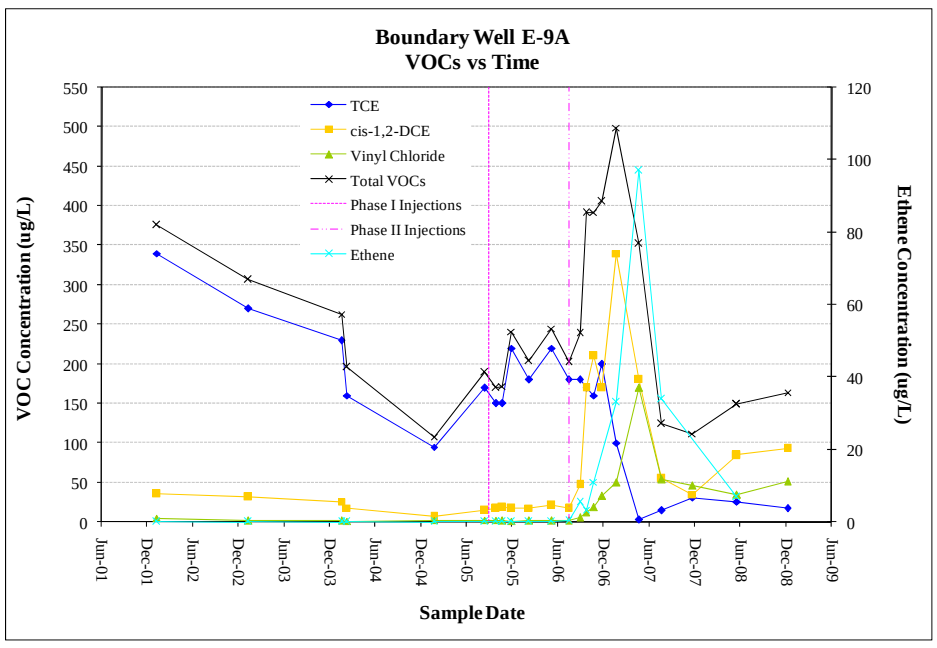
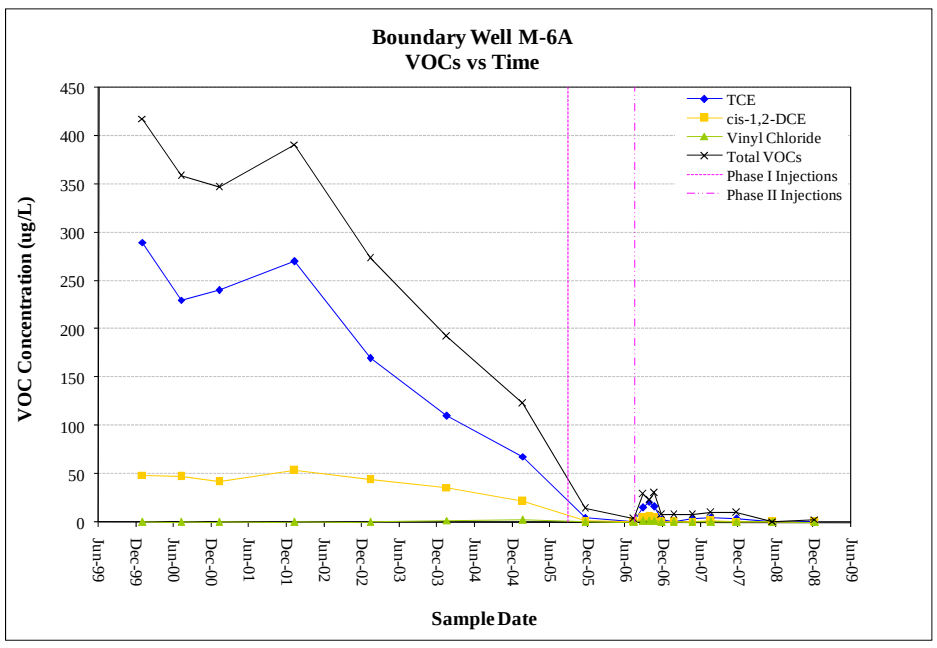
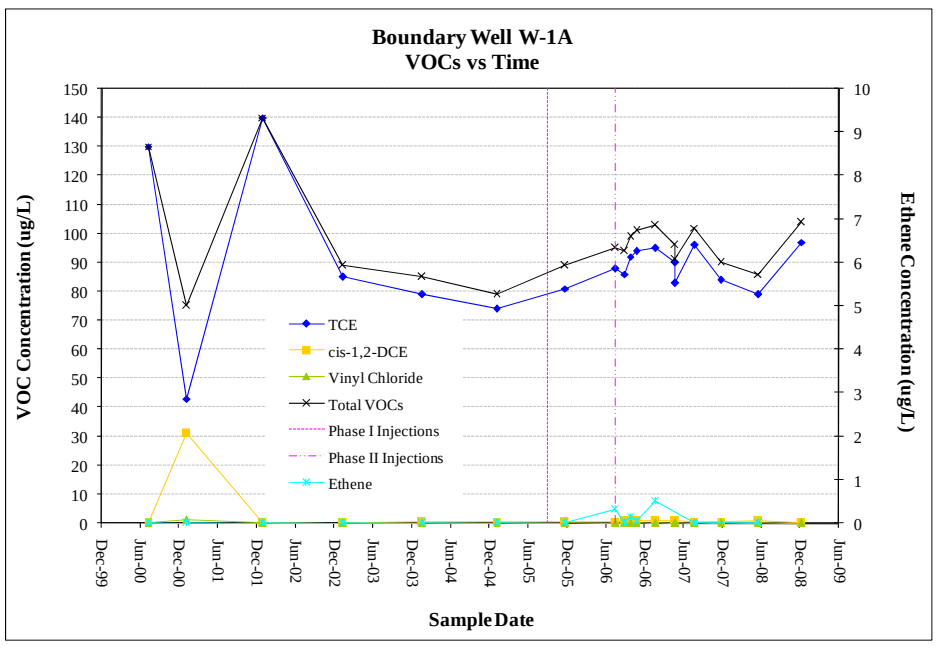


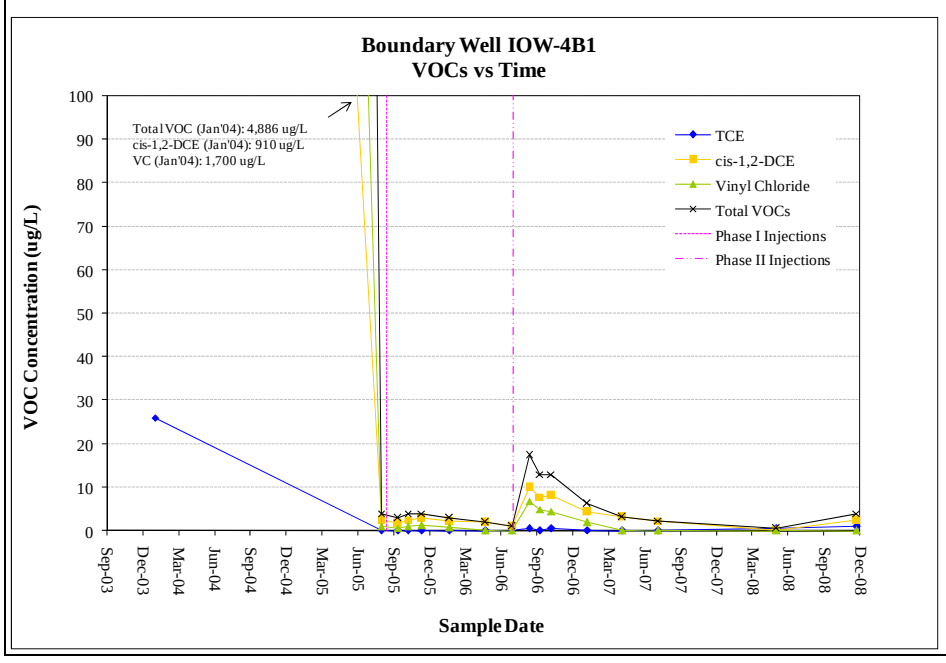
Figure 5. Select VOC Concentrations vs. Time for Phase I A-zone Guard Wells E-14A, TW-2A, TW-3A, and TW-4A, and Boundary Well PW-3A.











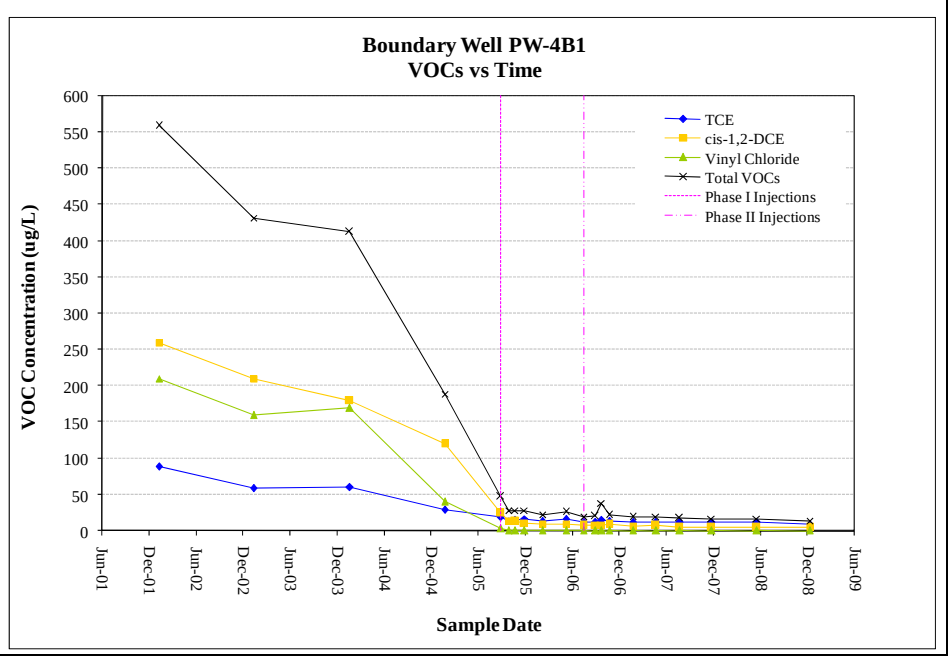
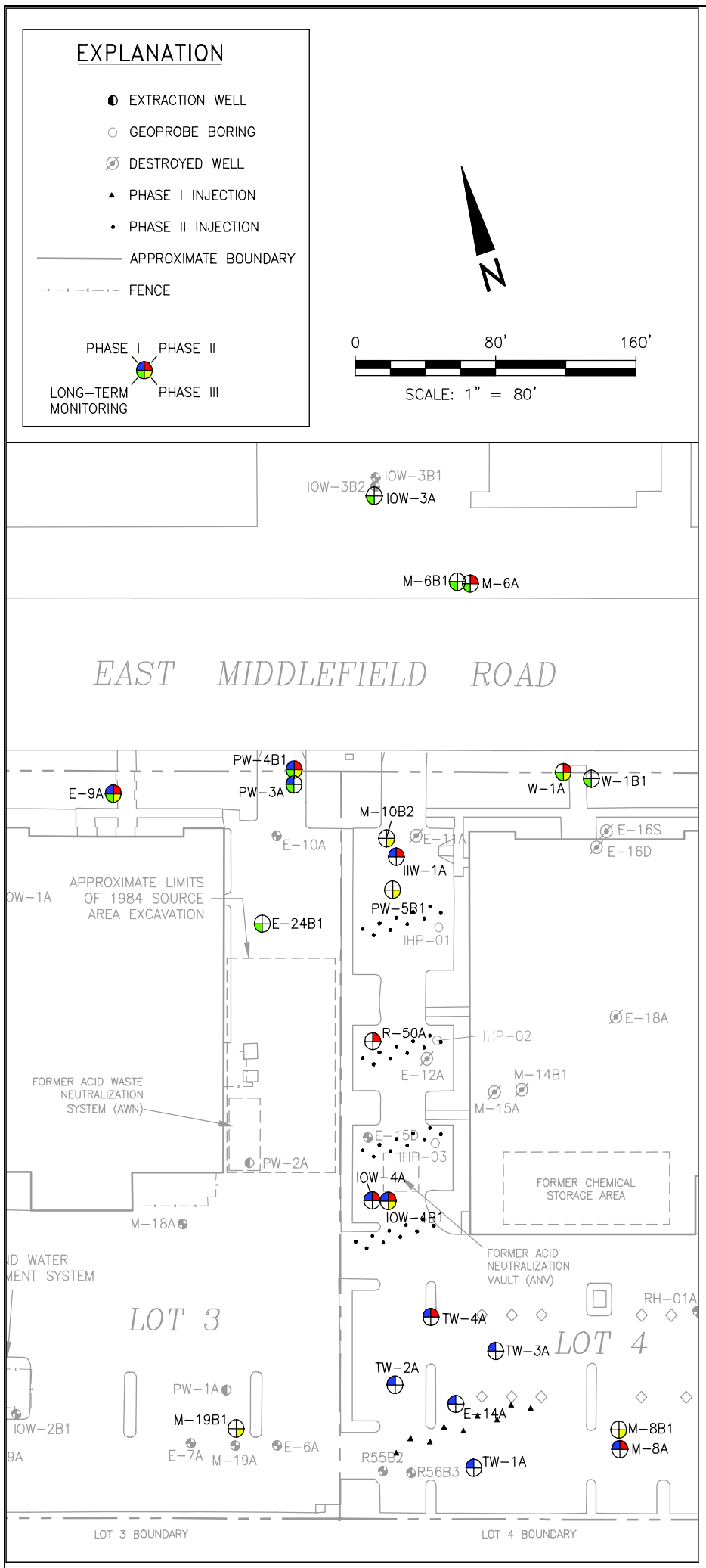
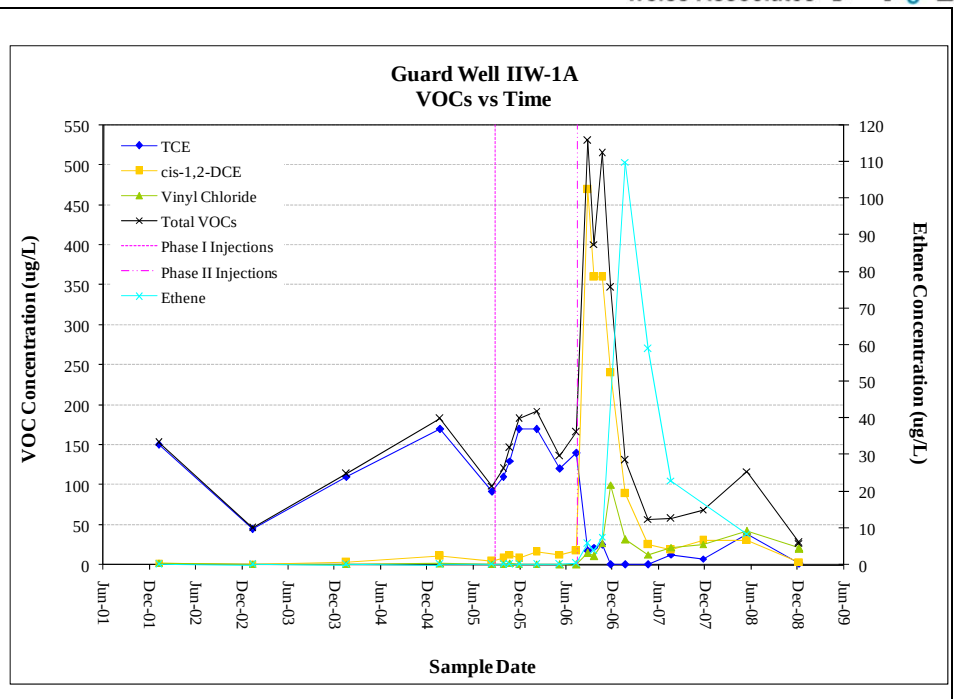
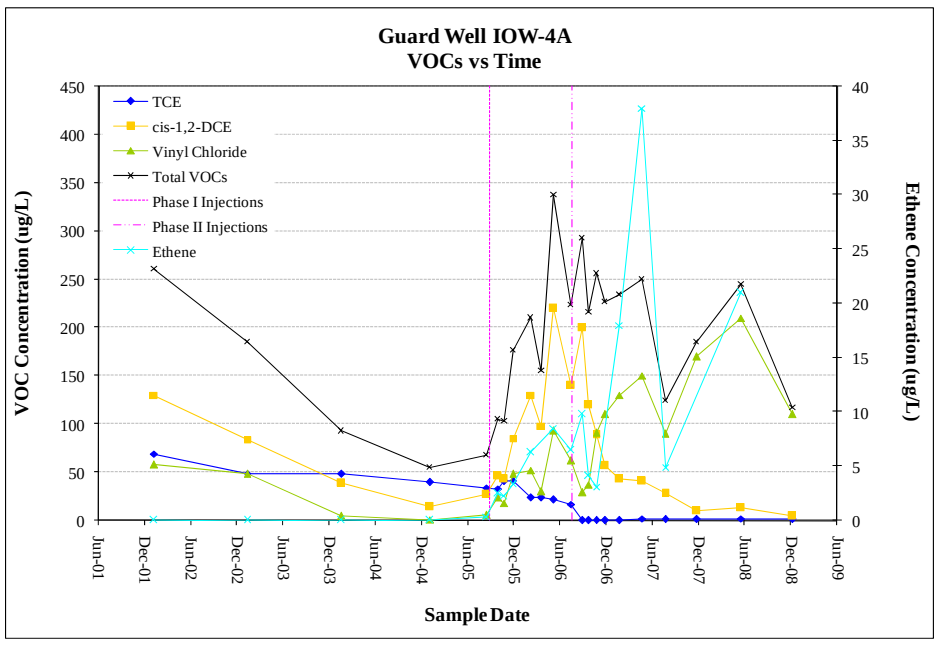
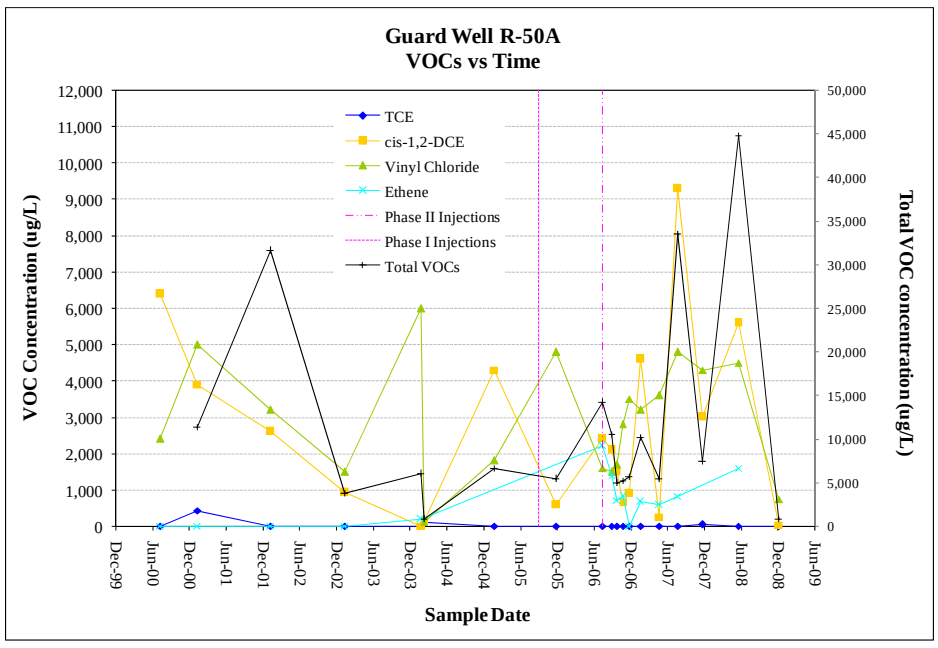


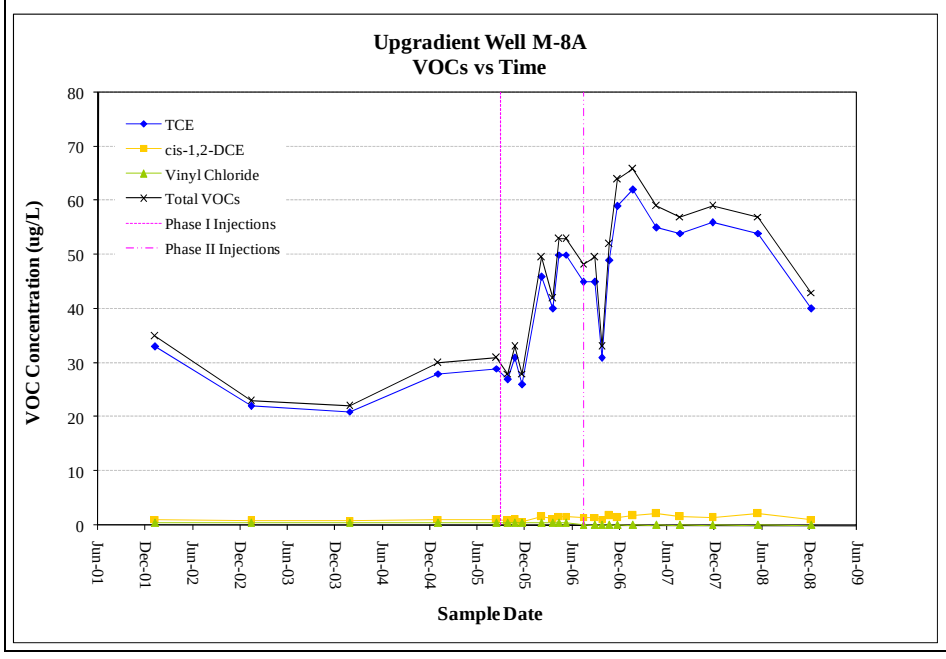
Figure 6. Select VOC Concentrations vs. Time for Phase II A-zone Boundary Wells E-9A, M-6A, W-1A and B-zone Boundary Wells IOW-4B1 and PW-4B1.











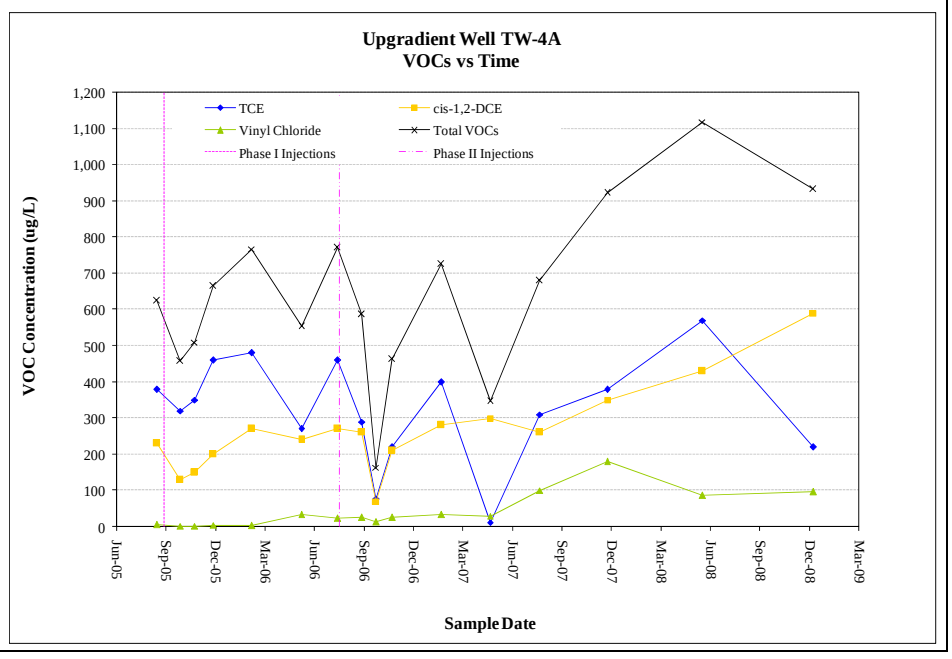


Figure 7. Select VOC Concentrations vs. Time for Phase II A-zone Guard Wells IIW-1A, IOW-4A, R-50A, and Upgradient Wells M-8A and TW-4A.

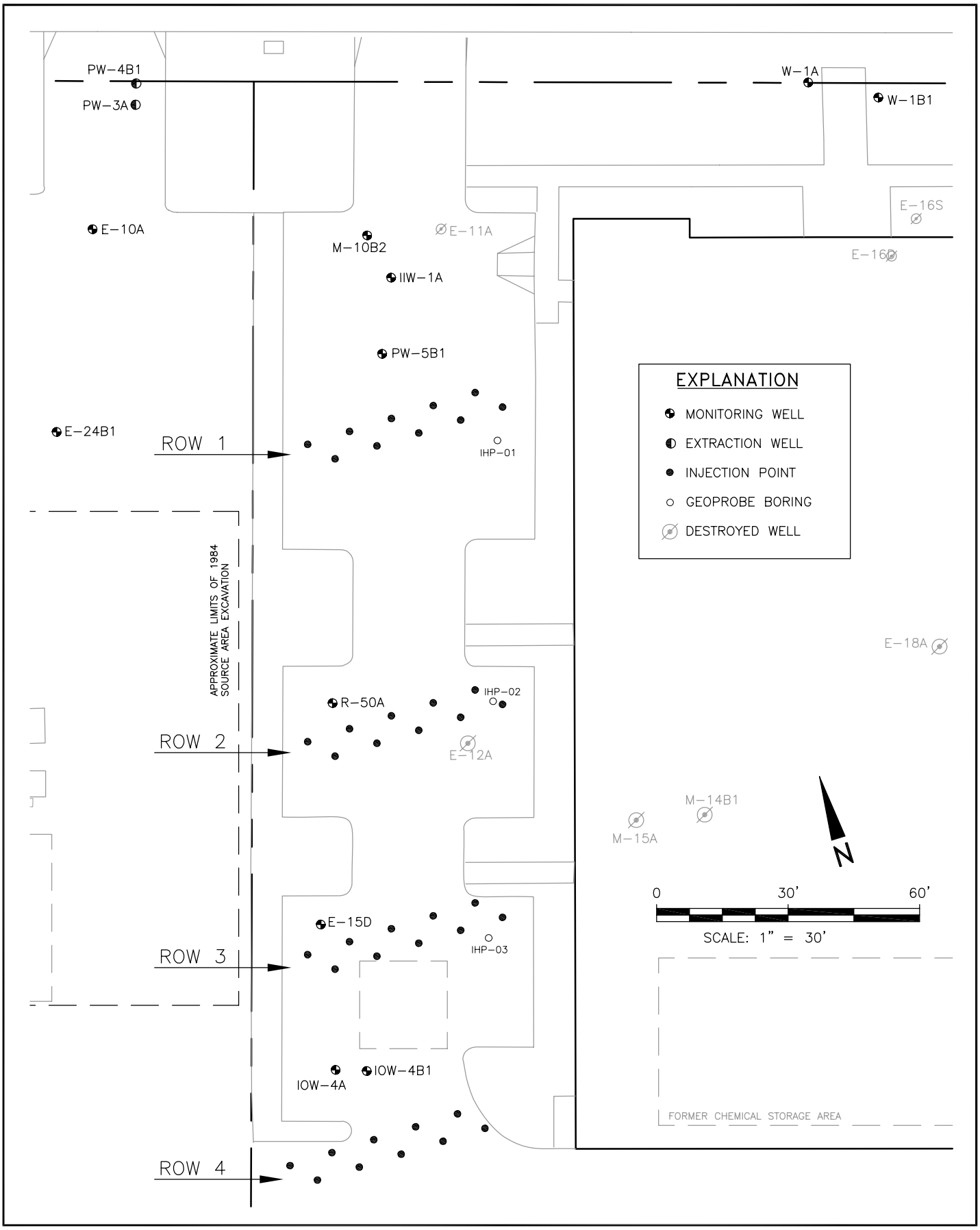
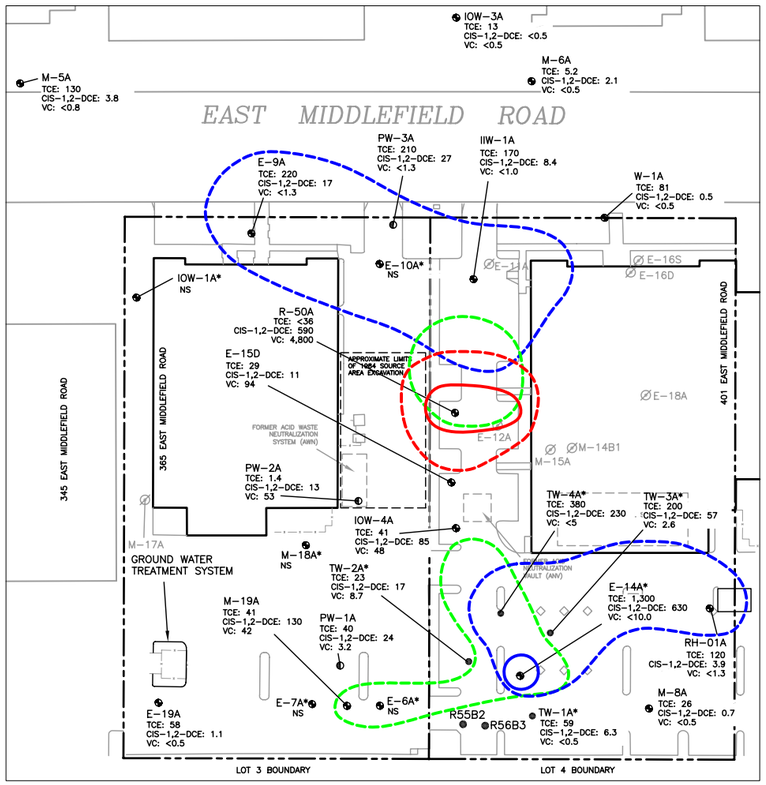
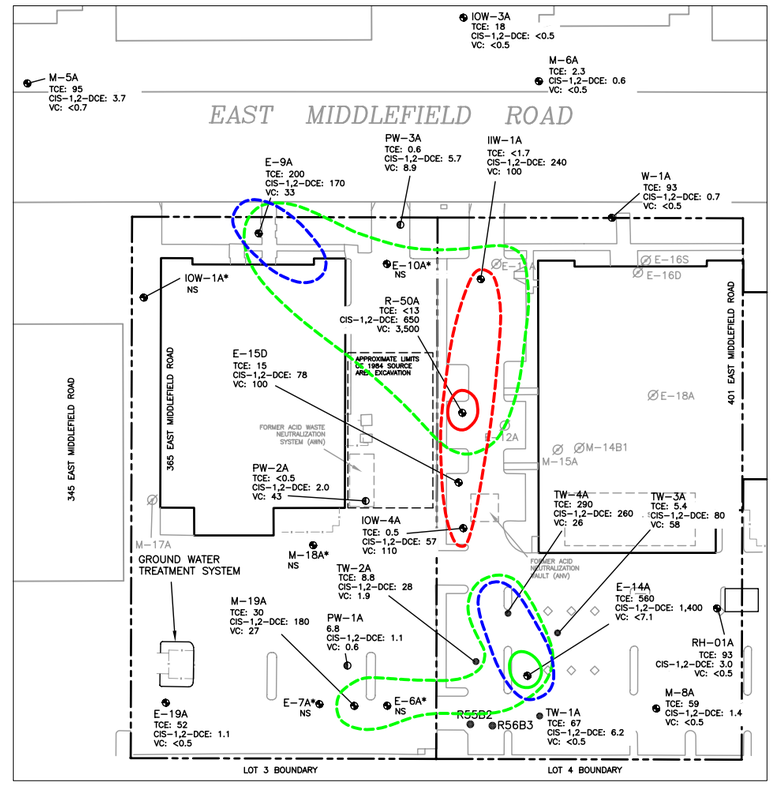
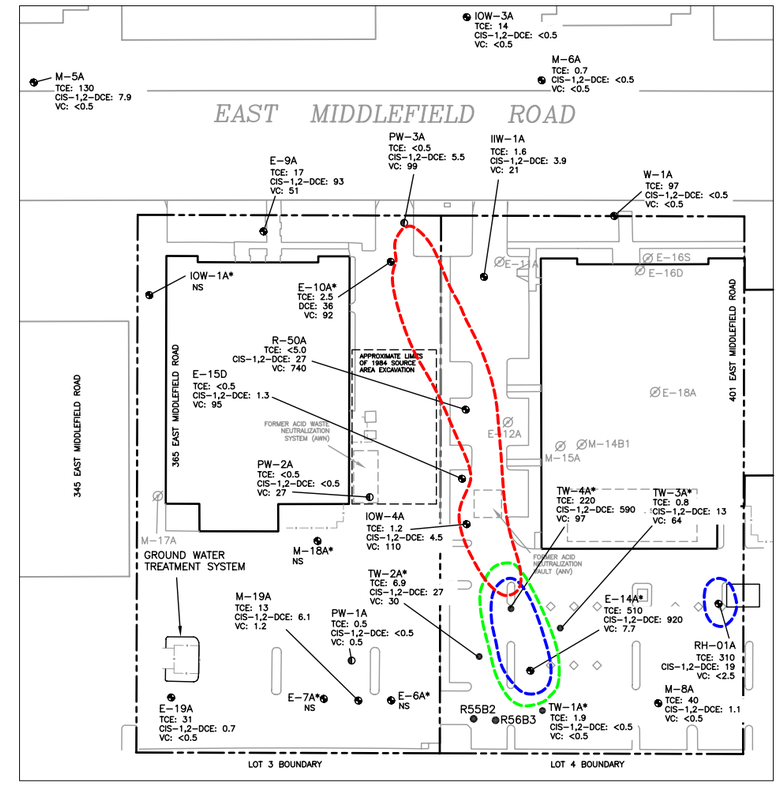


Figure 8. Phase II Injection Locations, Former Intel Facility, Mountain View, California







Enhanced In-Situ Bioremediation Pilot Test

Phase I Emulsified Oil Injections: August 29–September 2, 2005
Baseline Sampling Event: August 18, 2005

Phase II Emulsified Oil Injections: July 19–26, 2006
Baseline Sampling Event: July 17, 2006

EXPLANATION

- MONITORING WELL
- EXTRACTION WELL
- DESTROYED WELL
- APPROXIMATE BOUNDARY
- FENCE
- 200 VOC CONCENTRATION IN PARTS PER BILLION
- NS NOT SAMPLED
- TCE – 100 PPB
- TCE – 1000 PPB
- CIS-1,2-DCE – 100 PPB
- CIS-1,2-DCE – 1000 PPB
- VINYL CHLORIDE – 100 PPB
- VINYL CHLORIDE – 1000 PPB
- ISOCONCENTRATION CONTOURS APPROXIMATED USING CURRENT AND HISTORICAL DATA
- * NOT ON ROUTINE ANNUAL SAMPLING NETWORK

N

0 110' 220'

Figure 9. VOC Concentrations in the A Water-Bearing Zone – Comparison of November 2005 and 2006 and December 2008 – Former Intel Facility, Mountain View, California

Weiss Associates

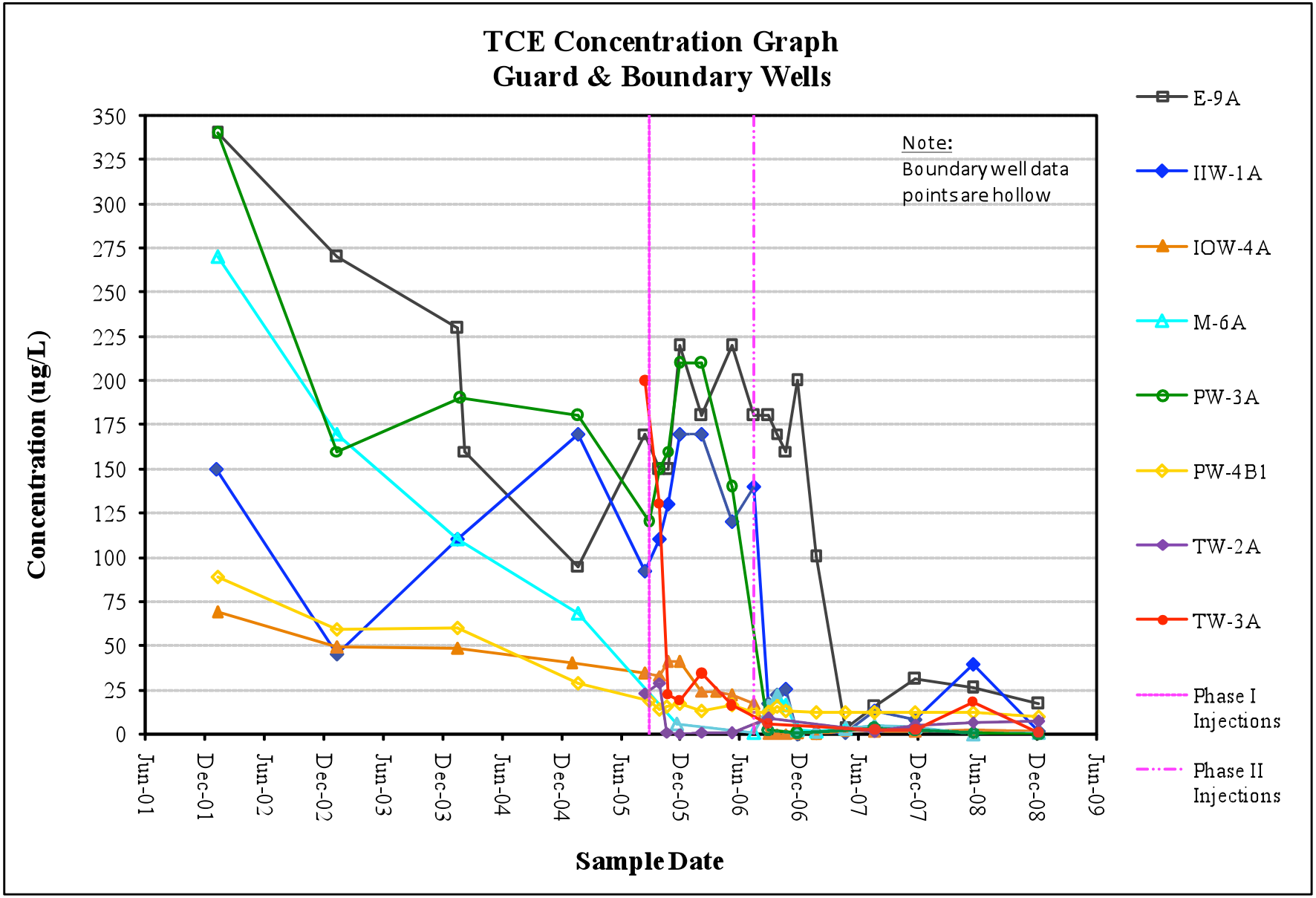


Figure 10. TCE Concentrations vs. Time for select A-zone and B-zone Guard and Boundary Wells, Former Intel Facility, Mountain View, California

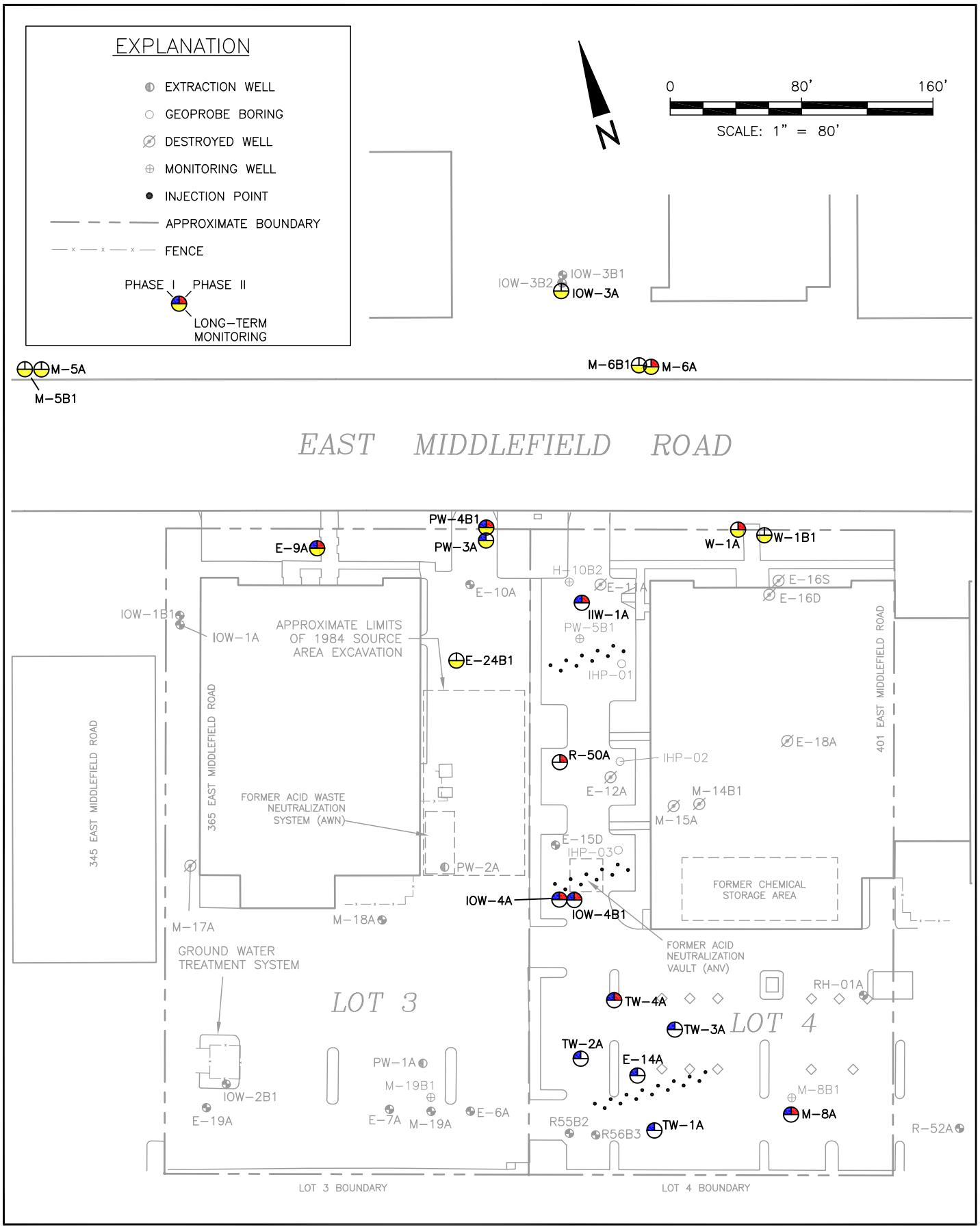


Figure 11. Additional Phase I and II Electron Donor Injection Locations, Former Intel Facility, Mountain View, California

TABLES

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
E-6A	03/25/04	63.83	16.30	47.53
	05/27/04		16.34	47.49
	08/26/04		17.33	46.50
	11/18/04		17.93	45.90
	03/24/05		16.30	47.53
	05/26/05		15.82	48.01
	08/25/05		16.46	47.37
	11/17/05		17.14	46.69
	03/23/06		15.85	47.98
	05/25/06		15.40	48.43
	08/24/06		15.89	47.94
	11/16/06		16.26	47.57
	03/22/07		16.47	47.36
	05/24/07		16.67	47.16
	08/23/07		17.23	46.60
	11/15/07		17.91	45.92
	03/27/08		17.43	46.40
	05/22/08		17.17	46.66
	08/28/08		17.65	46.18
	11/20/08		18.42	45.41
E-7A	03/25/04	63.95	16.45	47.50
	05/27/04		16.49	47.46
	08/26/04		17.46	46.49
	11/18/04		18.13	45.82
	03/24/05		16.41	47.54
	05/26/05		15.94	48.01
	08/25/05		16.57	47.38
	11/17/05		17.22	46.73
	03/23/06		16.05	47.90
	05/25/06		15.52	48.43
	08/24/06		15.99	47.96
	11/16/06		16.38	47.57
	03/22/07		16.62	47.33
	05/24/07		16.81	47.14
	08/23/07		17.37	46.58
	11/15/07		18.05	45.90
	03/27/08		17.56	46.39
	05/22/08		17.30	46.65
	08/28/08		17.79	46.16
	11/20/08		18.55	45.40
E-9A	03/25/04	61.11	14.88	46.23
	05/27/04		14.98	46.13
	08/26/04		15.75	45.36
	11/18/04		16.31	44.80

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
E-9A	03/24/05	61.11	14.80	46.31
	05/26/05		14.45	46.66
	08/25/05		14.95	46.16
	09/29/05		15.29	45.82
	10/26/05		15.44	45.67
	11/17/05		15.50	45.61
	02/08/06		14.89	46.22
	03/23/06		14.44	46.67
	05/11/06		13.94	47.17
	05/25/06		14.01	47.10
	07/17/06		14.26	46.85
	08/24/06		14.52	46.59
	08/30/06		14.48	46.63
	09/26/06		14.67	46.44
	10/25/06		14.78	46.33
	11/16/06		14.81	46.30
	01/24/07		15.14	45.97
	03/22/07		14.95	46.16
	04/24/07		15.13	45.98
	05/24/07		15.15	45.96
	07/25/07		15.43	45.68
	08/23/07		15.57	45.54
	11/15/07		16.10	45.01
	03/27/08		15.70	45.41
	05/22/08		15.53	45.58
	08/28/08		15.93	45.18
	11/20/08		16.60	44.51
E-10A	03/25/04	59.99	13.78	46.21
	05/27/04		13.88	46.11
	08/26/04		14.62	45.37
	11/18/04		15.20	44.79
	03/24/05		13.73	46.26
	05/26/05		13.35	46.64
	08/25/05		13.83	46.16
	11/17/05		14.35	45.64
	03/23/06		13.28	46.71
	05/25/06		12.87	47.12
	08/24/06		13.33	46.66
	11/16/06		13.68	46.31
	03/22/07		13.99	46.00
	05/24/07		14.27	45.72
	08/23/07		14.71	45.28
	11/15/07		14.95	45.04
	03/27/08		14.59	45.40
	05/22/08		14.39	45.60

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
E-10A	08/28/08	59.99	14.79	45.20
	11/20/08		15.44	44.55
E-14A	03/25/04	63.28	15.73	47.55
	05/27/04		15.76	47.52
	08/26/04		16.64	46.64
	11/18/04		17.32	45.96
	03/24/05		15.78	47.50
	05/26/05		15.28	48.00
	08/25/05		15.85	47.43
	09/29/05		16.22	47.06
	10/26/05		16.45	46.83
	11/17/05		16.52	46.76
	02/08/06		15.85	47.43
	03/23/06		15.32	47.96
	05/11/06		14.77	48.51
	05/25/06		14.86	48.42
	08/24/06		15.26	48.02
	08/30/06		15.20	48.08
	11/16/06		15.64	47.64
	03/22/07		15.89	47.39
	05/24/07		16.28	47.00
	08/23/07		16.60	46.68
	11/15/07		17.29	45.99
	03/27/08		16.86	46.42
	05/22/08		16.62	46.66
	08/28/08		17.04	46.24
	11/20/08		17.82	45.46
E-15D	03/25/04	60.94	14.49	46.45
	05/27/04		14.80	46.14
	08/26/04		15.62	45.32
	11/18/04		16.15	44.79
	03/24/05		14.67	46.27
	05/26/05		14.24	46.70
	08/25/05		14.77	46.17
	11/17/05		15.50	45.44
	03/23/06		13.97	46.97
	05/25/06		13.26	47.68
	08/24/06		14.08	46.86
	11/16/06		14.31	46.63
	03/22/07		14.52	46.42
	05/24/07		14.68	46.26
	08/23/07		15.12	45.82
	11/15/07		15.68	45.26
	03/27/08		15.28	45.66
	05/22/08		16.00	44.94

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
E-15D	08/28/08	60.94	15.57	45.37
	11/20/08		16.34	44.60
E-19A	03/25/04	63.59	16.22	47.37
	05/27/04		16.31	47.28
	08/26/04		17.23	46.36
	11/18/04		17.83	45.76
	03/24/05		16.19	47.40
	05/26/05		15.73	47.86
	08/25/05		16.37	47.22
	11/17/05		17.03	46.56
	03/23/06		15.81	47.78
	05/25/06		15.30	48.29
	08/24/06		15.84	47.75
	11/16/06		16.20	47.39
	03/22/07		16.45	47.14
	05/24/07		16.61	46.98
	08/23/07		17.17	46.42
	11/15/07		17.82	45.77
	03/27/08		17.35	46.24
	05/22/08		17.11	46.48
	08/28/08		17.57	46.02
	11/20/08		18.31	45.28
E-23A	03/25/04	72.01	23.69	48.32
	05/27/04		23.60	48.41
	08/26/04		24.63	47.38
	11/18/04		25.23	46.78
	03/24/05		23.67	48.34
	05/26/05		23.11	48.90
	08/25/05		23.73	48.28
	11/17/05		24.49	47.52
	03/23/06		23.31	48.70
	05/25/06		22.68	49.33
	08/24/06		23.08	48.93
	11/16/06		23.53	48.48
	03/22/07		23.85	48.16
	05/24/07		24.04	47.97
	08/23/07		24.59	47.42
	11/15/07		25.36	46.65
	03/27/08		24.26	47.75
	05/22/08		24.63	47.38
	08/28/08		25.06	46.95
	11/20/08		25.93	46.08
E-23B1	03/25/04	69.21	15.88	53.33
	05/27/04		16.42	52.79

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
E-23B1	08/26/04	69.21	17.49	51.72
	11/18/04		18.08	51.13
	03/24/05		16.51	52.70
	05/26/05		15.91	53.30
	08/25/05		16.90	52.31
	11/17/05		17.36	51.85
	03/23/06		16.08	53.13
	05/25/06		15.42	53.79
	08/24/06		16.00	53.21
	11/16/06		16.52	52.69
	03/22/07		16.75	52.46
	05/24/07		17.02	52.19
	08/23/07		18.03	51.18
	11/15/07		18.82	50.39
	03/27/08		17.70	51.51
	05/22/08		17.14	52.07
	08/28/08		18.23	50.98
	11/20/08		19.45	49.76
E-24B1	03/25/04	60.62	14.60	46.02
	05/27/04		15.10	45.52
	08/26/04		15.78	44.84
	11/18/04		16.54	44.08
	03/24/05		14.75	45.87
	05/26/05		14.42	46.20
	08/25/05		15.02	45.60
	11/17/05		15.40	45.22
	03/23/06		13.98	46.64
	05/25/06		13.64	46.98
	08/24/06		14.18	46.44
	11/16/06		14.52	46.10
	03/22/07		14.50	46.12
	05/24/07		14.72	45.90
	08/23/07		15.31	45.31
	11/15/07		15.64	44.98
	03/27/08		15.19	45.43
	05/22/08		14.90	45.72
	08/28/08		15.62	45.00
	11/20/08		16.35	44.27
I-9A	03/25/04	71.28	23.14	48.14
	05/27/04		23.37	47.91
	08/26/04		24.33	46.95
	11/18/04		25.04	46.24
	03/24/05		23.10	48.18
	05/26/05		22.67	48.61
	08/25/05		23.47	47.81

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
I-9A	11/17/05	71.28	24.23	47.05
	03/23/06		22.41	48.87
	05/25/06		22.12	49.16
	08/24/06		22.78	48.50
	11/16/06		23.25	48.03
	03/22/07		23.54	47.74
	05/24/07		23.72	47.56
	08/23/07		24.30	46.98
	11/15/07		25.15	46.13
	03/27/08		24.39	46.89
	05/22/08		24.13	47.15
	08/28/08		24.81	46.47
	11/20/08		25.64	45.64
IIW-1A	03/25/04	60.48	14.16	46.32
	05/27/04		14.23	46.25
	08/26/04		15.06	45.42
	11/18/04		15.60	44.88
	03/24/05		14.15	46.33
	05/26/05		13.78	46.70
	08/25/05		14.22	46.26
	09/29/05		14.47	46.01
	10/26/05		14.70	45.78
	11/17/05		14.80	45.68
	02/08/06		14.18	46.30
	03/23/06		13.65	46.83
	05/10/06		13.21	47.27
	05/25/06		13.26	47.22
	07/17/06		13.49	46.99
	08/24/06		13.62	46.86
	08/30/06		13.63	46.85
	09/25/06		13.79	46.69
	10/25/06		13.82	46.66
	11/16/06		13.81	46.67
	01/24/07		14.14	46.34
	03/22/07		14.12	46.36
	04/24/07		14.28	46.20
	05/24/07		14.22	46.26
	07/25/07		14.60	45.88
	08/23/07		14.79	45.69
	11/15/07		15.34	45.14
	03/27/08		14.99	45.49
	05/22/08		14.80	45.68
	08/28/08		15.15	45.33
	11/20/08		15.86	44.62
IOW-1A	03/25/04	59.83	13.54	46.29

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
IOW-1A	05/27/04	59.83	13.67	46.16
	08/26/04		14.48	45.35
	11/18/04		15.00	44.83
	03/24/05		13.42	46.41
	05/26/05		13.10	46.73
	08/25/05		13.72	46.11
	11/17/05		14.29	45.54
	03/23/06		12.83	47.00
	05/25/06		12.66	47.17
	08/24/06		13.21	46.62
	11/16/06		13.56	46.27
	03/22/07		13.68	46.15
	05/24/07		13.86	45.97
	08/23/07		14.36	45.47
	11/15/07		15.95	43.88
	03/27/08		14.46	45.37
	05/22/08		14.28	45.55
	08/28/08		14.75	45.08
	11/20/08		15.42	44.41
IOW-1B1	03/25/04	59.84	10.56	49.28
	05/27/04		11.29	48.55
	08/26/04		12.15	47.69
	11/18/04		12.86	46.98
	03/24/05		10.88	48.96
	05/26/05		10.57	49.27
	08/25/05		11.40	48.44
	11/17/05		11.72	48.12
	03/23/06		10.22	49.62
	05/25/06		9.59	50.25
	08/24/06		10.34	49.50
	11/16/06		10.80	49.04
	03/22/07		10.79	49.05
	05/24/07		11.01	48.83
	08/23/07		12.01	47.83
	03/27/08		11.55	48.29
	05/22/08		11.15	48.69
	08/28/08		12.33	47.51
	11/20/08		13.12	46.72
IOW-2B1	03/25/04	63.20	15.95	47.25
	05/27/04		16.35	46.85
	08/26/04		17.17	46.03
	11/18/04		17.89	45.31
	03/24/05		10.09	53.11
	05/26/05		15.74	47.46
	08/25/05		16.33	46.87

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
IOW-2B1	11/17/05	63.20	16.84	46.36
	03/23/06		15.51	47.69
	05/25/06		15.09	48.11
	08/24/06		15.58	47.62
	11/16/06		15.95	47.25
	03/22/07		15.97	47.23
	05/24/07		16.20	47.00
	08/23/07		16.89	46.31
	11/15/07		17.29	45.91
	03/27/08		16.71	46.49
	05/22/08		16.33	46.87
	08/28/08		17.20	46.00
	11/20/08		18.01	45.19
IOW-3A	03/25/04	58.74	13.19	45.55
	05/27/04		13.57	45.17
	08/26/04		14.26	44.48
	11/18/04		14.94	43.80
	03/24/05		13.24	45.50
	05/26/05		12.91	45.83
	08/25/05		13.52	45.22
	11/17/05		14.89	43.85
	03/23/06		12.78	45.96
	05/25/06		12.31	46.43
	08/24/06		12.94	45.80
	11/16/06		14.35	44.39
	03/22/07		13.25	45.49
	05/24/07		13.45	45.29
	08/23/07		13.84	44.90
	11/15/07		14.28	44.46
	03/27/08		13.93	44.81
	05/22/08		13.70	45.04
	08/28/08		14.22	44.52
	11/20/08		14.92	43.82
IOW-3B1	03/25/04	58.75	13.44	45.31
	05/27/04		13.97	44.78
	08/26/04		14.73	44.02
	11/18/04		15.39	43.36
	03/24/05		13.60	45.15
	05/26/05		13.39	45.36
	08/25/05		14.00	44.75
	11/17/05		14.50	44.25
	03/23/06		13.06	45.69
	05/25/06		12.71	46.04
	08/24/06		13.31	45.44
	11/16/06		13.85	44.90

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
IOW-3B1	03/22/07	58.75	13.51	45.24
	05/24/07		13.70	45.05
	08/23/07		14.30	44.45
	11/15/07		14.50	44.25
	03/27/08		14.11	44.64
	05/22/08		13.87	44.88
	08/28/08		14.54	44.21
	11/20/08		15.32	43.43
IOW-3B2	03/25/04	58.75	13.14	45.61
	05/27/04		13.40	45.35
	08/26/04		14.28	44.47
	11/18/04		14.95	43.80
	03/24/05		13.24	45.51
	05/26/05		12.93	45.82
	08/25/05		13.58	45.17
	11/17/05		14.02	44.73
	03/23/06		12.64	46.11
	05/25/06		12.14	46.61
	08/24/06		12.83	45.92
	11/16/06		13.30	45.45
	03/22/07		13.05	45.70
	05/24/07		13.28	45.47
	08/23/07		13.89	44.86
	03/27/08		13.62	45.13
	05/22/08		13.42	45.33
	08/28/08		14.10	44.65
	11/20/08		14.92	43.83
IOW-4A	03/25/04	59.83	13.94	45.89
	05/27/04		14.00	45.83
	08/26/04		14.89	44.94
	11/18/04		15.36	44.47
	03/24/05		13.92	45.91
	05/26/05		13.50	46.33
	08/25/05		14.00	45.83
	09/29/05		14.40	45.43
	10/26/05		14.58	45.25
	11/17/05		14.64	45.19
	02/08/06		14.05	45.78
	03/22/06		13.57	46.26
	03/23/06		13.50	46.33
	05/11/06		13.04	46.79
	05/25/06		12.94	46.89
	07/17/06		13.29	46.54
	08/24/06		13.40	46.43
	08/30/06		13.24	46.59

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
IOW-4A	09/25/06	59.83	13.33	46.50
	10/25/06		13.48	46.35
	11/16/06		13.61	46.22
	01/24/07		13.96	45.87
	03/22/07		13.95	45.88
	04/24/07		14.17	45.66
	05/24/07		14.17	45.66
	08/23/07		14.69	45.14
	11/15/07		15.21	44.62
	03/27/08		14.94	44.89
	05/22/08		14.67	45.16
	08/28/08		15.10	44.73
	11/20/08		15.86	43.97
IOW-4B1	03/25/04	59.84	14.37	45.47
	05/27/04		14.77	45.07
	08/26/04		15.56	44.28
	11/18/04		15.69	44.15
	03/24/05		14.46	45.38
	05/26/05		14.14	45.70
	08/25/05		14.77	45.07
	09/29/05		15.03	44.81
	10/25/05		15.21	44.63
	11/17/05		15.25	44.59
	02/08/06		14.50	45.34
	03/23/06		13.83	46.01
	05/10/06		13.33	46.51
	05/25/06		13.49	46.35
	07/17/06		13.75	46.09
	08/24/06		14.01	45.83
	08/30/06		14.00	45.84
	09/26/06		14.21	45.63
	10/25/06		14.39	45.45
	11/16/06		14.33	45.51
	01/24/07		14.03	45.81
	03/22/07		14.37	45.47
	04/24/07		14.62	45.22
	05/24/07		14.54	45.30
	08/23/07		15.17	44.67
	11/15/07		15.50	44.34
	03/27/08		15.25	44.59
	05/22/08		14.76	45.08
	08/28/08		15.45	44.39
	11/20/08		16.24	43.60
M-10B2	03/25/04	60.27	5.87	54.40
	05/27/04		6.77	53.50

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-10B2	08/26/04	60.27	7.71	52.56
	11/18/04		8.38	51.89
	03/24/05		6.54	53.73
	05/26/05		6.37	53.90
	08/25/05		7.24	53.03
	11/17/05		7.72	52.55
	03/23/06		5.90	54.37
	05/25/06		5.11	55.16
	08/24/06		5.81	54.46
	11/16/06		5.95	54.32
	03/22/07		5.45	54.82
	05/24/07		6.12	54.15
	08/23/07		7.78	52.49
	11/15/07		8.40	51.87
	03/27/08		6.99	53.28
	05/22/08		6.65	53.62
	08/28/08		7.64	52.63
	11/20/08		9.21	51.06
M-18A	03/25/04	61.39	14.22	47.17
	05/27/04		14.35	47.04
	08/26/04		15.31	46.08
	11/18/04		15.76	45.63
	03/24/05		14.21	47.18
	05/26/05		13.79	47.60
	08/25/05		14.38	47.01
	11/17/05		14.88	46.51
	03/23/06		13.86	47.53
	05/25/06		13.32	48.07
	08/24/06		13.82	47.57
	11/16/06		14.17	47.22
	03/22/07		14.36	47.03
	05/24/07		14.67	46.72
	08/23/07		15.10	46.29
	11/15/07		15.71	45.68
	03/27/08		15.28	46.11
	05/22/08		15.04	46.35
	08/28/08		15.51	45.88
	11/20/08		16.26	45.13
M-19A	03/25/04	63.55	16.03	47.52
	05/27/04		16.09	47.46
	08/26/04		17.05	46.50
	11/18/04		17.66	45.89
	03/24/05		16.00	47.55
	05/26/05		15.59	47.96
	08/25/05		16.20	47.35

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-19A	11/17/05	63.55	16.87	46.68
	03/23/06		15.53	48.02
	05/25/06		15.16	48.39
	08/24/06		15.61	47.94
	11/16/06		16.00	47.55
	03/22/07		16.24	47.31
	05/24/07		16.42	47.13
	08/23/07		16.97	46.58
	11/15/07		17.64	45.91
	03/27/08		17.20	46.35
	05/22/08		16.93	46.62
	08/28/08		17.40	46.15
	11/20/08		18.15	45.40
M-19B1	03/25/04	63.72	16.32	47.40
	05/27/04		16.71	47.01
	08/26/04		17.62	46.10
	11/18/04		18.26	45.46
	03/24/05		16.46	47.26
	05/26/05		15.85	47.87
	08/25/05		16.77	46.95
	11/17/05		17.31	46.41
	03/23/06		15.71	48.01
	05/25/06		15.26	48.46
	08/24/06		15.82	47.90
	11/16/06		16.13	47.59
	03/22/07		16.37	47.35
	05/24/07		16.43	47.29
	08/23/07		17.10	46.62
	11/15/07		17.56	46.16
	03/27/08		16.98	46.74
	05/22/08		16.62	47.10
	08/28/08		17.44	46.28
	11/20/08		18.40	45.32
M-1A	03/25/04 d		10.05	NA
	05/27/04 d		10.00	NA
	08/26/04 d		10.69	NA
	11/18/04 d		11.21	NA
	03/24/05 d		10.54	NA
	05/26/05 d		9.66	NA
	08/25/05 d		10.04	NA
	11/17/05 d		10.55	NA
	03/23/06 d		9.57	NA
	05/25/06 d		9.28	NA
	08/24/06 d		9.64	NA
	11/16/06 d		9.94	NA

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date		Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-1A	03/22/07	d		9.98	NA
	05/24/07	d		10.17	NA
	08/23/07	d		10.54	NA
	11/15/07	d		11.05	NA
	03/27/08	d		10.82	NA
	05/22/08	d		10.64	NA
	08/28/08	d		11.12	NA
	11/20/08	d		11.60	NA
M-1B1	03/25/04	d		11.36	NA
	05/27/04	d		11.85	NA
	08/26/04	d		12.69	NA
	11/18/04	d		13.27	NA
	03/24/05	d		11.54	NA
	05/26/05	d		11.27	NA
	08/25/05	d		11.88	NA
	11/17/05	d		12.39	NA
	03/23/06	d		10.94	NA
	05/25/06	d		10.64	NA
	08/24/06	d		11.22	NA
	11/16/06	d		11.60	NA
	03/22/07	d		11.35	NA
	05/24/07	d		11.71	NA
	08/23/07	d		12.09	NA
	11/15/07	d		12.39	NA
	03/27/08	d		12.03	NA
	05/22/08	d		11.80	NA
	08/28/08	d		12.20	NA
	11/20/08	d		13.13	NA
M-2B1	03/25/04		56.45	12.87	43.58
	05/27/04			13.52	42.93
	08/26/04			14.27	42.18
	11/18/04	--*--		NA	NA
	03/24/05			12.94	43.51
	05/26/05			12.93	43.52
	08/25/05			13.62	42.83
	11/17/05			14.01	42.44
	03/23/06			12.48	43.97
	05/25/06			12.32	44.13
	08/24/06			12.94	43.51
	11/16/06			13.32	43.13
	03/22/07			13.00	43.45
	05/24/07			13.18	43.27
	08/23/07			13.80	42.65
	11/15/07			13.75	42.70
	03/27/08			13.40	43.05

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-2B1	05/22/08	56.45	13.04	43.41
	08/28/08		13.98	42.47
	11/20/08		14.70	41.75
M-3B1	03/25/04	55.98	11.66	44.32
	05/27/04		12.26	43.72
	08/26/04		13.03	42.95
	11/18/04		13.65	42.33
	03/24/05		11.79	44.19
	05/26/05		10.93	45.05
	08/25/05		12.30	43.68
	11/17/05		12.77	43.21
	03/23/06		11.30	44.68
	05/25/06		11.07	44.91
	08/24/06		11.65	44.33
	11/16/06		12.13	43.85
	03/22/07		11.78	44.20
	05/24/07		11.96	44.02
	08/23/07		12.54	43.44
	11/15/07		12.58	43.40
	03/27/08		12.26	43.72
	05/22/08		12.21	43.77
	08/28/08		12.76	43.22
	11/20/08		13.52	42.46
M-4A	03/25/04	59.93	14.57	45.36
	05/27/04		14.80	45.13
	08/26/04		15.66	44.27
	11/18/04		16.12	43.81
	03/24/05		14.43	45.50
	05/26/05		14.23	45.70
	08/25/05		15.05	44.88
	11/17/05		15.41	44.52
	03/23/06		14.08	45.85
	05/25/06		13.97	45.96
	08/24/06		14.51	45.42
	11/16/06		14.68	45.25
	03/22/07		14.71	45.22
	05/24/07		14.96	44.97
	08/23/07		15.43	44.50
	11/15/07		15.90	44.03
	03/27/08		15.30	44.63
	05/22/08		15.21	44.72
	08/28/08		15.79	44.14
	11/20/08		16.37	43.56
M-4B1	03/25/04	59.93	14.44	45.49

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-4B1	05/27/04	59.93	15.16	44.77
	08/26/04		15.97	43.96
	11/18/04		16.58	43.35
	03/24/05		14.56	45.37
	05/26/05		14.50	45.43
	08/25/05		15.43	44.50
	11/17/05		15.72	44.21
	03/23/06		14.15	45.78
	05/25/06		13.91	46.02
	08/24/06		14.53	45.40
	11/16/06		14.89	45.04
	03/22/07		14.74	45.19
	05/24/07		14.98	44.95
	08/23/07		15.70	44.23
	11/15/07		15.86	44.07
	03/27/08		15.26	44.67
	05/22/08		15.00	44.93
	08/28/08		15.94	43.99
	11/20/08		15.62	44.31
M-5A	03/25/04	60.17	14.48	45.69
	05/27/04		14.66	45.51
	08/26/04		15.47	44.70
	11/18/04		15.95	44.22
	03/24/05		14.38	45.79
	05/26/05		14.12	46.05
	08/25/05		14.73	45.44
	11/17/05		15.26	44.91
	03/23/06		13.99	46.18
	05/25/06		13.72	46.45
	08/24/06		14.24	45.93
	11/16/06		14.53	45.64
	03/22/07		14.61	45.56
	05/24/07		14.81	45.36
	08/23/07		15.28	44.89
	11/15/07		15.89	44.28
	03/27/08		15.34	44.83
	05/22/08		15.19	44.98
	08/28/08		15.63	44.54
	11/20/08		16.27	43.90
M-5B1	03/25/04	60.16	15.82	44.34
	05/27/04		16.42	43.74
	08/26/04		17.23	42.93
	11/18/04		17.82	42.34
	03/24/05		15.94	44.22
	05/26/05		15.83	44.33

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-5B1	08/25/05	60.16	16.54	43.62
	11/17/05		17.00	43.16
	03/23/06		14.46	45.70
	05/25/06		15.18	44.98
	08/24/06		15.81	44.35
	11/16/06		16.16	44.00
	03/22/07		16.00	44.16
	05/24/07		16.16	44.00
	08/23/07		16.80	43.36
	11/15/07		18.85	41.31
	03/27/08		16.42	43.74
	05/22/08		16.23	43.93
	08/28/08		17.03	43.13
	11/20/08		17.69	42.47
M-6A	03/25/04	58.59	12.83	45.76
	05/27/04		13.15	45.44
	08/26/04		13.91	44.68
	11/18/04		14.50	44.09
	03/24/05		12.90	45.69
	05/26/05		12.61	45.98
	08/25/05		13.09	45.50
	11/17/05		13.71	44.88
	03/23/06		12.39	46.20
	05/25/06		12.02	46.57
	07/17/06		12.42	46.17
	08/24/06		12.57	46.02
	08/30/06		12.61	45.98
	09/26/06		12.73	45.86
	10/25/06		12.86	45.73
	11/16/06		12.89	45.70
	01/24/07		13.15	45.44
	03/22/07		12.87	45.72
	04/24/07		13.18	45.41
	05/24/07		13.11	45.48
	07/25/07		13.53	45.06
	08/23/07		13.53	45.06
	11/15/07		13.95	44.64
	03/27/08		13.60	44.99
	05/22/08		13.37	45.22
	08/28/08		13.88	44.71
	11/20/08		14.58	44.01
M-6B1	03/25/04	58.99	13.13	45.86
	05/27/04		13.44	45.55
	08/26/04		14.23	44.76
	11/18/04		14.96	44.03

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-6B1	03/24/05	58.99	13.20	45.79
	05/26/05		12.91	46.08
	08/25/05		13.48	45.51
	11/17/05		14.14	44.85
	03/23/06		12.67	46.32
	05/25/06		12.43	46.56
	08/24/06		12.84	46.15
	11/16/06		13.24	45.75
	03/22/07		13.15	45.84
	05/24/07		13.36	45.63
	08/23/07		13.81	45.18
	11/15/07		14.24	44.75
	03/27/08		13.87	45.12
	05/22/08		13.56	45.43
	08/28/08		14.18	44.81
	11/20/08		14.91	44.08
M-7A	03/25/04	58.39	11.44	46.95
	05/27/04		10.93	47.46
	08/26/04		12.14	46.25
	11/18/04		12.75	45.64
	03/24/05		11.48	46.91
	05/26/05		11.04	47.35
	08/25/05		11.45	46.94
	11/17/05		12.09	46.30
	03/23/06		11.06	47.33
	05/25/06		10.68	47.71
	08/24/06		10.98	47.41
	11/16/06		11.38	47.01
	03/22/07		11.52	46.87
	05/24/07		11.69	46.70
	08/23/07		11.69	46.70
	11/15/07		12.70	45.69
	03/27/08		12.41	45.98
	05/22/08		12.23	46.16
	08/28/08		12.53	45.86
	11/20/08		13.20	45.19
M-7B1	03/25/04	58.65	10.80	47.85
	05/27/04		11.39	47.26
	08/26/04		11.69	46.96
	11/18/04		12.36	46.29
	03/24/05		10.81	47.84
	05/26/05		10.45	48.20
	08/25/05		10.97	47.68
	11/17/05		11.52	47.13
	03/23/06		10.35	48.30

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-7B1	05/25/06	58.65	9.93	48.72
	08/24/06		10.27	48.38
	11/16/06		10.72	47.93
	03/22/07		10.82	47.83
	05/24/07		11.00	47.65
	08/23/07		12.12	46.53
	11/15/07		12.16	46.49
	03/27/08		11.77	46.88
	05/22/08		11.40	47.25
	08/28/08		11.94	46.71
	11/20/08		12.72	45.93
M-8A	03/25/04	64.30	16.78	47.52
	05/27/04		16.74	47.56
	08/26/04		17.70	46.60
	11/18/04		18.30	46.00
	03/24/05		16.77	47.53
	05/26/05		16.28	48.02
	08/25/05		16.83	47.47
	09/29/05		17.15	47.15
	10/25/05		17.40	46.90
	11/17/05		17.51	46.79
	02/08/06		16.85	47.45
	03/22/06		16.38	47.92
	03/23/06		16.40	47.90
	04/14/06		15.71	48.59
	05/10/06		15.76	48.54
	05/25/06		15.84	48.46
	07/17/06		15.97	48.33
	08/24/06		16.23	48.07
	08/30/06		16.21	48.09
	09/26/06		16.38	47.92
	10/25/06		16.55	47.75
	11/16/06		16.62	47.68
	01/24/07		16.94	47.36
	03/22/07		16.90	47.40
	04/24/07		17.02	47.28
	05/24/07		17.04	47.26
	07/25/07		17.35	46.95
	08/23/07		17.55	46.75
	11/15/07		18.24	46.06
	03/27/08		17.87	46.43
	05/22/08		17.60	46.70
	08/28/08		18.01	46.29
	11/20/08		18.79	45.51
M-8B1	03/25/04	63.95	16.40	47.55

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-8B1	05/27/04	63.95	16.55	47.40
	08/26/04		17.37	46.58
	11/18/04		18.03	45.92
	03/24/05		16.50	47.45
	05/26/05		16.04	47.91
	08/25/05		16.59	47.36
	11/17/05		17.20	46.75
	03/23/06		15.92	48.03
	05/25/06		15.50	48.45
	08/24/06		15.94	48.01
	11/16/06		16.28	47.67
	03/22/07		16.45	47.50
	05/24/07		16.65	47.30
	08/23/07		17.19	46.76
	11/15/07		17.78	46.17
	03/27/08		17.36	46.59
	05/22/08		17.01	46.94
	08/28/08		17.59	46.36
	11/20/08		18.39	45.56
M-9A	03/25/04	64.66	18.00	46.66
	05/27/04		18.20	46.46
	08/26/04		19.07	45.59
	11/18/04		19.57	45.09
	03/24/05		16.50	48.16
	05/26/05		17.71	46.95
	08/25/05		18.41	46.25
	11/17/05		18.90	45.76
	03/23/06		17.64	47.02
	05/25/06		17.21	47.45
	08/24/06		17.77	46.89
	11/16/06		18.08	46.58
	03/22/07		18.28	46.38
	05/24/07		19.45	45.21
	08/23/07		19.03	45.63
	11/15/07		19.64	45.02
	03/27/08		19.03	45.63
	05/22/08		18.88	45.78
	08/28/08		19.41	45.25
	11/20/08		22.19	42.47
M-9B1	03/25/04	65.04	16.26	48.78
	05/27/04		17.02	48.02
	08/26/04		17.99	47.05
	11/18/04		18.47	46.57
	03/24/05		16.65	48.39
	05/26/05		16.19	48.85

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
M-9B1	08/25/05	65.04	17.24	47.80
	11/17/05		17.69	47.35
	03/23/06		15.97	49.07
	05/25/06		16.05	48.99
	08/24/06		16.25	48.79
	11/16/06		16.71	48.33
	03/22/07		16.67	48.37
	05/24/07		17.02	48.02
	08/23/07		17.99	47.05
	11/15/07		18.43	46.61
	03/27/08		17.31	47.73
	05/22/08		17.84	47.20
	08/28/08		18.33	46.71
	11/20/08		19.13	45.91
PW-1A	03/25/04	63.04	15.26	47.78
	05/27/04		15.32	47.72
	08/26/04		16.28	46.76
	11/18/04		16.89	46.15
	03/24/05		15.54	47.50
	05/26/05		15.09	47.95
	08/25/05		15.47	47.57
	11/17/05		16.42	46.62
	03/23/06		15.10	47.94
	05/25/06		14.70	48.34
	08/24/06		15.15	47.89
	11/16/06		15.58	47.46
	03/22/07		15.78	47.26
	05/24/07		15.95	47.09
	08/23/07		16.55	46.49
	11/15/07		17.21	45.83
	03/27/08		16.39	46.65
	05/22/08		16.13	46.91
	08/28/08		16.68	46.36
	11/20/08		19.72	43.32
PW-2A	03/25/04	61.48	19.61	41.87
	05/27/04		19.95	41.53
	08/26/04		21.66	39.82
	11/18/04		21.45	40.03
	03/24/05		17.95	43.53
	05/26/05		17.73	43.75
	08/25/05		14.88	46.60
	11/17/05		15.42	46.06
	03/23/06		14.35	47.13
	05/25/06		13.93	47.55
	08/24/06		14.37	47.11

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
PW-2A	11/16/06	61.48	14.75	46.73
	03/22/07		14.88	46.60
	05/24/07		15.05	46.43
	08/23/07		15.53	45.95
	11/15/07		16.10	45.38
	03/27/08		15.74	45.74
	05/22/08		15.52	45.96
	08/28/08		15.91	45.57
	11/20/08		16.65	44.83
PW-3A	03/25/04	59.02	13.77	45.25
	05/27/04		13.74	45.28
	08/26/04		14.85	44.17
	11/18/04		14.93	44.09
	03/24/05		13.75	45.27
	05/26/05		13.44	45.58
	08/25/05		13.98	45.04
	09/29/05		13.12	45.90
	10/26/05		13.33	45.69
	11/17/05		13.37	45.65
	02/08/06		12.82	46.20
	03/23/06		12.35	46.67
	05/11/06		11.91	47.11
	05/25/06		11.96	47.06
	08/24/06		12.42	46.60
	08/30/06		12.31	46.71
	11/16/06		12.76	46.26
	03/22/07		12.88	46.14
	05/24/07		13.05	45.97
	07/25/07		13.33	45.69
	08/23/07		13.47	45.55
	11/15/07		14.03	44.99
	03/27/08		13.66	45.36
	05/22/08		13.97	45.05
	08/28/08		13.83	45.19
	11/20/08		14.54	44.48
PW-4B1	03/25/04	58.96	16.11	42.85
	05/27/04		17.86	41.10
	08/26/04		16.51	42.45
	11/18/04		16.23	42.73
	03/24/05		17.27	41.69
	05/26/05		16.29	42.67
	08/25/05		15.67	43.29
	09/29/05		13.58	45.38
	10/25/05		13.28	45.68
	11/17/05		13.80	45.16

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
PW-4B1	02/08/06	58.96	13.01	45.95
	03/23/06		12.40	46.56
	05/10/06		12.03	46.93
	05/25/06		12.05	46.91
	07/17/06		12.68	46.28
	08/24/06		12.64	46.32
	08/30/06		12.65	46.31
	09/26/06		12.84	46.12
	10/25/06		13.04	45.92
	11/16/06		13.01	45.95
	01/24/07		13.23	45.73
	03/22/07		12.77	46.19
	04/24/07		13.30	45.66
	05/24/07		13.14	45.82
	07/25/07		13.62	45.34
	08/23/07		13.78	45.18
	11/15/07		14.04	44.92
	03/27/08		17.55	41.41
	05/22/08		13.28	45.68
	08/28/08		14.03	44.93
	11/20/08		14.77	44.19
PW-5B1	03/25/04	60.23	14.31	45.92
	05/27/04		14.81	45.42
	08/26/04		15.57	44.66
	11/18/04		16.17	44.06
	03/24/05		14.45	45.78
	05/26/05		14.18	46.05
	08/25/05		14.78	45.45
	11/17/05		15.21	45.02
	03/23/06		13.77	46.46
	05/25/06		13.43	46.80
	08/24/06		14.02	46.21
	11/16/06		14.31	45.92
	03/22/07		14.32	45.91
	05/24/07		14.50	45.73
	08/23/07		15.09	45.14
	11/15/07		15.39	44.84
	03/27/08		14.98	45.25
	05/22/08		14.69	45.54
	08/28/08		15.37	44.86
	11/20/08		16.16	44.07
R-50A	03/25/04	60.43	14.12	46.31
	05/27/04		14.41	46.02
	08/26/04		15.19	45.24
	11/18/04		15.84	44.59

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
R-50A	03/24/05	60.43	14.17	46.26
	05/26/05		13.84	46.59
	08/25/05		14.40	46.03
	11/17/05		14.86	45.57
	03/23/06		13.60	46.83
	05/25/06		13.22	47.21
	07/17/06		13.45	46.98
	08/24/06		13.77	46.66
	08/30/06		13.74	46.69
	09/25/06		13.89	46.54
	10/25/06		14.11	46.32
	11/16/06		14.11	46.32
	01/24/07		14.23	46.20
	03/22/07		14.14	46.29
	04/24/07		14.40	46.03
	05/24/07		14.33	46.10
	07/25/07		14.70	45.73
	08/23/07		14.86	45.57
	11/15/07		15.31	45.12
	03/27/08		14.75	45.68
	05/22/08		14.67	45.76
	08/28/08		15.18	45.25
	11/20/08		15.96	44.47
RH-01A	03/25/04	62.39	15.11	47.28
	05/27/04		15.05	47.34
	08/26/04		15.93	46.46
	11/18/04		16.53	45.86
	03/24/05		15.11	47.28
	05/26/05		14.62	47.77
	08/25/05		15.13	47.26
	11/17/05		15.81	46.58
	03/23/06		14.70	47.69
	05/25/06		14.27	48.12
	08/24/06		14.59	47.80
	11/16/06		14.93	47.46
	03/22/07		15.15	47.24
	05/24/07		15.32	47.07
	08/23/07		15.80	46.59
	11/15/07		16.46	45.93
	03/27/08		16.16	46.23
	05/22/08		15.90	46.49
	08/28/08		16.27	46.12
	11/20/08		17.00	45.39
W-1A	03/25/04	58.96	12.44	46.52
	05/27/04		12.46	46.50

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
W-1A	08/26/04	58.96	13.28	45.68
	11/18/04		13.83	45.13
	03/24/05		12.42	46.54
	05/26/05		11.92	47.04
	08/25/05		12.50	46.46
	11/17/05		13.09	45.87
	03/23/06		11.93	47.03
	05/25/06		11.59	47.37
	07/17/06		11.80	47.16
	08/24/06		11.97	46.99
	08/30/06		11.98	46.98
	09/26/06		12.11	46.85
	10/25/06		12.24	46.72
	11/16/06		12.32	46.64
	01/24/07		12.61	46.35
	03/22/07		12.43	46.53
	04/24/07		12.63	46.33
	05/24/07		12.62	46.34
	07/25/07		12.92	46.04
	08/23/07		13.10	45.86
	11/15/07		13.63	45.33
	03/27/08		13.32	45.64
	05/22/08		13.11	45.85
	08/28/08		13.45	45.51
	11/20/08		14.16	44.80
W-1B	03/25/04	59.02	12.79	46.23
	05/27/04		12.99	46.03
	08/26/04		13.68	45.40
	11/18/04		14.35	44.67
	03/24/05		12.80	46.22
	05/26/05		12.42	46.60
	08/25/05		12.95	46.07
	11/17/05		13.46	45.56
	03/23/06		12.20	46.82
	05/25/06		11.88	47.14
	08/24/06		12.34	46.68
	11/16/06		12.69	46.33
	03/22/07		12.70	46.32
	05/24/07		12.90	46.12
	08/23/07		13.34	45.68
	11/15/07		13.88	45.14
	03/27/08		13.52	45.50
	05/22/08		13.17	45.85
	08/28/08		13.76	45.26
	11/20/08		14.52	44.50

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date		Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
TW-1A	08/25/05	e		16.88	NA
	09/29/05	e		17.22	NA
	10/25/05	e		17.44	NA
	11/17/05	e		17.50	NA
	02/08/06	e		16.86	NA
	03/23/06	e		16.47	NA
	05/10/06	e		15.71	NA
	05/25/06	e		15.82	NA
	08/24/06	e		16.27	NA
	08/30/06	e		16.25	NA
	11/16/06	e		16.68	NA
	03/22/07	e		17.00	NA
	05/24/07	e		17.15	NA
	07/25/07	e		17.42	NA
	08/23/07	e		17.64	NA
	11/15/07	e		18.34	NA
	03/27/08	e		17.90	NA
	05/22/08	e		17.64	NA
	08/28/08	e		18.01	NA
	11/20/08	e		18.88	NA
TW-2A	08/25/05	e		15.72	NA
	09/29/05	e		16.07	NA
	10/25/05	e		16.33	NA
	11/17/05	e		16.42	NA
	02/08/06	e		16.05	NA
	03/23/06	e		15.12	NA
	05/10/06	e		14.71	NA
	05/25/06	e		14.73	NA
	08/24/06	e		15.11	NA
	08/30/06	e		15.05	NA
	11/16/06	e		15.50	NA
	03/22/07	e		15.75	NA
	05/24/07	e		15.97	NA
	08/23/07	e		16.50	NA
	11/15/07	e		17.16	NA
	03/27/08	e		16.78	NA
	05/22/08	e		16.51	NA
	08/28/08	e		16.96	NA
	11/20/08	e		17.72	NA
TW-3A	08/25/05	e		15.39	NA
	09/29/05	e		15.77	NA
	10/26/05	e		15.93	NA
	11/17/05	e		16.01	NA
	02/08/06	e		15.66	NA
	03/23/06	e		15.00	NA

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date		Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)
TW-3A	05/11/06	e		14.66	NA
	05/25/06	e		14.45	NA
	08/24/06	e		14.85	NA
	08/30/06	e		14.80	NA
	11/16/06	e		15.24	NA
	03/22/07	e		15.46	NA
	05/24/07	e		15.61	NA
	08/23/07	e		16.17	NA
	11/15/07	e		16.84	NA
	03/27/08	e		16.54	NA
	05/22/08	e		16.25	NA
	08/28/08	e		16.60	NA
	11/20/08	e		17.41	NA
TW-4A	08/25/05	e		15.04	NA
	09/29/05	e		15.40	NA
	10/26/05	e		15.67	NA
	11/17/05	e		15.78	NA
	02/08/06	e		15.25	NA
	03/23/06	e		14.60	NA
	05/11/06	e		14.09	NA
	05/25/06	e		14.14	NA
	07/17/06	e		14.33	NA
	08/24/06	e		14.45	NA
	08/30/06	e		14.39	NA
	09/25/06	e		14.59	NA
	10/25/06	e		14.76	NA
	11/16/06	e		14.83	NA
	01/24/07	e		15.12	NA
	03/22/07	e		15.09	NA
	04/24/07	e		15.25	NA
	05/24/07	e		15.28	NA
	08/23/07	e		15.80	NA
	11/15/07	e		15.46	NA
	03/27/08	e		16.10	NA
	05/22/08	e		15.82	NA
	08/28/08	e		16.29	NA
	11/20/08	e		17.04	NA

Table 1. Ground Water Elevations - Former Intel Mountain View Facility, Mountain View, California
March 25, 2004 to November 20, 2008

Well ID	Date	Top of Casing (ft above msl)	Depth to Water (ft)	Ground Water Elevation (msl)

Notes and Abbreviations:

--*-- = measurement not recorded due to well inaccessability
a = well destroyed due to building improvements on property
b = well blocked at 8.88 feet below top-of-casing (TOC)
c = well destroyed on January 22, 2001
d = TOC elevation unknown; well casing altered during June 2001 construction
e = TOC elevation unknown; temporary well installed August 9, 2005
msl = mean sea level
NA = not available
NR = not recorded

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<<					*micrograms per liter (µg/L)*								>>
Effluent	01/13/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**4.2**	<0.5	<0.5	<1	<0.5	<0.5	**4**
	04/27/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**7**	<0.5	<0.5	<1	<0.5	<0.5	**7**
	07/06/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**6.8**	<0.5	<0.5	<1	<0.5	<0.5	**7**
	10/05/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**3.9**	<0.5	<0.5	<1	<0.5	<0.5	**4**
	02/10/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	ND
	04/01/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	ND
	05/02/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	ND
	07/01/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.7**	<0.5	<0.5	<1	<0.5	<0.5	**2**
	02/09/06	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.4**	<0.5	---	---	---	---	**1**
	07/27/06	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**2.6**	<0.5	---	---	---	---	**4**
	11/28/06	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.9**	<0.5	---	---	---	---	**0.9**
	08/10/07	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.5**	<0.5	---	---	---	---	**2**
	05/21/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.8**	<0.5	---	---	---	---	**2**
Midpoint	01/13/04	STCL/8260B	**1.2**	<0.5	<0.5	**42**	<0.5	<0.5	**18**	**1.6**	**1.1**	<0.5	<1	<0.5	<0.5	**64**
	02/10/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**2**	<0.5	<0.5	<1	<0.5	<0.5	**2**
Influent	01/13/04	STCL/8260B	<1	<1	<1	**19**	<1	<1	**150**	**1.6**	**2.2**	<1	<2	<1	<1	**177**
	04/27/04	STCL/8260B	**1.2**	<1	<1	**49**	<1	<1	**120**	**19**	**2.4**	<1	<2	<1	<1	**194**
	07/06/04	STCL/8260B	**1.2**	<1	<1	**53**	<1	<1	**110**	**12**	**2**	<1	<2	<1	<1	**181**
	10/05/04	STCL/8260B	**1.3**	<1	<1	**63**	<1	<1	**110**	**16**	**1.3**	<1	<2	<1	<1	**192**
	02/10/05	STCL/8260B	**1.3**	<1	<1	**60**	<1	<1	**99**	**14**	**1.3**	<1	<2	<1	<1	**177**
	04/01/05	STCL/8260B	**1.4**	<1	<1	**70**	<1	<1	**89**	**35**	**1.5**	<1	<2	<1	<1	**198**
	05/02/05	STCL/8260B	**1.6**	<1	<1	**66**	<1	<1	**100**	**31**	**1.4**	<1	<2	<1	<1	**203**
	07/01/05	STCL/8260B	**1.1**	<1	<1	**52**	<1	<1	**78**	**21**	**1.6**	<1	<2	<1	<1	**156**
	02/09/06	CTB/8260B	<2.5	<2.5	<2.5	**3.3**	<2.5	<2.5	**3.4**	<2.5	<2.5	---	---	---	---	**7**
	07/27/06	CTB/8260B	**2.5**	<1.3	<1.3	**210**	<1.3	<1.3	**39**	**69**	<1.3	---	---	---	---	**321**
	11/28/06	CTB/8260B	<20	<20	<20	<20	<20	<20	<20	<20	<20	---	---	---	---	ND
	08/10/07	CTB/8260B	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	---	---	---	---	ND
	05/21/08	CTB/8260B	<20	<20	<20	<20	<20	<20	<20	<20	<20	---	---	---	---	ND
E-9A	01/21/04	STCL/8260B	<2	<2	<2	**26**	<2	<2	**230**	<2	**3**	---	---	---	---	**263**
	02/11/04	STCL/8260B	<1	<1	<1	**18**	<1	<1	**160**	<1	**2.8**	<1	<2	<1	<1	**196**
	01/25/05	STCL/8260B	<1	<1	<1	**7.2**	<1	<1	**95**	<1	<1	---	---	---	---	**108**
	08/17/05	STCL/8260B	<2.5	<2.5	<2.5	**15**	<2.5	<2.5	**170**	<2.5	**3.8**	---	---	---	---	**189**
	09/30/05	STCL/8260B	<2	<2	<2	**17**	<2	<2	**150**	<2	**2.9**	---	---	---	---	**170**
	10/26/05	STL /8260B	<2	<2	<2	**19**	<2	<2	**150**	<2	**3.3**	---	---	---	---	**172**
	11/30/05	CTB/8260B	<1.3	<1.3	<1.3	**17**	<1.3	<1.3	**220**	<1.3	**4.1**	---	---	---	---	**241**
	02/08/06	CTB/8260B	<1.7	<1.7	<1.7	**18**	<1.7	<1.7	**180**	<1.7	**5.8**	---	---	---	---	**204**
	05/11/06	CTB/8260B	<1.3	<1.3	<1.3	**21**	<1.3	<1.3	**220**	**1.4**	**2.9**	---	---	---	---	**245**
	07/17/06	CTB/8260B	<1.3	<1.3	<1.3	**17**	<1.3	<1.3	**180**	**1.9**	**3.9**	---	---	---	---	**203**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<< micrograms per liter (µg/L) >>													
E-9A	07/17/06	CTB/8260B FD	<1.0	<1.0	<1.0	**17**	<1.0	<1.0	**180**	**2.0**	**3.5**	---	---	---	---	**203**
	08/31/06	CTB/8260B	<1.0	<1.0	<1.0	**47**	<1.0	<1.0	**180**	**6.0**	**6.3**	---	---	---	---	**239**
	09/26/06	CTB/8260B	<0.5	<0.5	<0.5	**170**	**0.7**	<0.5	**170**	**12**	**3.1**	---	---	---	---	**356**
	10/25/06	CTB/8260B	<0.7	<0.7	<0.7	**210**	**1.0**	<0.7	**160**	**19**	**2.1**	---	---	---	---	**392**
	11/27/06	CTB/8260B	<1.7	<1.7	<1.7	**170**	<1.7	<1.7	**200**	**33**	**2.9**	---	---	---	---	**406**
	01/24/07	CTB/8260B	<0.7	<0.7	<0.7	**340**	**3.3**	<0.7	**100**	**50**	**2.4**	---	---	---	---	**499**
	01/24/07	CTB/8260B FD	<2.0	<2.0	<2.0	**330**	**8.9**	<2.0	**90**	**60**	<2.0	---	---	---	---	**493**
	04/24/07	CTB/8260B	<1.0	<1.0	<1.0	**180**	**3.2**	<1.0	**2.7**	**170**	<1.0	---	---	---	---	**358**
	07/25/07	CTB/8260B	<0.5	<0.5	<0.5	**55**	**2.0**	<0.5	**15**	**54**	**1.3**	---	---	---	---	**130**
	07/25/07	CTB/8260B FD	<0.5	<0.5	<0.5	**55**	**2.1**	<0.5	**14**	**57**	**1.2**	---	---	---	---	**132**
	11/27/07	CTB/8260B	<0.5	<0.5	**1.0**	**35**	**1.9**	<0.5	**31**	**44**	<0.5	---	---	---	---	**116**
	11/27/07	CTB/8260B FD	<0.5	<0.5	**0.8**	**36**	**1.7**	<0.5	**31**	**46**	<0.5	<0.5	<0.5	<0.5	<0.5	**118**
	05/20/08	CTB/8260B	<0.5	<0.5	**0.6**	**84**	**1.6**	<0.5	**26**	**35**	<0.5	---	---	---	---	**149**
	05/20/08	CTB/8260B FD	<0.5	<0.5	**0.7**	**85**	**1.7**	<0.5	**26**	**34**	<0.5	---	---	---	---	**149**
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	**93**	**1.5**	<0.5	**17**	**51**	<0.5	---	---	---	---	**164**
E-10A	01/21/04	STCL/8260B	<2	<2	<2	**48**	<2	<2	**240**	<2	**6.7**	<2	<4	<2	<2	**295**
	01/25/05	STCL/8260B	<2	<2	<2	**46**	<2	<2	**180**	<2	**6**	---	---	---	---	**232**
	01/25/05	STCL/8260B FD	<2	<2	<2	**43**	<2	<2	**190**	<2	**5.8**	---	---	---	---	**239**
	12/09/08	CTB/8260B	**1.8**	<0.5	<0.5	**36**	**1**	<0.5	**2.5**	**92**	**1**	---	---	---	---	**134**
E-14A	01/21/04	STCL/8260B	<10	<10	<10	**630**	<10	<10	**1,300**	<10	<10	<10	<20	<10	<10	**1,930**
	01/25/05	STCL/8260B	<10	<10	<10	**780**	<10	<10	**1,300**	<10	**11**	<10	<20	<10	<10	**2,091**
	01/25/05	STCL/8260B FD	<10	<10	<10	**840**	<10	<10	**1,400**	<10	**12**	<10	<20	<10	<10	**2,252**
	08/18/05	STCL/8260B	<25	<25	<25	**500**	<25	<25	**1,200**	<25	<25	<25	<50	<25	<25	**1,700**
	08/18/05	STCL/8260B FD	<20	<20	<20	**510**	<20	<20	**1,300**	<20	<20	<20	<40	<20	<20	**1,810**
	09/30/05	STCL/8260B	<20	<20	<20	**660**	<20	<20	**1,300**	<20	<20	<20	<40	<20	<20	**1,960**
	10/26/05	STL /8260B	<20	<20	<20	**960**	<20	<20	**1,400**	<20	<20	<20	<40	<20	<20	**2,360**
	11/30/05	CTB/8260B	<10	<10	<10	**1,400**	**77**	<10	**620**	<10	<100	<10	<10	<10	<10	**2,097**
	02/08/06	CTB/8260B	<8.3	<8.3	**9.1**	**1,200**	**29**	<8.3	**930**	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	**2,168**
	05/11/06	CTB/8260B	<10	<10	<10	**1,400**	**28**	<10	**890**	<10	**11**	<10	<10	<10	<10	**2,329**
	08/31/06	CTB/8260B	<7.1	<7.1	**7.7**	**1,400**	**18**	<7.1	**560**	<7.1	**9.2**	<7.1	<7.1	<7.1	<7.1	**1,995**
	07/25/07	CTB/8260B	<6.3	<6.3	<6.3	**1,000**	**20**	<6.3	**530**	<6.3	<6.3	<6.3	<6.3	<6.3	<6.3	**1,550**
	11/26/07	CTB/8260B	<10	<10	<10	**1,900**	**15**	<10	**570**	<10	<10	---	---	---	---	**2,485**
	05/21/08	CTB/8260B	<13	<13	<13	**1,700**	<13	<13	**740**	<13	<13	<13	<13	<13	<13	**2,440**
	05/21/08	CTB/8260B FD	<13	<13	<13	**1,400**	**31**	<13	**1,200**	<13	<13	---	---	---	---	**2,631**
	12/10/08	CTB/8260B	<7.1	<7.1	<7.1	**920**	**22**	<7.1	**510**	**7.7**	<7.1	---	---	---	---	**1,460**
E-15D	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	**25**	**0.9**	<0.5	**48**	**56**	<0.5	<0.5	<1	<0.5	<0.5	**130**
	01/06/05	STCL/8260B	<2.5	<2.5	<2.5	**16**	<2.5	<2.5	**38**	**290**	<2.5	<2.5	<5	<2.5	<2.5	**351**
	11/29/05	CTB/8260B	<1	<1	<1	**11**	<1	<1	**29**	**94**	<10	<1	<1	<1	<1	**138**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<< micrograms per liter (µg/L) >>													
E-15D	11/28/06	CTB/8260B	<0.7	<0.7	<0.7	**78**	**1.2**	<0.7	**15**	**100**	<0.7	<0.7	<0.7	<0.7	<0.7	**196**
	11/26/07	CTB/8260B	**0.6**	<0.5	<0.5	**4.4**	**1.3**	<0.5	**1.2**	**120**	<0.5	<0.5	<0.5	<0.5	<0.5	**128**
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	**1.3**	**1.0**	<0.5	<0.5	**95**	<0.5	<0.5	<0.5	<0.5	<0.5	**97**
E-19A	01/29/04	STCL/8260B	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	**45**	<0.5	<0.5	---	---	---	---	**46**
	01/05/05	STCL/8260B	<0.5	<0.5	<0.5	**1.5**	<0.5	<0.5	**60**	<0.5	<0.5	---	---	---	---	**62**
	11/23/05	CTB/8260B	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	**58**	<0.5	<0.5	---	---	---	---	**59**
	11/27/06	CTB/8260B	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	**52**	<0.5	<0.5	---	---	---	---	**53**
	11/27/07	CTB/8260B	<0.5	<0.5	<0.5	**1.0**	<0.5	<0.5	**53**	<0.5	<0.5	---	---	---	---	**54**
	12/09/08	CTB/8260B	<0.5	<0.5	<0.5	**0.7**	<0.5	<0.5	**31**	<0.5	<0.5	---	---	---	---	**32**
E-23A	01/20/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	ND
E-23B1	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	<0.5	<1	<0.5	<0.5	**1**
E-24B1	01/21/04	STCL/8260B	<2	<2	<2	**160**	<2	<2	**140**	**36**	<2	---	---	---	---	**336**
	01/25/05	STCL/8260B	<2	<2	<2	**230**	<2	<2	**79**	**76**	<2	---	---	---	---	**385**
	11/29/05	CTB/8260B	<0.5	<0.5	<0.5	**20**	<0.5	<0.5	**36**	**6.2**	<0.5	---	---	---	---	**62**
	11/29/05	CTB/8260B FD	<0.5	<0.5	<0.5	**20**	<0.5	<0.5	**37**	**6.3**	<0.5	---	---	---	---	**63**
	11/28/06	CTB/8260B	<0.5	<0.5	<0.5	**9.0**	<0.5	<0.5	**13**	**4.1**	<0.5	---	---	---	---	**26**
	11/27/07	CTB/8260B	<0.5	<0.5	<0.5	**4.7**	<0.5	<0.5	**9.1**	**3.0**	<0.5	---	---	---	---	**17**
	05/20/08	CTB/8260B	<0.5	<0.5	<0.5	**4.9**	<0.5	<0.5	**6.0**	**1.8**	<0.5	---	---	---	---	**13**
	12/09/08	CTB/8260B	<0.5	<0.5	<0.5	**5.9**	<0.5	<0.5	**8.9**	**4.9**	<0.5	---	---	---	---	**20**
IIW-1A	01/21/04	STCL/8260B	<1	<1	<1	**2.9**	<1	<1	**110**	<1	**1.2**	---	---	---	---	**114**
	01/24/05	STCL/8260B	<2	<2	<2	**11**	<2	<2	**170**	<2	**2.2**	---	---	---	---	**183**
	08/17/05	STCL/8260B	<1	<1	<1	**4.2**	<1	<1	**92**	<1	**2.4**	---	---	---	---	**99**
	09/30/05	STCL/8260B	<2	<2	<2	**7.9**	<2	<2	**110**	<2	**2.5**	---	---	---	---	**120**
	10/26/05	STL /8260B	<2.5	<2.5	<2.5	**13**	<2.5	<2.5	**130**	<2.5	**3.2**	---	---	---	---	**146**
	11/30/05	CTB/8260B	**1.5**	<1	<1	**8.4**	<1	<1	**170**	<1	**3.4**	---	---	---	---	**183**
	11/30/05	CTB/8260B FD	**1.1**	<0.8	<0.8	**6.9**	<0.8	**0.9**	**150**	<0.8	**3.4**	---	---	---	---	**162**
	02/08/06	CTB/8260B	**1.8**	<1.0	<1.0	**16**	<1.0	<1.0	**170**	<1.0	**4.9**	---	---	---	---	**193**
	05/10/06	CTB/8260B	**0.8**	<0.7	<0.7	**13**	**0.7**	<0.7	**120**	<0.7	**1.9**	---	---	---	---	**136**
	07/17/06	CTB/8260B	**1.1**	<1.0	<1.0	**17**	<1.0	<1.0	**140**	<1.0	**4.7**	<1.0	**1.6**	<1.0	<1.0	**166**
	08/30/06	CTB/8260B	**2.8**	<1.3	**2.3**	**470**	**2.7**	<1.3	**17**	**15**	**5.0**	**2.7**	**13.4**	<1.3	<1.3	**531**
	09/25/06	CTB/8260B	<3.1	<3.1	<3.1	**360**	<3.1	<3.1	**22**	**10**	<3.1	<3.1	**8.9**	<3.1	<3.1	**401**
	09/25/06	CTB/8260B FD	<3.1	<3.1	<3.1	**360**	<3.1	<3.1	**20**	**11**	<3.1	---	---	---	---	**391**
	10/25/06	CTB/8260B	**1.5**	<1.3	**1.3**	**360**	**2.1**	<1.3	**25**	**27**	**1.5**	**21**	**76**	<1.3	<1.3	**515**
	11/27/06	CTB/8260B	<1.7	<1.7	<1.7	**240**	**1.9**	<1.7	<1.7	**100**	<1.7	<1.7	**4.6**	<1.7	<1.7	**347**
	01/24/07	CTB/8260B	**1.1**	<0.5	<0.5	**89**	**1.6**	<0.5	**0.6**	**32**	<0.5	**1.1**	**5.9**	<0.5	<0.5	**131**
	04/24/07	CTB/8260B	**0.7**	<0.5	<0.5	**25**	**1.4**	<0.5	**0.6**	**13**	<0.5	**2.0**	**14.1**	<0.5	<0.5	**57**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<<					*micrograms per liter (µg/L)*								>>
IIW-1A	07/25/07	CTB/8260B	**1.2**	<0.5	<0.5	**19**	**0.7**	<0.5	**13**	**22**	**1.3**	<0.5	**0.9**	<0.5	<0.5	**58**
	11/27/07	CTB/8260B	**1.3**	<0.5	<0.5	**30**	**0.6**	<0.5	**7.7**	**26**	**1.2**	**0.9**	**0.8**	<0.5	<0.5	**69**
	05/20/08	CTB/8260B	**2.2**	<0.5	<0.5	**30**	**0.6**	<0.5	**39**	**42**	**3.0**	<0.5	<0.5	<0.5	<0.5	**117**
	12/10/08	CTB/8260B	**1.2**	<0.5	<0.5	**3.9**	<0.5	<0.5	**1.6**	**21**	<0.5	<0.5	<0.5	<0.5	<0.5	**28**
	12/10/08	CTB/8260B FD	**1.2**	<0.5	<0.5	**3.9**	<0.5	<0.5	**1.5**	**20**	<0.5	<0.5	<0.5	<0.5	<0.5	**27**
IOW-1A	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	**0.7**	<0.5	<0.5	**9.8**	<0.5	<0.5	<0.5	<1	<0.5	<0.5	**11**
IOW-1B1	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**12**	<0.5	<0.5	---	---	---	---	**12**
	01/06/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**9.6**	<0.5	<0.5	---	---	---	---	**10**
	11/21/05	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**9.3**	<0.5	<0.5	---	---	---	---	**9**
	11/27/06	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**8.2**	<0.5	<0.5	---	---	---	---	**8**
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**8.3**	<0.5	<0.5	---	---	---	---	**8**
IOW-2B1	01/20/04	STCL/8260B	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	**290**	**290**
IOW-3A	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	**0.7**	**15**	<0.5	**0.6**	---	---	---	---	**16**
	01/06/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**14**	<0.5	**0.7**	---	---	---	---	**15**
	11/21/05	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	**0.8**	**13**	<0.5	**0.7**	---	---	---	---	**15**
	11/27/06	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**18**	<0.5	**0.7**	---	---	---	---	**19**
	11/26/07	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	**0.8**	**23**	<0.5	<0.5	---	---	---	---	**24**
	05/30/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	**17**	<0.5	<0.5	---	---	---	---	**18**
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**14**	<0.5	<0.5	---	---	---	---	**14**
IOW-3B1	01/21/04	STCL/8260B	**2.3**	<1	**2.4**	**57**	<1	<1	**110**	<1	**1.2**	---	---	---	---	**173**
	01/06/05	STCL/8260B	**2.9**	<1	**2.6**	**74**	<1	<1	**130**	<1	**1.6**	---	---	---	---	**211**
	11/21/05	CTB/8260B	**1.5**	<0.5	**1.2**	**33**	<0.5	<0.5	**67**	<0.5	**0.6**	---	---	---	---	**103**
	11/27/06	CTB/8260B	**1.1**	<0.5	**1.5**	**38**	<0.5	<0.5	**47**	<0.5	<0.5	---	---	---	---	**88**
	11/26/07	CTB/8260B	**1.9**	<0.7	**1.6**	**43**	**0.8**	**0.7**	**95**	<0.7	**0.9**	---	---	---	---	**144**
	12/10/08	CTB/8260B	**1.4**	<0.5	**1.5**	**42**	<0.5	**0.9**	**88**	<0.5	**2.0**	---	---	---	---	**136**
IOW-3B2	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**15**	<0.5	<0.5	---	---	---	---	**15**
	01/06/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**11**	<0.5	<0.5	---	---	---	---	**11**
	11/21/05	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**2.3**	<0.5	<0.5	---	---	---	---	**2**
	11/27/06	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	---	---	---	---	**1**
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	<0.5	<0.5	---	---	---	---	**0.6**
IOW-4A	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	**39**	**1.5**	<0.5	**48**	**4.6**	<0.5	<0.5	<1	<0.5	<0.5	**93**
	01/05/05	STCL/8260B	<0.5	<0.5	<0.5	**14**	**0.6**	<0.5	**40**	**0.9**	<0.5	<0.5	<1	<0.5	<0.5	**55**
	08/17/05	STCL/8260B	<0.5	<0.5	<0.5	**27**	**1.3**	<0.5	**34**	**5.5**	<0.5	---	---	---	---	**68**
	09/30/05	STCL/8260B	<0.5	<0.5	<0.5	**46**	**1.6**	<0.5	**33**	**24**	<0.5	---	---	---	---	**105**
	10/26/05	STL /8260B	<0.5	<0.5	<0.5	**43**	**1.4**	<0.5	**41**	**18**	<0.5	---	---	---	---	**103**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<<					*micrograms per liter (µg/L)*								>>
IOW-4A	10/26/05	STL /8260B FD	<0.5	<0.5	<0.5	**46**	**1.5**	<0.5	**41**	**19**	<0.5	---	---	---	---	**108**
	11/30/05	CTB/8260B	<0.5	<0.5	<0.5	**85**	**2.6**	<0.5	**41**	**48**	<0.5	<0.5	<0.5	<0.5	<0.5	**177**
	02/08/06	CTB/8260B	<1.0	<1.0	<1.0	**130**	**4.2**	<1.0	**24**	**52**	<1.0	---	---	---	---	**210**
	03/22/06	CTB/8260B	<0.5	<0.5	<0.5	**98**	**3.1**	<0.5	**24**	**30**	<0.5	---	---	---	---	**155**
	05/10/06	CTB/8260B	<1.3	<1.3	<1.3	**220**	**6.9**	<1.3	**22**	**89**	<1.3	---	---	---	---	**338**
	05/10/06	CTB/8260B FD	<1.7	<1.7	<1.7	**210**	**7.6**	<1.7	**21**	**93**	<1.7	---	---	---	---	**332**
	07/17/06	CTB/8260B	<0.7	<0.7	<0.7	**140**	**4.5**	<0.7	**17**	**62**	<0.7	<0.7	<0.7	<0.7	<0.7	**224**
	08/30/06	CTB/8260B	<1.7	<1.7	<1.7	**200**	**3.1**	<1.7	<1.7	**29**	<1.7	**22**	**39**	<1.7	<1.7	**293**
	09/25/06	CTB/8260B	<1.0	<1.0	<1.0	**120**	**2.5**	<1.0	<1.0	**37**	<1.0	**24**	**32.8**	<1.0	<1.0	**216**
	10/25/06	CTB/8260B	<0.5	<0.5	<0.5	**89**	**3.2**	<0.5	<0.5	**91**	<0.5	**29**	**44**	<0.5	<0.5	**256**
	11/28/06	CTB/8260B	<0.5	<0.5	<0.5	**57**	**3.4**	<0.5	**0.5**	**110**	<0.5	**25**	**31**	<0.5	<0.5	**227**
	01/24/07	CTB/8260B	<0.5	<0.5	<0.5	**43**	**3.6**	<0.5	<1.3	**130**	<0.5	**31**	**26.9**	<0.5	<0.5	**235**
	04/24/07	CTB/8260B	<0.5	<0.5	<0.5	**41**	**5.7**	<0.5	**2.1**	**150**	<0.5	**41**	**9.7**	<0.5	<0.5	**250**
	07/25/07	CTB/8260B	<0.5	<0.5	<0.5	**28**	**1.6**	<0.5	**1.4**	**90**	<0.5	**0.7**	**1.8**	<0.5	<0.5	**124**
	11/26/07	CTB/8260B	<0.5	<0.5	<0.5	**9.9**	**2.9**	<0.5	**1.4**	**170**	<0.5	<0.5	**0.6**	<0.5	<0.5	**185**
	05/20/08	CTB/8260B	<0.5	<0.5	<0.5	**13**	**3.2**	<0.5	**2.0**	**210**	<0.5	**3.1**	**13.4**	<0.5	<0.5	**245**
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	**4.5**	**1.2**	<0.5	**1.2**	**110**	<0.5	---	---	---	---	**117**
IOW-4B1	01/20/04	STCL/8260B	<20	<20	<20	**910**	<20	<20	**26**	**1,700**	<20	**810**	**1,400**	<20	**40**	**4,886**
	08/18/05	STCL/8260B	<0.5	<0.5	<0.5	**2.5**	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	<1	<0.5	<0.5	**4**
	09/29/05	STCL/8260B	<0.5	<0.5	<0.5	**1.8**	<0.5	<0.5	<0.5	**0.7**	<0.5	<0.5	<1	<0.5 .	<0.5	**3**
	10/25/05	STCL/8260B	<0.5	<0.5	<0.5	**2.6**	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	<1	<0.5	<0.5	**4**
	11/30/05	CTB/8260B	<0.5	<0.5	<0.5	**3**	<0.5	<0.5	<0.5	**1.2**	<5	<0.5	<0.5	<0.5	<0.5	**4**
	02/08/06	CTB/8260B	<0.5	<0.5	<0.5	**2.2**	<0.5	<0.5	<0.5	**0.8**	<0.5	---	---	---	---	**3**
	05/10/06	CTB/8260B	<0.5	<0.5	<0.5	**2.0**	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	**2**
	07/17/06	CTB/8260B	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	**1**
	08/30/06	CTB/8260B	<0.5	<0.5	<0.5	**10**	<0.5	<0.5	**0.6**	**6.8**	<0.5	---	---	---	---	**17**
	09/26/06	CTB/8260B	<0.5	<0.5	<0.5	**7.8**	<0.5	<0.5	<0.5	**4.9**	<0.5	---	---	---	---	**13**
	10/25/06	CTB/8260B	<0.5	<0.5	<0.5	**8.2**	<0.5	<0.5	**0.6**	**4.5**	<0.5	---	---	---	---	**13**
	01/24/07	CTB/8260B	<0.5	<0.5	<0.5	**4.4**	<0.5	<0.5	<0.5	**1.9**	<0.5	---	---	---	---	**6**
	04/24/07	CTB/8260B	<0.5	<0.5	<0.5	**3.2**	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	**3**
	07/25/07	CTB/8260B	<0.5	<0.5	<0.5	**2.3**	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	**2**
	05/20/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	<0.5	<0.5	---	---	---	---	**0.6**
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	**2.5**	<0.5	<0.5	**1**	<0.5	<0.5	---	---	---	---	**4**
M-5A	01/29/04	STCL/8260B	<0.5	<0.5	<0.5	**2**	<0.5	<0.5	**59**	<0.5	<0.5	---	---	---	---	**61**
	01/06/05	STCL/8260B	**1.1**	<1	<1	**8**	<1	<1	**160**	<1	<1	---	---	---	---	**169**
	11/29/05	CTB/8260B	<0.8	<0.8	<0.8	**3.8**	<0.8	<0.8	**130**	<0.8	<0.8	---	---	---	---	**134**
	11/27/06	CTB/8260B	<0.7	<0.7	<0.7	**3.7**	<0.7	<0.7	**95**	<0.7	<0.7	---	---	---	---	**99**
	11/26/07	CTB/8260B	<0.5	<0.5	<0.5	**4.9**	<0.5	<0.5	**100**	<0.5	<0.5	---	---	---	---	**105**
	05/20/08	CTB/8260B	<1.3	<1.3	<1.3	**7.8**	<1.3	<1.3	**130**	<1.3	<1.3	---	---	---	---	**138**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<< micrograms per liter (µg/L) >>													
M-5A	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	**7.9**	<0.5	<0.5	**130**	<0.5	<1.3	---	---	---	---	**138**
M-5B1	02/17/04	CTBE/8260B	<0.5	<0.5	<0.5	**6**	<0.5	<0.5	**4**	<0.5	<0.5	---	---	---	---	**10**
	02/17/04	CTBE/8260B FD	<0.5	<0.5	<0.5	**7.3**	**0.6**	<0.5	**5.1**	<0.5	<0.5	---	---	---	---	**13**
	11/16/04	CTBE/8260B	**1.5**	<0.5	**0.7**	**96**	**9.6**	<0.5	**64**	**4.2**	<0.5	---	---	---	---	**176**
	11/29/05	CTB/8260B	**1.4**	<0.8	<0.8	**110**	**9.5**	<0.8	**60**	**4.5**	<0.8	---	---	---	---	**185**
	11/27/06	CTB/8260B	<1.3	<1.3	<1.3	**130**	**15**	<1.3	**53**	**4.8**	<1.3	---	---	---	---	**203**
	11/26/07	CTB/8260B	**1.7**	<0.5	**0.8**	**110**	**17**	<0.5	**97**	**5.6**	<0.5	---	---	---	---	**232**
	12/10/08	CTB/8260B	**1.5**	<0.5	**0.6**	**100**	**15**	<0.5	**62**	**5.0**	<0.5	---	---	---	---	**184**
M-6A	01/21/04	STCL/8260B	**31**	<1	**9.6**	**36**	<1	<1	**110**	**2.1**	**2.9**	---	---	---	---	**192**
	01/24/05	STCL/8260B	**22**	<0.5	**5.9**	**22**	<0.5	<0.5	**68**	**2.3**	**2.3**	---	---	---	---	**123**
	11/21/05	CTB/8260B	**3.3**	<0.5	**0.5**	**2.1**	<0.5	<0.5	**5.2**	<0.5	**2.4**	---	---	---	---	**14**
	07/17/06	CTB/8260B	**0.8**	<0.5	<0.5	<0.5	<0.5	<0.5	**0.9**	<0.5	**2.2**	---	---	---	---	**4**
	08/30/06	CTB/8260B	**4.5**	<0.5	**1.4**	**4.9**	<0.5	<0.5	**15**	**1.3**	**2.4**	---	---	---	---	**30**
	09/26/06	CTB/8260B	**5.0**	<0.5	**2.1**	**5.6**	<0.5	<0.5	**21**	**1.7**	**2.4**	---	---	---	---	**38**
	10/25/06	CTB/8260B	**3.9**	<0.5	**1.6**	**4.8**	<0.5	<0.5	**16**	**1.6**	**2.0**	---	---	---	---	**30**
	11/27/06	CTB/8260B	**1.2**	<0.5	<0.5	**0.6**	<0.5	<0.5	**2.3**	<0.5	**4.3**	---	---	---	---	**8**
	01/24/07	CTB/8260B	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	**1**	<0.5	**6.2**	---	---	---	---	**8**
	04/24/07	CTB/8260B	**1.4**	<0.5	<0.5	**1.0**	<0.5	<0.5	**3.3**	<0.5	**2.3**	---	---	---	---	**8**
	07/25/07	CTB/8260B	**1.5**	<0.5	<0.5	**1.1**	<0.5	<0.5	**4.7**	**0.6**	**1.7**	---	---	---	---	**10**
	11/26/07	CTB/8260B	**1.8**	<0.5	<0.5	**0.8**	<0.5	<0.5	**3.9**	**0.7**	**2.4**	---	---	---	---	**10**
	05/20/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.1**	---	---	---	---	**1**
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.7**	<0.5	**2.7**	---	---	---	---	**3**
M-8A	01/29/04	STCL/8260B	<0.5	<0.5	<0.5	**0.9**	<0.5	<0.5	**21**	<0.5	<0.5	---	---	---	---	**22**
	01/05/05	STCL/8260B	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	**28**	<0.5	**0.9**	---	---	---	---	**30**
	08/17/05	STCL/8260B	<0.5	<0.5	<0.5	**1.0**	<0.5	<0.5	**29**	<0.5	**1**	---	---	---	---	**31**
	09/29/05	STCL/8260B	<0.5	<0.5	<0.5	**0.9**	<0.5	<0.5	**27**	<0.5	**0.6**	---	---	---	---	**28**
	10/25/05	STCL/8260B	<0.5	<0.5	<0.5	**1**	<0.5	<0.5	**31**	<0.5	**0.9**	---	---	---	---	**33**
	11/23/05	CTB/8260B	<0.5	<0.5	<0.5	**0.7**	<0.5	<0.5	**26**	<0.5	**0.8**	---	---	---	---	**28**
	02/08/06	CTB/8260B	<0.5	<0.5	<0.5	**1.6**	<0.5	<0.5	**46**	<0.5	**2.0**	---	---	---	---	**50**
	03/22/06	CTB/8260B	<0.5	<0.5	<0.5	**1.3**	<0.5	<0.5	**40**	<0.5	**0.9**	---	---	---	---	**42**
	04/14/06	CTB/8260B	<0.5	<0.5	<0.5	**1.7**	<0.5	<0.5	**50**	<0.5	**1.3**	---	---	---	---	**53**
	05/10/06	CTB/8260B	<0.5	<0.5	<0.5	**1.7**	<0.5	<0.5	**50**	<0.5	**1.2**	---	---	---	---	**53**
	07/17/06	CTB/8260B	<0.5	<0.5	<0.5	**1.5**	<0.5	<0.5	**45**	<0.5	**1.8**	---	---	---	---	**48**
	08/31/06	CTB/8260B	<0.5	<0.5	<0.5	**1.5**	<0.5	<0.5	**45**	<0.5	**3.1**	---	---	---	---	**50**
	09/26/06	CTB/8260B	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	**31**	<0.5	**0.9**	---	---	---	---	**33**
	10/25/06	CTB/8260B	<0.5	<0.5	<0.5	**1.8**	<0.5	<0.5	**49**	<0.5	**1.1**	---	---	---	---	**52**
	11/27/06	CTB/8260B	<0.5	<0.5	<0.5	**1.4**	<0.5	<0.5	**59**	<0.5	**3.6**	---	---	---	---	**64**
	01/24/07	CTB/8260B	<0.5	<0.5	<0.5	**1.8**	<0.5	<0.5	**62**	<0.5	**2.0**	---	---	---	---	**66**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<<					*micrograms per liter (µg/L)*								>>
M-8A	04/24/07	CTB/8260B	<0.5	<0.5	<0.5	**2.1**	<0.5	<0.5	**55**	<0.5	**1.5**	---	---	---	---	**59**
	07/25/07	CTB/8260B	<0.5	<0.5	<0.5	**1.6**	<0.5	<0.5	**54**	<0.5	**1.1**	---	---	---	---	**57**
	11/26/07	CTB/8260B	<0.5	<0.5	<0.5	**1.4**	<0.5	<0.5	**56**	<0.5	**1.2**	---	---	---	---	**59**
	05/20/08	CTB/8260B	<0.5	<0.5	<0.5	**2.2**	<0.5	<0.5	**54**	<0.5	**1.1**	---	---	---	---	**57**
	12/09/08	CTB/8260B	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	**40**	<0.5	**2.2**	---	---	---	---	**43**
M-8B1	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	**4.4**	<0.5	<0.5	**13**	<0.5	<0.5	<0.5	<1	<0.5	<0.5	**17**
M-10B2	01/20/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	01/05/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	11/22/05	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	11/27/06	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	11/27/07	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
M-18A	01/20/04	STCL/8260B	<1	<1	<1	**17**	<1	<1	**140**	**1.3**	<1	<1	<2	<1	<1	**171**
M-19A	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	**2**	<0.5	<0.5	**21**	<0.5	<0.5	---	---	---	---	**23**
	01/05/05	STCL/8260B	<0.5	<0.5	<0.5	**44**	**0.5**	<0.5	**24**	**6**	<0.5	---	---	---	---	**78**
	11/23/05	CTB/8260B	**0.5**	<0.5	<0.5	**130**	**1.4**	<0.5	**41**	**42**	<0.5	---	---	---	---	**227**
	11/27/06	CTB/8260B	<1.7	<1.7	<1.7	**180**	**3.0**	<1.7	**30**	**27**	<1.7	---	---	---	---	**240**
	11/27/07	CTB/8260B	<3.6	<3.6	<3.6	**380**	**6.6**	<3.6	**43**	**79**	<3.6	---	---	---	---	**509**
	12/09/08	CTB/8260B	<0.5	<0.5	<0.5	**6.1**	<0.5	<0.5	**13**	**1.2**	<0.5	---	---	---	---	**20**
M-19B1	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	**0.7**	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	**0.7**
	01/05/05	STCL/8260B	<0.5	<0.5	<0.5	**1.0**	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	**1.**
	11/22/05	CTB/8260B	<0.5	<0.5	<0.5	**0.9**	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	**0.9**
	11/27/06	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	11/27/07	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
PW-1A	01/21/04	STCL/8260B	<0.5	<0.5	<0.5	**1.6**	<0.5	<0.5	**1.3**	<0.5	<0.5	---	---	---	---	**3**
	01/05/05	STCL/8260B	<0.5	<0.5	<0.5	**3.7**	<0.5	<0.5	**9.7**	**0.7**	<0.5	---	---	---	---	**14**
	11/22/05	CTB/8260B	<0.5	<0.5	<0.5	**24**	**0.5**	<0.5	**40**	**3.2**	<0.5	---	---	---	---	**68**
	11/28/06	CTB/8260B	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	**6.8**	**0.6**	<0.5	---	---	---	---	**9**
	11/27/07	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**59**	**1.2**	<0.5	---	---	---	---	**60**
	12/09/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.5**	**0.5**	<0.5	---	---	---	---	**1**
PW-2A	01/29/04	STCL/8260B	<0.5	<0.5	<0.5	**18**	<0.5	<0.5	**61**	**6**	<0.5	**2.5**	<1	<0.5	<0.5	**98**
	01/06/05	STCL/8260B	<0.5	<0.5	<0.5	**23**	<0.5	<0.5	**74**	**4.9**	**0.6**	**3.2**	<1	<0.5	<0.5	**114**
	11/23/05	CTB/8260B	**3.6**	<0.5	<0.5	**13**	**1**	<0.5	**1.4**	**53**	<0.5	---	---	---	---	**96**
	11/28/06	CTB/8260B	**3.5**	<0.5	<0.5	**2.0**	**3.8**	<0.5	<0.5	**43**	<0.5	**15**	**1.1**	<0.5	**1.0**	**103**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<< micrograms per liter (µg/L) >>													
PW-2A	11/27/07	CTB/8260B	**2.7**	<0.5	<0.5	**1**	**3.4**	<0.5	<0.5	**34**	<0.5	**63**	**5.2**	<0.5	<0.5	**154**
	12/09/08	CTB/8260B	**2.0**	<0.5	<0.5	<0.5	**1.0**	<0.5	<0.5	**27**	<0.5	**220**	**4.6**	<0.5	<0.5	**307**
PW-3A	01/29/04	STCL/8260B	<2.5	<2.5	<2.5	**20**	<2.5	<2.5	**190**	<2.5	<2.5	---	---	---	---	**210**
	01/25/05	STCL/8260B	<2	<2	<2	**20**	<2	<2	**180**	<2	**3.2**	---	---	---	---	**203**
	08/29/05	STCL/8260B	<1	<1	<1	**18**	<1	<1	**120**	<1	**2.8**	---	---	---	---	**141**
	08/29/05	STCL/8260B FD	<1	<1	<1	**19**	<1	<1	**130**	<1	**3.1**	---	---	---	---	**152**
	09/29/05	STCL/8260B	<2	<2	<2	**27**	<2	<2	**150**	<2	**4.4**	---	---	---	---	**181**
	10/26/05	STL /8260B	<2	<2	<2	**33**	<2	<2	**160**	<2	**4.7**	<2	<4	<2	<2	**198**
	11/30/05	CTB/8260B	<1.3	<1.3	<1.3	**27**	**1.4**	<1.3	**210**	<1.3	**6.2**	---	---	---	---	**245**
	02/08/06	CTB/8260B	<1.3	<1.3	<1.3	**39**	**2.8**	<1.3	**210**	<1.3	**8.0**	<1.3	<1.3	<1.3	<1.3	**260**
	05/11/06	CTB/8260B	<1.0	<1.0	<1.0	**29**	<1.0	<1.0	**140**	<1.0	**3.6**	---	---	---	---	**173**
	08/31/06	CTB/8260B	**1.7**	<1.3	**2.1**	**550**	**6.0**	<1.3	**2.5**	**19**	**10**	---	---	---	---	**591**
	11/28/06	CTB/8260B	**1.7**	<0.5	<0.5	**5.7**	**2.8**	<0.5	**0.6**	**8.9**	**3.3**	---	---	---	---	**23**
	07/25/07	CTB/8260B	**0.8**	<0.5	<0.5	**3.2**	<0.5	<0.5	**2.6**	**8.5**	<0.5	---	---	---	---	**16**
	11/27/07	CTB/8260B	**1.3**	<0.5	<0.5	**7.0**	**0.6**	<0.5	**2.6**	**19**	**0.6**	---	---	---	---	**31**
	05/21/08	CTB/8260B	**1.5**	<0.5	<0.5	**4.0**	<0.5	<0.5	**0.7**	**24**	<0.5	---	---	---	---	**30**
	12/10/08	CTB/8260B	**1.8**	<0.5	<0.5	**5.5**	**0.6**	<0.5	<0.5	**99**	<0.5	---	---	---	---	**107**
PW-4B1	01/21/04	STCL/8260B	**2.7**	<2	<2	**180**	<2	<2	**60**	**170**	<2	---	---	---	---	**413**
	01/25/05	STCL/8260B	<1	<1	<1	**120**	<1	<1	**29**	**40**	<1	---	---	---	---	**189**
	08/29/05	STCL/8260B	<0.5	<0.5	<0.5	**25**	<0.5	<0.5	**19**	**3.1**	<0.5	---	---	---	---	**47**
	09/29/05	STCL/8260B	<0.5	<0.5	<0.5	**14**	<0.5	<0.5	**14**	<0.5	<0.5	---	---	---	---	**28**
	10/25/05	STCL/8260B	<0.5	<0.5	<0.5	**13**	<0.5	<0.5	**15**	<0.5	<0.5	---	---	---	---	**28**
	11/30/05	CTB/8260B	<0.5	<0.5	<0.5	**11**	<0.5	<0.5	**17**	<0.5	<0.5	---	---	---	---	**28**
	02/08/06	CTB/8260B	<0.5	<0.5	<0.5	**9.6**	<0.5	<0.5	**13**	<0.5	<0.5	---	---	---	---	**23**
	05/10/06	CTB/8260B	<0.5	<0.5	<0.5	**9.8**	<0.5	<0.5	**16**	<0.5	<0.5	---	---	---	---	**26**
	07/17/06	CTB/8260B	<0.5	<0.5	<0.5	**7.6**	<0.5	<0.5	**12**	<0.5	<0.5	---	---	---	---	**20**
	08/31/06	CTB/8260B	<0.5	<0.5	<0.5	**8.3**	<0.5	<0.5	**12**	<0.5	<0.5	---	---	---	---	**20**
	09/26/06	CTB/8260B	<0.5	<0.5	<0.5	**8.3**	<0.5	<0.5	**15**	<0.5	<0.5	---	---	---	---	**23**
	10/25/06	CTB/8260B	<0.5	<0.5	<0.5	**8.9**	<0.5	<0.5	**13**	<0.5	<0.5	---	---	---	---	**22**
	11/28/06	CTB/8260B	<0.5	<0.5	<0.5	**7.4**	<0.5	<0.5	**14**	<0.5	<0.5	---	---	---	---	**21**
	01/24/07	CTB/8260B	<0.5	<0.5	<0.5	**7.0**	<0.5	<0.5	**12**	<0.5	<0.5	---	---	---	---	**19**
	04/24/07	CTB/8260B	<0.5	<0.5	<0.5	**7.7**	<0.5	<0.5	**12**	<0.5	<0.5	---	---	---	---	**20**
	07/25/07	CTB/8260B	<0.5	<0.5	<0.5	**5.1**	<0.5	<0.5	**12**	<0.5	<0.5	---	---	---	---	**17**
	11/27/07	CTB/8260B	<0.5	<0.5	<0.5	**4.6**	<0.5	<0.5	**12**	<0.5	<0.5	---	---	---	---	**17**
	05/21/08	CTB/8260B	<0.5	<0.5	<0.5	**4.7**	<0.5	<0.5	**12**	<0.5	<0.5	---	---	---	---	**17**
	12/10/08	CTB/8260B	<0.5	<0.5	<0.5	**4.3**	<0.5	<0.5	**9.7**	<0.5	<0.5	---	---	---	---	**14**
PW-5B1	01/21/04	STCL/8260B	**5.2**	<1	**2.1**	**110**	<1	<1	**50**	**71**	<1	---	---	---	---	**238**
	01/06/05	STCL/8260B	**5.8**	<2	**2**	**110**	<2	<2	**45**	**28**	<2	---	---	---	---	**191**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<< micrograms per liter (µg/L) >>													
PW-5B1	11/29/05	CTB/8260B	**5.7**	<1.3	**1.4**	**110**	**1.5**	<1.3	**46**	**35**	<1.3	---	---	---	---	**200**
	10/25/06	CTB/8260B	**4.8**	<0.5	**2.4**	**97**	<0.5	<0.5	**42**	**27**	<0.5	---	---	---	---	**173**
	11/27/06	CTB/8260B	**5.0**	<1.0	**2.3**	**140**	<1.0	<1.0	**44**	**58**	<1.0	---	---	---	---	**249**
	11/27/06	CTB/8260B FD	**5.9**	<0.5	**2.9**	**110**	<0.5	**0.7**	**59**	**44**	**1.3**	---	---	---	---	**224**
	11/27/07	CTB/8260B	**5.1**	<0.5	**2.5**	**78**	<0.5	**0.6**	**52**	**35**	**0.5**	---	---	---	---	**174**
	11/27/07	CTB/8260B FD	**4.6**	<0.7	**1.8**	**91**	**2.2**	<0.7	**46**	**28**	<0.7	---	---	---	---	**174**
	12/10/08	CTB/8260B	**5.2**	<0.5	**1.6**	**110**	**0.6**	**0.8**	**53**	**39**	<1.0	---	---	---	---	**210**
R-50A	01/29/04	STCL/8260B	<50	<50	<50	<50	<50	<50	<50	**6,000**	<50	<50	<100	<50	<50	**6,000**
	02/11/04	STCL/8260B	<2.5	<2.5	<2.5	**130**	**4.6**	<2.5	**110**	**110**	<2.5	**110**	**310**	<2.5	<2.5	**775**
	01/25/05	STCL/8260B	<50	<50	<50	**4,300**	<50	<50	<50	**1,800**	<50	**290**	**250**	<50	<50	**6,640**
	11/29/05	CTB/8260B	<36	<36	<36	**590**	**36**	<36	<36	**4,800**	<360	<36	<36	<36	<36	**5,426**
	07/17/06	CTB/8260B	<20	<20	<20	**2,400**	<20	<20	**20**	**1,600**	<20	**2,500**	**7,600**	<20	**26**	**14,146**
	08/30/06	CTB/8260B	<13	<13	<13	**2,100**	**17**	<13	<13	**1,500**	<13	**2,500**	**4,430**	<13	**23**	**10,570**
	08/30/06	CTB/8260B FD	<13	<13	<13	**2,000**	**16**	<13	<13	**1,400**	<13	---	---	---	---	**3,416**
	09/25/06	CTB/8260B	<17	<17	<17	**1,500**	**21**	<17	<17	**1,700**	<17	**1,200**	**480**	<17	<17	**4,901**
	10/25/06	CTB/8260B	<8.3	<8.3	<8.3	**660**	**23**	<8.3	<8.3	**2,800**	<8.3	**1,400**	**325**	<8.3	<8.3	**5,208**
	11/27/06	CTB/8260B	<17	<17	<17	**890**	**35**	<17	<17	**3,300**	<17	**1,300**	**112**	<17	<17	**5,637**
	11/27/06	CTB/8260B FD	<13	<13	<13	**650**	**28**	<13	<13	**3,500**	<13	**1,400**	**108**	<13	<13	**5,686**
	01/24/07	CTB/8260B	<10	<10	**11**	**4,600**	**51**	<10	<10	**3,200**	<10	**1,600**	**760**	<10	<10	**10,222**
	04/24/07	CTB/8260B	**5.6**	<1.7	<1.7	**260**	**38**	<1.7	<1.7	**3,600**	<1.7	**1,500**	**43**	<1.7	**5.0**	**5,452**
	07/25/07	CTB/8260B	<10	<10	**12**	**9,300**	**120**	<10	<10	**4,800**	<10	**5,000**	**14,300**	<10	**50**	**33,582**
	11/27/07	CTB/8260B	<31	<31	<31	**3,000**	**40**	<31	**43**	**4,300**	<31	---	---	---	---	**7,383**
	05/20/08	CTB/8260B	<17	<17	<17	**5,600**	**42**	<17	<17	**4,500**	<17	**8,300**	**26,300**	<17	**110**	**44,852**
	12/10/08	CTB/8260B	<5.0	<5.0	<5.0	**27**	**6.8**	<5.0	<5.0	**740**	<5.0	**64**	**6.7**	<5.0	<5.0	**845**
RH-01A	01/21/04	STCL/8260B	**9**	<1	**9.3**	**4.9**	<1	**3.2**	**120**	<1	**4.3**	---	---	---	---	**151**
	01/24/05	STCL/8260B	**8**	<1	**6.7**	**4.5**	<1	**2.4**	**100**	<1	**4**	---	---	---	---	**126**
	11/21/05	CTB/8260B	**11**	<1.3	**6.8**	**3.9**	<1.3	**3.9**	**120**	<1.3	**6.1**	---	---	---	---	**152**
	11/28/06	CTB/8260B	**3.2**	<0.5	**6.7**	**3.0**	<0.5	**2.1**	**93**	<0.5	**5.1**	---	---	---	---	**113**
	11/26/07	CTB/8260B	**91**	<1.0	**47**	**18**	<1.0	**6.0**	**190**	<1.0	**11**	---	---	---	---	**363**
	12/10/08	CTB/8260B	**77**	<2.5	**35**	**19**	<2.5	**12**	**310**	<2.5	**21**	---	---	---	---	**474**
W-1A	01/21/04	STCL/8260B	**1.9**	<0.5	**1.1**	**0.5**	<0.5	**1.2**	**79**	<0.5	**0.8**	---	---	---	---	**85**
	01/06/05	STCL/8260B	**1.4**	<0.5	**0.6**	**0.6**	<0.5	**1.1**	**74**	<0.5	**0.8**	---	---	---	---	**79**
	11/23/05	CTB/8260B	**2.2**	<0.5	**1**	**0.5**	<0.5	**1.6**	**81**	<0.5	**1.4**	---	---	---	---	**89**
	07/17/06	CTB/8260B	**2.0**	<0.5	**0.9**	**0.6**	<0.5	**1**	**88**	<0.5	**1.7**	---	---	---	---	**95**
	08/30/06	CTB/8260B	**2.1**	<0.5	**1**	**0.8**	<0.5	**1.3**	**86**	<0.5	**1.2**	---	---	---	---	**94**
	09/26/06	CTB/8260B	**1.8**	<0.5	**0.9**	**0.8**	<0.5	**1**	**92**	<0.5	**1.3**	---	---	---	---	**99**
	10/25/06	CTB/8260B	**1.8**	<0.5	**1.2**	**0.9**	<0.5	**0.8**	**94**	<0.5	**1.0**	---	---	---	---	**101**
	11/27/06	CTB/8260B	**1.5**	<0.5	**0.7**	**0.7**	<0.5	**1**	**93**	<0.5	**0.9**	---	---	---	---	**99**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<< micrograms per liter (µg/L) >>													
W-1A	01/24/07	CTB/8260B	**2.1**	<0.5	**1.3**	**0.8**	<0.5	**1.0**	**95**	<0.5	**1.7**	---	---	---	---	**103**
	04/24/07	CTB/8260B	**1.8**	<0.5	**1.0**	**0.8**	<0.5	**0.9**	**90**	<0.5	**1.1**	---	---	---	---	**96**
	04/24/07	CTB/8260B FD	**2.1**	<0.5	**1.1**	**0.9**	<0.5	**1.1**	**83**	<0.5	**1.5**	---	---	---	---	**91**
	07/25/07	CTB/8260B	**1.5**	<0.5	**0.7**	**0.6**	<0.5	**1**	**96**	<0.5	**0.9**	---	---	---	---	**102**
	11/27/07	CTB/8260B	**1.8**	<0.5	**1.1**	**0.7**	<0.5	**1.0**	**84**	<0.5	**0.9**	---	---	---	---	**90**
	05/20/08	CTB/8260B	**2.4**	<0.5	**1**	**0.8**	<0.5	**1.0**	**79**	<0.5	**0.7**	---	---	---	---	**86**
	12/10/08	CTB/8260B	**1.7**	<0.5	**0.7**	<0.5	<0.5	**1.5**	**97**	<0.5	**2.3**	---	---	---	---	**104**
W-1B	01/21/04	STCL/8260B	**79**	<0.5	**17**	**60**	**0.5**	<0.5	**50**	**6.7**	<0.5	---	---	---	---	**213**
	01/06/05	STCL/8260B	**110**	<1	**21**	**82**	<1	<1	**54**	**11**	<1	---	---	---	---	**278**
	11/23/05	CTB/8260B	**88**	<0.5	**17**	**91**	**0.8**	<0.5	**35**	**8.5**	<0.5	---	---	---	---	**240**
	11/27/06	CTB/8260B	**59**	<0.5	**18**	**66**	**0.7**	<0.5	**57**	**2.6**	<0.5	---	---	---	---	**203**
	11/27/07	CTB/8260B	**45**	<0.5	**11**	**56**	**0.6**	<0.5	**36**	**1.3**	<0.5	---	---	---	---	**150**
	05/20/08	CTB/8260B	**18**	<0.5	**5.4**	**39**	<0.5	**0.5**	**37**	**0.7**	<0.5	---	---	---	---	**101**
	12/10/08	CTB/8260B	**28**	<0.5	**6.1**	**50**	**0.5**	<0.5	**35**	**1**	**0.6**	---	---	---	---	**121**
IHP-1**	02/10/04	STCL/8260B	**160**	<100	<100	**3,200**	<100	<100	**10,000**	<100	<100	<100	<200	<100	<100	**13,360**
IHP-2**	02/10/04	STCL/8260B	<10	<10	<10	**1,100**	<10	<10	**120**	**1,500**	**23**	**31**	<20	<10	<10	**2,774**
IHP-3**	02/10/04	STCL/8260B	<0.5	<0.5	<0.5	**15**	<0.5	<0.5	**79**	<0.5	**3.1**	<0.5	<1	<0.5	<0.5	**97**
TW-1A	08/17/05	STCL/8260B	<0.5	<0.5	<0.5	**6.3**	<0.5	<0.5	**59**	<0.5	**2.1**	---	---	---	---	**67**
	09/30/05	STCL/8260B	<0.5	<0.5	<0.5	**6.5**	<0.5	<0.5	**67**	<0.5	**1.3**	---	---	---	---	**75**
	10/25/05	STCL/8260B	<0.5	<0.5	<0.5	**6.5**	<0.5	**0.5**	**77**	<0.5	**1.8**	---	---	---	---	**86**
	11/23/05	CTB/8260B	<0.5	<0.5	<0.5	**5**	<0.5	**0.5**	**87**	<0.5	**1.2**	---	---	---	---	**94**
	02/08/06	CTB/8260B	<0.5	<0.5	<0.5	**8.3**	<0.5	**0.6**	**88**	<0.5	**2.5**	---	---	---	---	**99**
	02/08/06	CTB/8260B FD	<0.8	<0.8	<0.8	**7.0**	<0.8	<0.8	**90**	<0.8	**2.8**	---	---	---	---	**100**
	05/10/06	CTB/8260B	<0.5	<0.5	<0.5	**7.6**	<0.5	<0.5	**93**	<0.5	**1.5**	---	---	---	---	**102**
	08/31/06	CTB/8260B	<0.5	<0.5	<0.5	**6.2**	<0.5	<0.5	**67**	<0.5	**3.1**	---	---	---	---	**76**
	07/25/07	CTB/8260B	<0.7	<0.7	<0.7	**6.2**	<0.7	<0.7	**83**	<0.7	**1**	---	---	---	---	**90**
	05/21/08	CTB/8260B	<0.5	<0.5	<0.5	**5.4**	<0.5	<0.5	**71**	<0.5	**0.8**	---	---	---	---	**77**
	12/09/08	CTB/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.7**	<0.5	<0.5	---	---	---	---	**2**
	12/09/08	CTB/8260B FD	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.9**	<0.5	<0.5	---	---	---	---	**2**
TW-2A	08/18/05	STCL/8260B	<0.5	<0.5	<0.5	**17**	**0.6**	<0.5	**23**	**8.7**	<0.5	<0.5	<1	<0.5	<0.5	**49**
	09/30/05	STCL/8260B	<0.5	<0.5	<0.5	**17**	**0.6**	<0.5	**29**	**2**	<0.5	<0.5	<1	<0.5	<0.5	**49**
	10/25/05	STCL/8260B	<0.5	<0.5	<0.5	**63**	**0.6**	<0.5	**0.9**	**1.9**	<0.5	<0.5	<1	<0.5	<0.5	**66**
	11/30/05	CTB/8260B	<0.7	<0.7	<0.7	**90**	**1.3**	<0.7	<0.7	**0.9**	<7.1	<0.7	<0.7	<0.7	<0.7	**92**
	02/08/06	CTB/8260B	<0.5	<0.5	<0.5	**92**	**1.1**	<0.5	**0.9**	**1.5**	<0.5	<0.5	<0.5	<0.5	<0.5	**96**
	05/10/06	CTB/8260B	<0.5	<0.5	<0.5	**53**	**1.0**	<0.5	**0.5**	**13**	<0.5	<0.5	<0.5	<0.5	<0.5	**68**

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<< micrograms per liter (µg/L) >>													
TW-2A	08/31/06	CTB/8260B	<0.5	<0.5	<0.5	**28**	**0.6**	<0.5	**8.8**	**1.9**	<0.5	<0.5	<0.5	<0.5	<0.5	**39**
	07/25/07	CTB/8260B	<0.5	<0.5	<0.5	**4.2**	<0.5	<0.5	**1.2**	**24**	<0.5	<0.5	<0.5	<0.5	<0.5	**29**
	11/26/07	CTB/8260B	<0.5	<0.5	<0.5	**36**	**0.6**	<0.5	**4.5**	**2.1**	<0.5	---	---	---	---	**43**
	05/20/08	CTB/8260B	<0.5	<0.5	<0.5	**36**	**1.3**	<0.5	**6.7**	**42**	<0.5	**0.7**	**2.3**	<0.5	<0.5	**89**
	12/09/08	CTB/8260B	<0.5	<0.5	<0.5	**27**	**1.3**	<0.5	**6.9**	**30**	<0.5	---	---	---	---	**65**
TW-3A	08/18/05	STCL/8260B	<2.5	<2.5	<2.5	**57**	**3**	<2.5	**200**	**2.6**	**10**	<2.5	<5	<2.5	<2.5	**273**
	09/30/05	STCL/8260B	<2	<2	<2	**73**	<2	<2	**130**	<2	**5.1**	<2	<4	<2	<2	**208**
	10/26/05	STL /8260B	<2	<2	<2	**320**	**2.6**	<2	**22**	**3.3**	**6.8**	<2	---	<2	<2	**355**
	11/30/05	CTB/8260B	<2.5	<2.5	<2.5	**290**	**2.7**	<2.5	**19**	<2.5	<25	<2.5	<2.5	<2.5	<2.5	**312**
	02/08/06	CTB/8260B	<1.7	<1.7	<1.7	**280**	**3.3**	<1.7	**34**	**1.7**	**9.6**	<1.7	<1.7	<1.7	<1.7	**329**
	05/11/06	CTB/8260B	<1.3	<1.3	<1.3	**200**	**2.9**	<1.3	**16**	**48**	**6.4**	<1.3	<1.3	<1.3	<1.3	**273**
	08/30/06	CTB/8260B	<0.5	<0.5	<0.5	**80**	**1.7**	<0.5	**5.4**	**58**	<0.5	<0.5	<0.5	<0.5	<0.5	**145**
	07/25/07	CTB/8260B	<0.5	<0.5	<0.5	**71**	**0.9**	<0.5	**2.4**	**15**	<0.5	<0.5	<0.5	<0.5	<0.5	**89**
	11/26/07	CTB/8260B	**0.5**	<0.5	<0.5	**70**	**1.9**	<0.5	**2.6**	**55**	**2.2**	---	---	---	---	**132**
	05/20/08	CTB/8260B	**0.6**	<0.5	<0.5	**120**	**3.0**	<0.5	**18**	**93**	**6.9**	**0.7**	**2.1**	<0.5	<0.5	**244**
	12/09/08	CTB/8260B	<0.5	<0.5	<0.5	**13**	**1**	<0.5	**0.8**	**64**	**2.7**	---	---	---	---	**82**
TW-4A	08/18/05	STCL/8260B	<5	<5	<5	**230**	**6**	<5	**380**	<5	**8.9**	<5	<10	<5	<5	**625**
	09/30/05	STCL/8260B	<2	<2	<2	**130**	**2.4**	<2	**320**	<2	**5.7**	<2	<4	<2	<2	**458**
	09/30/05	STCL/8260B FD	<2.5	<2.5	<2.5	**110**	<2.5	<2.5	**270**	<2.5	**4.7**	<2.5	<5	<2.5	<2.5	**385**
	10/26/05	STL /8260B	<2	<2	<2	**150**	**3.1**	<2	**350**	<2	**6.2**	<2	<4	<2	<2	**509**
	11/30/05	CTB/8260B	<4.2	<4.2	<4.2	**200**	**4.3**	<4.2	**460**	<4.2	<42	<4.2	<4.2	<4.2	<4.2	**664**
	02/08/06	CTB/8260B	<3.6	<3.6	<3.6	**270**	**4.4**	<3.6	**480**	<3.6	**13**	<3.6	<3.6	<3.6	<3.6	**767**
	05/11/06	CTB/8260B	<2.0	<2.0	<2.0	**240**	**4.1**	<2.0	**270**	**34**	**5.5**	<2.0	<2.0	<2.0	<2.0	**554**
	07/17/06	CTB/8260B	<3.6	<3.6	<3.6	**270**	**5.2**	<3.6	**460**	**23**	**13**	---	---	---	---	**771**
	08/30/06	CTB/8260B	<2.0	<2.0	<2.0	**260**	**3.8**	<2.0	**290**	**26**	**6.3**	<2.0	<2.0	<2.0	<2.0	**586**
	09/25/06	CTB/8260B	<0.7	<0.7	<0.7	**70**	**1.1**	<0.7	**77**	**13**	**2.1**	---	---	---	---	**163**
	10/25/06	CTB/8260B	<1.0	<1.0	<1.0	**200**	**3.3**	<1.0	**220**	**24**	**3.7**	---	---	---	---	**451**
	10/25/06	CTB/8260B FD	<1.3	<1.3	<1.3	**210**	**4.1**	<1.3	**220**	**25**	**3.6**	---	---	---	---	**463**
	01/24/07	CTB/8260B	<0.5	<0.5	**1.4**	**280**	**4.9**	<0.5	**400**	**33**	**5.9**	---	---	---	---	**726**
	04/24/07	CTB/8260B	<1.7	<1.7	<1.7	**300**	**3.5**	<1.7	**12**	**29**	**2.1**	---	---	---	---	**347**
	07/25/07	CTB/8260B	<2.5	<2.5	<2.5	**260**	**4.9**	<2.5	**310**	**100**	**5.0**	<2.5	<2.5	<2.5	<2.5	**680**
	11/26/07	CTB/8260B	<1.7	<1.7	**1.8**	**350**	**5.4**	<1.7	**380**	**180**	**6.0**	---	---	---	---	**923**
	05/21/08	CTB/8260B	<4.2	<4.2	<4.2	**430**	**20**	<4.2	**570**	**87**	**11**	<4.2	<4.2	<4.2	<4.2	**1,118**
	12/09/08	CTB/8260B	<2.5	<2.5	<2.5	**590**	**11**	<2.5	**220**	**97**	**14**	---	---	---	---	**932**
Travel Blank	01/29/04	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	04/24/07	CTB/8260B TB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	04/24/07	CTB/8260B TB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	12/09/08	CTB/8260B TB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<< micrograms per liter (µg/L) >>													
Travel Blank	12/09/08	CTB/8260B TB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	12/10/08	CTB/8260B TB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	12/10/08	CTB/8260B TB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
Rinse Blank	01/24/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	08/18/05	STCL/8260B EB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	ND
	11/30/05	CTB/8260B EB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	11/28/06	CTB/8260B EB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	11/27/07	CTB/8260B EB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	12/10/08	CTB/8260B EB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
Field Blank	01/25/05	STCL/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	08/18/05	STCL/8260B FB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	ND
	11/23/05	CTB/8260B FB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	11/27/06	CTB/8260B FB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	11/27/07	CTB/8260B FB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND
	12/10/08	CTB/8260B FB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	ND

Table 2. Chemical Analytic Results for Volatile Organic Compounds in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sampling Date	Lab/Analysis	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	Trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Ethyl benzene	Xylenes	Benzene	Toluene	Total VOCs
			<<					*micrograms per liter (µg/L)*								>>

Abbreviations:
CTB = Curtis Tompkins Laboratory, Berkeley, California
CA = Columbia Analytical Services, San Jose, California
CCA = Coast to Coast Analytic Services, San Jose, California
BCE = Brown and Caldwell Analytic Laboratories, Emeryville, California
EALY = Entech Analytical Labs, Inc., Santa Clara, California
IT = International Technology Analytical Services, San Jose, California
P = PACE Incorporated Envirionmental Laboratories, San Jose, California
SAL = Sequoia Analytical Laboratory
STCL = STL San Francisco, Pleasanton, California

Analytical Methods:
601,2 = EPA Methods 601 and 602
624 = EPA Method 624
8010 = EPA Method 8010
8015M = EPA Method 8015M
8010,20 = EPA Methods 8010 and 8020
8021B = EPA Method 8021B
8260 = EPA Method 8260
8240 = EPA Method 8240
8260B = EPA Method 8260B

Chemical Abbreviations:
1,1-DCA = 1,1-dichloroethane
1,2-DCA = 1,2-dichloroethane
1,1-DCE = 1,1-dichloroethylene
1,2-DCE = 1,2-dichloroethylene
1,1,1-TCA = 1,1,1-trichloroethane
Freon 113 = Trichlorotrifluroethane
TCE = trichloroethylene
Xylenes = total xylenes

Notes:
* = Revised lab report
** = IHP-#: Hydropunch grab sample
--- = Not analyzed
>390 = Analyte detected above accepable range of analytical instrument. Result is reported as above the upper limit of acceptable range (i.e. 390 ppb). Often, the sample is diluted and run again as an LD.
B = Analyte also detected in Method Blank
BD = Blind duplicate sample
LD = Lab duplicate
LD2 = Second lab duplicate
SD = Split duplicate sample sent to separate lab
nd = Not detected above reported detection limit
nr = Not reported. Prior to 11/87, CC reported cis and trans-1,2-DCE separately. In some analyses from 11/87 and later these isomers were reported as "1,2-dichloroethenes" and are shown in the cis column; trans is shown as "nr" (not reported). BC reported both isomers as trans only; cis is shown as "nr". IT and CT report these isomers separately.
UJ = The sample result is less than five times the contaminant level in the Method Blank for the sample. The analyte was detected above the reported method detection limit for the sample, however, the reported method detection limit for the sample may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. The detection limit associated with the UJ-qualified result is therefore estimated as five-times the contaminant level in the Method Blank for the sample.

Table 3. Summary of Intrinsic Remediation Monitoring Parameters for Enhanced In-Situ Bioremediation of Chlorinated Solvents in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sample Date/Type	TCE	cis-1,2-DCE	Vinyl Chloride	Ethene	Ethane	Mn, Dissolved	Mn, Total	Iron, Dissolved	Iron, Total	Methane	Chloride	Nitrite	Nitrate	Sulfate	Sulfide	Alka-linity	Ec	pH	Temp	TOC	ORP	DO
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	std.	C	mg/L	mV	mg/L
E-9A	01/25/05	95	7.2	<1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	08/17/05	170	15	<2.5	0.04	0.008 J	---	---	---	---	0.52	---	---	---	---	---	---	902	6.86	21.3	---	168	0.82
	09/30/05	150	17	<2	0.037	0.012 J	---	---	---	---	0.23	---	---	---	---	---	---	1,042	6.99	26.9	---	112	1.80
	10/26/05	150	19	<2	0.032	0.015 J	---	---	---	---	1.8	---	---	---	---	---	---	827	6.71	17.9	---	218	1.49
	11/30/05	220	17	<1.3	0.057	0.009 J	---	---	---	---	9.8	---	---	---	---	---	---	1,005	6.85	18.3	---	35	1.20
	02/08/06	180	18	<1.7	0.14	0.016 J	---	---	---	---	57	---	---	---	---	---	---	901	6.86	21.3	---	0.37	NA
	05/11/06	220	21	1.4	0.15	0.031	---	---	---	---	240	---	---	---	---	---	---	1,027	6.79	18.7	---	186	0.80
	07/17/06	180	17	1.9	0.37	0.046	---	---	---	---	770	---	---	---	---	---	---	1,151	6.75	25.2	---	205	0.5
	07/17/06 FD	180	17	2.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	08/31/06	180	47	6.0	5.5	0.19	---	---	---	---	3,100	---	---	---	---	---	---	1,004	6.53	20.6	---	42	1.40
	09/26/06	170	170	12	3.4	0.45	---	---	---	---	1,800	---	---	---	---	---	---	1,293	6.57	20.0	---	62	0.50
	10/25/06	160	210	19	11	0.43	---	---	---	---	8,100	---	---	---	---	---	---	1,476	6.28	14.4	---	198	1.32
	11/27/06	200	170	33	---	---	---	---	---	---	---	---	---	---	---	---	---	1,578	6.22	16.3	---	---	---
	01/24/07	100	340	50	33	0.28	---	---	---	---	10,000	---	---	---	---	---	---	1,617	6.97	18.8	---	190	6.20
	01/24/07 FD	90	330	60	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	04/24/07	2.7	180	170	97	0.18	---	---	---	---	13,000	---	---	---	---	---	---	1,593	6.33	18.1	---	-43	2.89
	07/25/07	15	55	54	34	0.03	---	---	---	---	10,000	---	---	---	---	---	---	1,293	6.41	19.7	---	227	1.44
	07/25/07 FD	14	55	57	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/27/07	31	35	44	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/27/07 FD	31	36	46	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/20/08	26	84	35	6.9	0.24	---	---	---	---	2,600	---	---	---	---	---	---	1052	6.72	22.2	1.9	30	0.91
	05/20/08 FD	26	85	34	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	12/10/08	17	93	51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
E-14A	01/25/05	1,300	780	<10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	01/25/05 FD	1,400	840	<10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	08/18/05	1,200	500	<25	0.11	0.028	0.13	0.17	0.71	0.72	1.1	39	<1	<1	220	<1.0 U	410	987	6.71	20.3	1.4	10	0.99
	08/18/05 FD	1,300	510	<20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	09/30/05	1,300	660	<20	0.23	0.034	0.42	0.47	0.78	0.8	1.1	39	<1 H2	<1 H2	240	<1.0 U	467	1,143	6.78	23.7	2.6	27	1.0
	10/26/05	1,400	960	<20	0.29	0.046	0.42	0.57	0.74	8.2	2.1	44	<1	<1	260	---	466	930	6.50	20.5	---	31	0.58
	11/30/05	620	1,400	<10	0.26	0.03	---	0.52	<0.1	<0.1	2	40	<0.05	<0.05	250	<0.04	480	1,091	6.68	19.0	0.96	-40	1.0
	02/08/06	930	1,200	<8.3	0.52	0.03	---	---	0.21	---	15	43	<0.05	<0.05	290	<0.04	470	716	6.36	22.3	1.3	0.17	0.2
	05/11/06	890	1,400	<10	0.59	0.31	---	---	<0.10	---	120	43	<0.05	<0.05	290	<0.04	450	1,027	6.59	21.9	1.5	105	0.70
	08/31/06	560	1,400	<7.1	0.35	0.026	---	---	<0.10	---	42	41	---	<0.05	260	<0.04	450	929	6.45	19.5	1.0	181	1.0
	07/25/07	530	1,000	<6.3	0.41	0.009 J	---	---	<0.10	---	250	58	---	<0.05	32	<0.04	500	1195	6.37	22.3	1.3	220	0.33
	11/26/07	570	1,900	<10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/21/08	740	1,700	<13	0.29	0.025 U	---	---	0.22	---	1,000	41	---	<0.05	310	0.06	510	689	6.50	18.9	1.2	109	1.07
	05/21/08 FD	1,200	1,400	<13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	12/10/08	510	920	7.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IIW-1A	01/24/05	170	11	<2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	08/17/05	92	4.2	<1	0.039	0.005 J	---	---	---	---	0.57	---	---	---	---	---	---	917	6.87	21.9	---	182	2.78
	09/30/05	110	7.9	<2	0.034	0.008 J	---	---	---	---	0.19	---	---	---	---	---	---	1,050	6.91	23.0	---	342	3.10
	10/26/05	130	13	<2.5	0.023 J	0.014 J	---	---	---	---	2.4	---	---	---	---	---	---	827	6.64	20.6	---	201	2.46
	11/30/05	170	8.4	<1	0.011 J	0.008 J	---	---	---	---	1.7	---	---	---	---	---	---	983	6.83	20.4	---	87	2.40
	11/30/05 FD	150	6.9	<0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	02/08/06	170	16	<1.0	0.049	0.025 U	---	---	---	---	2.8	---	---	---	---	---	---	932	6.94	17.4	---	214	5
	05/10/06	120	13	<0.7	0.006 J	0.004 J	---	---	---	---	14	---	---	---	---	---	---	895	6.88	23.5	---	104	5.60
	07/17/06	140	17	<1.0	0.34	0.005 J	---	---	<0.10	---	0.27	41	<0.05	11	130	<0.04	450	1,020	6.87	23.3	<0.50	169	2.4
	08/30/06	17	470	15	5.7	0.93	---	---	4.6	---	13	41	---	<0.05	17	2.7	700	900	6.07	20.9	160	-90	0.04
	09/25/06	22	360	10	3.7	0.87	---	---	4.5	---	2,500	40	---	<0.05	8.9	0.57	700	1,096	6.27	21.8	31	-114	0.2
	09/25/06 FD	20	360	11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	10/25/06	25	360	27	7.6	4.4	---	---	5.7	---	4,900	40	---	<0.05	<0.50	1.5	460	722	5.82	20.7	310	-105	0.3
	11/27/06	<1.7	240	100	---	---	---	---	---	---	---	---	---	---	---	---	---	1,229	6.23	21.0	---	---	---
	01/24/07	0.6	89	32	110	0.058	---	---	3.4	---	16,000	40	---	<0.05	2.4	1.5	710	1,088	6.6	18.9	110	-82	1.37
	04/24/07	0.6	25	13	59	0.025 U	---	---	2.9	---	18,000	37	---	<0.05	3.8	1.1	790	1,446	6.47	21.2	9.8	-96	1.48
	07/25/07	13	19	22	23	0.016 J	---	---	2.4	---	8,300	38	---	0.08	97	0.16	560	995	6.72	22.2	1.9	61	0.35

Table 3. Summary of Intrinsic Remediation Monitoring Parameters for Enhanced In-Situ Bioremediation of Chlorinated Solvents in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sample Date/Type	TCE	cis-1,2-DCE	Vinyl Chloride	Ethene	Ethane	Mn, Dissolved	Mn, Total	Iron, Dissolved	Iron, Total	Methane	Chloride	Nitrite	Nitrate	Sulfate	Sulfide	Alka-linity	Ec	pH	Temp	TOC	ORP	DO
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	std.	C	mg/L	mV	mg/L
IIW-1A	11/27/07	7.7	30	26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/20/08	39	30	42	8.5	0.025 U	---	---	1.1	---	2,300	36	---	0.07	120	<0.04	510	586	6.51	21.0	1.1	8	1.01
	12/10/08	1.6	3.9	21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	12/10/08 FD	1.5	3.9	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IOW-4A	01/05/05	40	14	0.88	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	08/17/05	34	27	5.5	0.37	0.007 J	---	---	---	---	0.81	---	---	---	---	---	---	910	6.85	21.6	---	19	2.02
	09/30/05	33	46	24	2.5	0.038	---	---	---	---	0.94	---	---	---	---	---	---	1,025	6.90	22.5	---	254	1.40
	10/26/05	41	43	18	2.2	0.066	---	---	---	---	5.5	---	---	---	---	---	---	859	6.51	20.6	---	24	0.54
	10/26/05 FD	41	46	19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/30/05	41	85	48	3.4	0.087	---	---	---	---	69	---	---	---	---	---	---	1,156	6.63	20.0	---	28	1.0
	02/08/06	24	130	52	6.3	0.043	---	---	---	---	900	---	---	---	---	---	---	1,117	6.52	17.9	---	0.11	0.8
	03/22/06	24	98	30	---	---	---	---	---	---	---	---	---	---	---	---	---	1,245	6.86	21.6	---	158	6.20
	05/10/06	22	220	89	8.5	0.017 J	---	---	---	---	1,500	---	---	---	---	---	---	1,028	6.61	24.4	---	62	0.30
	05/10/06 FD	21	210	93	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	07/17/06	17	140	62	6.5	0.015 J	---	---	0.15	---	1,000	42	<0.05	<0.05	110	<0.04	570	1,064	6.69	24.5	1.2	41	0.60
	08/30/06	<1.7	200	29	9.8	0.89	---	---	34	---	6,600	41	---	<0.05	<0.50	0.33	810	1,102	5.83	22.4	250	-45	0.40
	09/25/06	<1.0	120	37	4.1	0.032	---	---	22	---	9,900	40	---	<0.05	0.83	0.18	880	1,321	6.21	23.7	140	-120	0.30
	10/25/06	<0.5	89	91	3.1	0.025 U	---	---	16	---	19,000	40	---	<0.05	<0.50	0.14	840	1,062	0.39	21.9	80	-104	0.60
	11/28/06	0.5	57	110	---	---	---	---	---	---	---	---	---	---	---	---	---	1,243	6.02	20.7	---	---	---
	01/24/07	<1.3	43	130	18	0.02 J	---	---	6.2	---	23,000	40	---	<0.05	2.3	0.75	850	1,174	6.64	19.6	24	-135	1.19
	04/24/07	2.1	41	150	38	0.077	---	---	4.5	---	18,000	37	---	<0.05	28	0.52	790	1,137	6.62	19.5	0.91	-75	2.12
	07/25/07	1.4	28	90	4.9	0.025 U	---	---	7.0	---	9,700	39	---	<0.05	75	0.04	620	1,151	6.34	22.4	2.0	21	0.77
	11/26/07	1.4	9.9	170	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/20/08	2.0	13	210	21	0.009 J	---	---	3.3	---	7,100	37	---	<0.05	90	0.09	590	673	6.51	21.6	1.8	-171	0.71
	12/10/08	1.2	4.5	110	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IOW-4B1	08/18/05	<0.5	2.5	1.1	0.12	0.006 J	0.0081	0.0085	0.31	0.33	0.88	34	1.1	4.7	85	<1.0 U	240	627	7.30	20.7	<1.0 U	-36.1	0.30
	09/29/05	<0.5	1.8	0.71	6.2	0.51	0.01	0.012	0.33	0.62	11	34	<1	3.2	84	<1.0 U	240	653	7.35	23.3	<1.0 U	326	2.30
	10/25/05	<0.5	2.6	1.1	0.084	0.099	0.014	0.0085	0.3	0.36	6.2	37	<1	3.5	84	1.8	250	597	7.22	20.1	<1.0 U	122	3.72
	11/30/05	<0.5	3	1.2	0.11	0.006 J	---	0.01	<0.1	<0.1	0.87	36	<0.05	0.8	84	<0.04	270	543	7.41	18.6	<0.5	202	1.0
	02/08/06	<0.5	2.2	0.8	0.086	0.004 J	---	---	---	---	4.4	---	---	---	---	---	---	574	7.37	18.6	---	0.83	0.7
	05/10/06	<0.5	2.0	<0.5	0.022 J	0.006 J	---	---	---	---	2.1	---	---	---	---	---	---	589	7.36	20.3	---	164	0.80
	07/17/06	<0.5	1.1	<0.5	0.037	0.014 J	---	---	---	---	0.33	---	---	---	---	---	---	636	7.29	24.3	---	127	0.90
	08/30/06	0.6	10	6.8	0.88	0.005 J	---	---	---	---	1.6	---	---	---	---	---	---	547	7.22	22.1	---	-4	1.0
	09/26/06	<0.5	7.8	4.9	2.2	0.012 J	---	---	---	---	3.2	---	---	---	---	---	---	595	7.39	22.3	---	61	0.50
	10/25/06	0.6	8.2	4.5	0.610	0.064	---	---	---	---	9.80	---	---	---	---	---	---	492	7.29	22.9	---	-39	0.40
	01/24/07	<0.5	4.4	1.9	1.4	0.007 J	---	---	---	---	33	---	---	---	---	---	---	562	7.39	20.0	---	-58	0.95
	04/24/07	<0.5	3.2	<0.5	0.02 J	0.025 U	---	---	---	---	0.45	---	---	---	---	---	---	747	7.08	21.8	---	259	0.54
	07/25/07	<0.5	2.3	<0.5	0.037	0.028	---	---	---	---	21	---	---	---	---	---	---	665	6.91	23.5	---	217	0.84
	05/20/08	0.6	<0.5	<0.5	0.08	0.003 J	---	---	<0.10	---	1.6	34	---	0.72	77	<0.04	270	437	7.02	21.9	<0.50	-123	1.22
	12/10/08	1	2.5	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
M-6A	01/24/05	68	22	2.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/21/05	5.2	2.1	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	07/17/06	0.9	<0.5	<0.5	1.8	0.024 J	---	---	---	---	1.8	---	---	---	---	---	---	931	7.03	26.2	---	186	1.20
	08/30/06	15	4.9	1.3	0.03	0.018 J	---	---	---	---	2.5	---	---	---	---	---	---	759	6.78	17.7	---	196	0.80
	09/26/06	21	5.6	1.7	0.26	0.018 J	---	---	---	---	2.8	---	---	---	---	---	---	---	---	---	---	---	---
	10/25/06	16	4.8	1.6	0.13	0.071	---	---	---	---	4.9	---	---	---	---	---	---	995	6.82	15.7	---	211	0.77
	11/27/06	2.3	0.6	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	1,054	7.15	15.6	---	---	---
	01/24/07	1	<0.5	<0.5	0.95	0.04	---	---	---	---	3.9	---	---	---	---	---	---	827	7.08	13.4	---	207	3.60
	04/24/07	3.3	1.0	<0.5	0.099	0.11	---	---	---	---	7.2	---	---	---	---	---	---	847	7.18	18.1	---	52	1.89
	07/25/07	4.7	1.1	0.6	0.046	0.021 J	---	---	---	---	2.2	---	---	---	---	---	---	442	7.01	18.7	---	228	0.66
	11/26/07	3.9	0.8	0.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/20/08	<0.5	<0.5	<0.5	0.015 J	0.014 J	---	---	---	---	0.53	---	---	---	---	---	---	811	7.21	26.1	---	152	1.13
	12/10/08	0.7	<0.5	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 3. Summary of Intrinsic Remediation Monitoring Parameters for Enhanced In-Situ Bioremediation of Chlorinated Solvents in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sample Date/Type	TCE	cis-1,2-DCE	Vinyl Chloride	Ethene	Ethane	Mn, Dissolved	Mn, Total	Iron, Dissolved	Iron, Total	Methane	Chloride	Nitrite	Nitrate	Sulfate	Sulfide	Alka-linity	Ec	pH	Temp	TOC	ORP	DO
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	std.	C	mg/L	mV	mg/L
PW-3A	01/25/05	180	20	<2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	08/29/05	120	18	<1	0.006 J	0.004 J	---	---	---	---	0.15	---	---	---	---	---	---	1,088	6.94	20.3	---	209	0.90
	08/29/05 FD	130	19	<1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	09/29/05	150	27	<2	0.063	0.028	---	---	---	---	0.2	---	---	---	---	---	---	1,047	6.92	21.5	---	341	0.91
	10/26/05	160	33	<2	0.043	0.018 J	---	---	---	---	1.4	---	---	---	---	---	---	827	6.72	19.3	---	202	1.27
	11/30/05	210	27	<1.3	0.02 J	0.009 J	---	---	---	---	0.65	---	---	---	---	---	---	994	6.87	20.0	---	58	1.80
	02/08/06	210	39	<1.3	0.042	0.005 J	---	---	---	---	1.4	---	---	---	---	---	---	602	7.4	20.3	---	0.15	0.8
	05/11/06	140	29	<1.0	0.043	0.008 J	---	---	---	---	3.3	---	---	---	---	---	---	888	6.88	20.2	---	173	0.6
	08/31/06	2.5	550	19	8.7	1.5	---	---	---	---	220	---	---	---	---	---	---	1,063	6.08	20.6	---	-76	0.8
	11/28/06	0.6	5.7	8.9	---	---	---	---	---	---	---	---	---	---	---	---	---	1,322	6.25	18.5	---	---	---
	07/25/07	2.6	3.2	8.5	45	0.064	---	---	---	---	14,000	---	---	---	---	---	---	991	6.60	19.9	---	198	0.58
	11/27/07	2.6	7.0	19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/21/08	0.7	4.0	24	16	0.087	---	---	---	---	800	---	---	---	---	---	---	565	6.67	19.9	---	73	0.63
	12/10/08	<0.5	5.5	99	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
PW-4B1	01/25/05	29	120	40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	08/29/05	19	25	3.1	0.093	0.005 J	---	---	---	---	0.49	---	---	---	---	---	---	730	7.33	20.3	---	203	1.10
	09/29/05	14	14	<0.5	1.2	0.11	---	---	---	---	2.4	---	---	---	---	---	---	704	7.43	22.2	---	393	0.95
	10/25/05	15	13	<0.5	0.022 J	0.11	---	---	---	---	3.8	---	---	---	---	---	---	622	7.14	19.3	---	137	1.04
	11/30/05	17	11	<0.5	0.01 J	0.01 J	---	---	---	---	0.28	---	---	---	---	---	---	638	7.33	19.3	---	4.0	1.0
	02/08/06	13	9.6	<0.5	0.045	0.025 U	---	---	---	---	3	---	---	---	---	---	---	800	6.08	18.2	---	105	1.49
	05/10/06	16	9.8	<0.5	0.012 J	0.006 J	---	---	---	---	1.4	---	---	---	---	---	---	589	7.47	19.6	---	205	2.20
	07/17/06	12	7.6	<0.5	0.32	0.006 J	---	---	---	---	0.39	---	---	---	---	---	---	653	7.37	26.5	---	176	1.0
	08/31/06	12	8.3	<0.5	0.052	0.058	---	---	---	---	0.95	---	---	---	---	---	---	572	7.31	20.3	---	45	1.0
	09/26/06	15	8.3	<0.5	0.43	0.01 J	---	---	---	---	1	---	---	---	---	---	---	619	7.42	20.0	---	35	0.70
	10/25/06	13	8.9	<0.5	0.66	0.08	---	---	---	---	8.6	---	---	---	---	---	---	700	7.36	17.4	---	179	1.07
	11/28/06	14	7.4	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	673	7.33	16.8	---	---	---
	01/24/07	12	7.0	<0.5	1.2	0.009 J	---	---	---	---	7.5	---	---	---	---	---	---	572	7.39	19.2	---	176	2.30
	04/24/07	12	7.7	<0.5	0.044	0.014 J	---	---	---	---	15	---	---	---	---	---	---	599	7.47	18.9	---	-9	2.18
	07/25/07	12	5.1	<0.5	0.012 J	0.007 J	---	---	---	---	2.1	---	---	---	---	---	---	666	7.44	19.9	---	229	0.99
	11/27/07	12	4.6	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/21/08	12	4.7	<0.5	0.025 U	0.025 U	---	---	---	---	0.71	---	---	---	---	---	---	412	7.21	18.9	---	108	1.01
	12/10/08	9.7	4.3	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
R-50A	01/25/05	<50	4,300	1,800	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/29/05	<36	590	4,800	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	07/17/06	20	2,400	1,600	2,200	0.18	---	---	0.63	---	190	57	<0.05	<0.05	17	<0.04	650	1,077	7.05	22.6	5.3	16	0.80
	08/30/06	<13	2,100	1,500	1,400	0.26	---	---	---	---	1,100	---	---	---	---	---	---	854	6.86	21.5	---	-132	0.60
	08/30/06 FD	<13	2,000	1,400	---	---	---	---	1.1	---	---	48	---	<0.05	29	1.6	530	---	---	---	3.4	---	---
	09/25/06	<17	1,500	1,700	710	0.51	---	---	0.44	---	780	49	---	<0.05	37	11	600	999	7.11	21.7	2.7	-281	0.60
	10/25/06	<8.3	660	2,800	810	0.52	---	---	0.45	---	820	48	---	<0.05	27	13	590	854	6.99	20.2	2.8	-260	0.40
	11/27/06	<17	890	3,300	---	---	---	---	---	---	---	---	---	---	---	---	---	1,129	6.82	21.4	---	---	---
	11/27/06 FD	<13	650	3,500	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	01/24/07	<10	4,600	3,200	670	0.99	---	---	0.44	---	540	51	---	<0.05	63	0.80	610	994	7.13	18.0	1.6	-205	0.80
	04/24/07	<1.7	260	3,600	580	0.61	---	---	0.16	---	430	49	---	<0.05	53	4.3	590	1,271	6.97	22.6	0.66	-170	1.34
	07/25/07	<10	9,300	4,800	830	0.56	---	---	0.97	---	590	43	---	<0.05	290	2.2	660	1,093	6.97	23.6	3.9	<NA	0.67
	11/27/07	43	3,000	4,300	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/20/08	<17	5,600	4,500	1,600	0.32	---	---	1.2	---	1,200	56	---	<0.05	2.4	3.0	730	632	6.60	21.8	12	-212	3.07
	12/10/08	<5.0	27	740	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TW-2A	08/18/05	23	17	8.7	0.78	0.12	0.11	0.11	0.61	0.59	1.9	35	<1	46	110	<1.0 U	430	926	6.85	19.9	<1.0 U	290	2.66
	09/30/05	29	17	2	0.66	0.46	2.6	2.6	3.3	3.3	1.9	37	<1 H2	1.8 H2	50	<1.0 U	690	1,167	6.63	20.9	82	104	1.40
	10/25/05	0.92	63	1.9	0.35	0.47	3.3	3.6	5.5	5.8	7.1	41	<1	<1	2.7	<1.0 U	870	1,125	6.07	20.7	16	-168	1.23
	11/30/05	<0.7	90	0.9	0.48	0.12	---	4.2	4.8	4.3	6,400	34	<0.05	0.55	20	0.19	780	1,292	6.17	20.6	48	-99	0.40
	02/08/06	0.9	92	1.5	0.15	0.005 J	---	---	5.5	---	16,000	40	<0.05	<0.05	<0.50	0.12	660	665	6.62	20.4	66	110	1.63
	05/10/06	0.5	53	13	0.11	0.025 U	---	---	3.1	---	14,000	38	<0.05	<0.05	6.4	2.4	600	907	6.69	22.3	4.2	-175	0.20
	08/31/06	8.8	28	1.9	0.1	0.01 J	---	---	1.8	---	2,100	37	---	<0.05	40	0.18	550	781	6.64	20.3	0.86	-63	1.40

Table 3. Summary of Intrinsic Remediation Monitoring Parameters for Enhanced In-Situ Bioremediation of Chlorinated Solvents in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sample Date/Type	TCE	cis-1,2-DCE	Vinyl Chloride	Ethene	Ethane	Mn, Dissolved	Mn, Total	Iron, Dissolved	Iron, Total	Methane	Chloride	Nitrite	Nitrate	Sulfate	Sulfide	Alka-linity	Ec	pH	Temp	TOC	ORP	DO
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	std.	C	mg/L	mV	mg/L
TW-2A	07/25/07	1.2	4.2	24	5.3	0.025 J	---	---	2.0	---	4,600	38	---	<0.05	69	<0.04	540	961	6.72	23.2	1.2	-35	0.58
	11/26/07	4.5	36	2.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/20/08	6.7	36	42	1.4	0.005 J	---	---	1.9	---	41	36	---	<0.05	110	<0.04	490	593	6.71	20.7	1.0	-37	1.10
	12/09/08	6.9	27	30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TW-3A	08/18/05	200	57	2.6	0.29	0.12	0.17	0.17	0.65	0.61	1.3	45	2.3	30	140	<1.0 U	440	984	6.91	20.4	<1.0 U	56	0.63
	09/30/05	130	73	<2	0.43	0.29	1.2	1.4	2.7	3	1.7	40	<1 H2	<1 H2	52	1.4	707	1,120	6.80	22.0	13	-67.5	1.60
	10/26/05	22	320	3.3	0.66	0.31	2.3	2	5.6	5.1	14	45	<1	<1	44	---	767	963	6.35	20.3	---	-230	0.99
	11/30/05	19	290	<2.5	1.1	0.15	---	2.5	4.9	4.7	820	38	<0.05	<0.05	43	1.2	790	1,012	6.65	19.0	2.3	-201	1.80
	02/08/06	34	280	1.7	0.39	0.047	---	---	2.0	---	6,800	41	<0.05	<0.05	34	0.19	800	705	6.07	19.5	2.4	-151	0.59
	05/11/06	16	200	48	0.4	0.024 J	---	---	3.0	---	10,000	42	<0.05	<0.05	63	0.20	580	975	6.45	21.5	2.0	-79	0.30
	08/30/06	5.4	80	58	0.38	0.025 U	---	---	1.8	---	15,000	39	---	<0.05	65	0.08	570	821	6.35	22.6	1.4	-56	0.60
	07/25/07	2.4	71	15	1.8	0.006 J	---	---	0.47	---	1,100	39	---	<0.05	110	<0.04	500	900	6.79	24.5	1.3	114	1.15
	11/26/07	2.6	70	55	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/20/08	18	120	93	1.2	0.019 J	---	---	0.48	---	680	37	---	<0.05	130	<0.04	490	602	6.57	22.0	1.0	-24	0.87
	12/09/08	0.8	13	64	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TW-4A	08/18/05	380	230	<5	0.32	0.11	0.27	0.26	0.61	0.58	1.2	40	<1	35	130	<1.0 U	440	951	6.42	20.4	<1.0 U	31	0.89
	09/30/05	320	130	<2	0.16	0.073	0.36	0.48	0.62	0.66	0.47	37	<1 H2	16 H2	130	<1.0 U	516	1,065	6.96	23.1	2.0	-4.2	0.60
	09/30/05 FD	270	110	<2.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	10/26/05	350	150	<2	0.22	0.23	0.26	0.21	0.8	0.73	1.7	41	<1	7	99	---	748	952	6.56	20.5	---	-11	1.40
	11/30/05	460	200	<4.2	0.28	0.13	---	0.29	<0.1	<0.1	600	37	0.08	1.1	80	<0.04	800	1,149	6.61	18.4	1.2	68	1.20
	02/08/06	480	270	<3.6	0.38	0.058	---	---	<0.10	---	5,100	41	<0.05	0.30	61	<0.04	860	756	6.15	18.2	2.5	-138	1.43
	05/11/06	270	240	34	1.5	1.1	---	---	<0.10	---	6,800	42	<0.05	0.16	30	<0.04	740	1,147	6.46	21.5	1.8	114	0.20
	07/17/06	460	270	23	---	---	---	---	---	---	---	---	---	---	---	---	---	1,276	6.54	26.4	---	177	0.10
	08/30/06	290	260	26	0.52	0.026	---	---	<0.10	---	9,600	38	---	<0.05	35	<0.04	700	965	6.34	22.1	1.4	21	0.60
	09/25/06	77	70	13	---	---	---	---	---	---	---	---	---	---	---	---	---	973	6.55	22.9	---	13	0.20
	10/25/06	220	200	24	---	---	---	---	---	---	---	---	---	---	---	---	---	1,125	6.32	22.4	---	58	0.97
	10/25/06 FD	220	210	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	01/24/07	400	280	33	---	---	---	---	---	---	---	---	---	---	---	---	---	1,190	6.61	19.5	---	-9	1.33
	04/24/07	12	300	29	---	---	---	---	---	---	---	---	---	---	---	---	---	1,146	6.97	18.3	---	265	2.59
	07/25/07	310	260	100	2.2	0.01 J	---	---	<0.10	---	3,200	40	---	<0.05	81	<0.04	700	961	6.72	23.2	1.3	-35	0.58
	11/26/07	380	350	180	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/21/08	570	430	87	2	0.025 U	---	---	<0.10	---	3,100	39	---	<0.05	110	<0.04	590	637	6.32	18.8	1.0	230	1.14
	12/09/08	220	590	97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W-1A	01/06/05	74	0.6	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/23/05	81	0.5	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	07/17/06	88	0.6	<0.5	0.32	0.007 J	---	---	---	---	0.35	---	---	---	---	---	---	1,080	6.91	23.4	---	194	2.30
	08/30/06	86	0.8	<0.5	0.008 J	0.025 U	---	---	---	---	0.17	---	---	---	---	---	---	834	6.72	17.7	---	194	3.0
	09/26/06	92	0.8	<0.5	0.16	0.006 J	---	---	---	---	0.32	---	---	---	---	---	---	1,024	6.95	18.7	---	34	2.80
	10/25/06	94	0.9	<0.5	0.07	0.048	---	---	---	---	2.5	---	---	---	---	---	---	1,122	6.84	16.4	---	63	2.66
	11/27/06	93	0.7	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	1,122	6.65	17.7	---	---	---
	01/24/07	95	0.8	<0.5	0.5	0.007 J	---	---	---	---	5.1	---	---	---	---	---	---	928	6.95	15.7	---	179	4.30
	04/24/07	90	0.8	<0.5	0.018 J	0.01 J	---	---	---	---	3.5	---	---	---	---	---	---	970	6.96	17.2	---	29	2.26
	04/24/07 FD	83	0.9	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	07/25/07	96	0.6	<0.5	0.016 J	0.004 J	---	---	---	---	9.5	---	---	---	---	---	---	1,022	6.91	19.0	---	237	2.08
	11/27/07	84	0.7	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	05/20/08	79	0.8	<0.5	0.025 U	0.025 U	---	---	---	---	0.2	---	---	---	---	---	---	897	7.09	19.6	---	175	2.06
	12/10/08	97	<0.5	<0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 3. Summary of Intrinsic Remediation Monitoring Parameters for Enhanced In-Situ Bioremediation of Chlorinated Solvents in Ground Water, Former Intel Mountain View Facility, Mountain View, California

Well ID	Sample Date/Type	TCE	cis-1,2-DCE	Vinyl Chloride	Ethene	Ethane	Mn, Dissolved	Mn, Total	Iron, Dissolved	Iron, Total	Methane	Chloride	Nitrite	Nitrate	Sulfate	Sulfide	Alka-linity	Ec	pH	Temp	TOC	ORP	DO
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	std.	C	mg/L	mV	mg/L

Parameter Abbreviations:

cis-1,2-DCE = cis-1,2-dichloroethene
DO = dissolved oxygen
Ec = electrical conductivity
Mn = manganese
ORP = oxidation reduction potential
pH = concentration of hydrogen ions
Temp = temperature
TCE = trichloroethene
TOC = total organic carbon

Notes:

--- = not analyzed
C = centigrade
FD = blind duplicate field sample
H1 = extracted out of holding time
H2 = analyzed out of holding time
J = estimated value
mg/L = milligrams per liter
mV = millivolts
std = standard pH units
U = analyte was not detected at or above the stated limit
ug/L = microgram per liter
uS/cm = microsiemens per centimeter

Table 4. Comparison of Long-Term Monitoring Data - 75% Upper Confidence VOC Levels vs. December 2008 VOC Concentrations

Well ID	**TCE** µg/L (75% UCL, 2000-2005)	**TCE** µg/L (Dec.2008)	**cis-1,2-DCE** µg/L (75% UCL, 2000-2005)	**cis-1,2-DCE** µg/L (Dec.2008)	**Vinyl Chloride** µg/L (75% UCL, 2000-2005)	**Vinyl Chloride** µg/L (Dec.2008)
Long-Term Monitoring						
E-9A	309	17	35	93	4	**51**
PW-3A	322	<0.5	43	6	25	**99**
PW-4B1	77	9.7	237	4	224	<0.5
W-1A	113	97	9	<0.5	2	<0.5
W-1B	74	35	49	**50**	5	1
E-24B1	142	9	211	6	77	5
M-5A	152	130	7	**8**	3	<0.5
M-5B*	31	**62**	45	**100**	2	**5**
M-6A	220	1	45	<0.5	3	<0.5
M-6B	280	NA	100	NA	10	NA
IOW-3A	17	14	2	<0.5	1	<0.5

Notes and Abbreviations:
Bold = trigger levels are exceeded
* = trigger levels were recalculated to include the November 2004 analytical data
NA = Not analyzed
UCL = Upper Confidence Level

Table 5. 2009 Sampling and Reporting Schedule for the Former Intel Facility, Mountain View, California

Sample Point	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
E-6A												
E-7A												
E-9A						8260B[g]			8260B[g]			8260B[g]
E-10A												8260B
E-14A						8260B[b,g]			8260B[b,g]			8260B[1,b,g]
E-15D												8260B[1]
E-19A												8260B
E-23A												
E-23B												
E-24B1												8260B
I-9A												
I-9B												8260B
IIW-1A						8260B[1,b,g]			8260B[b,g]			8260B[1,b,g]
IOW-1A												
IOW-2B1												
IOW-3A												8260B
IOW-3B1												8260B
IOW-4A						8260B[1,b,g]			8260B[b,g]			8260B[1,b,g]
IOW-4B1						8260B[b,g]						8260B[1,b,g]
M-1A												
M-1B												
M-2B												
M-3B												
M-4A												
M-4B												
M-5A												8260B
M-5B												8260B
M-6A												8260B[g]
M-6B												
M-7A												
M-7B												
M-8A						8260B						8260B
M-8B1												
M-9A												8260B
M-9B												8260B
M-10B2												8260B
M-18A												
M-19A												8260B
M-19B1												8260B
PW-1A												8260B
PW-2A												8260B[1]
PW-3A						8260B[g]			8260B[g]			8260B[g]
PW-4B1						8260B[g]			8260B[g]			8260B[g]
PW-5B1												8260B
R-50A						8260B[1,b,g]			8260B[1,b,g]			8260B[1,b,g]
RH-01A												8260B
TW-1A												8260B
TW-2A						8260B[1,b,g]			8260B[b,g]			8260B[1,b,g]
TW-3A						8260B[1,b,g]			8260B[b,g]			8260B[1,b,g]
TW-4A						8260B[1,b,g]			8260B[b,g]			8260B[1,b,g]
W-1A						8260B[g]			8260B[g]			8260B[g]
W-1B												8260B

Table 5. 2009 Sampling and Reporting Schedule for the Former Intel Facility, Mountain View, California

Sample Point	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Regional Sampling (MEW)[2]												✔
Water Levels (MEW and facility-specific)[3]			✔								✔	
Well Depths												✔
Treatment System Sampling[4]												
Flow Readings/O&M Check[5]												
City of MV Discharge Letter	✔			✔			✔			✔		
Annual Report (due 4/15)[6]				✔								

Notes and Abbreviations:

Green font indicates sample is for in-situ bioremediation project; blue indicates sample is for MEW RGRP.

8260B = Analyze sample by USEPA Method 8260B for halogenated volatile organic compounds (VOCs), Method 8010 list of analytes.

1 = Also analyze for benzene, toluene, ethylbenzene, and xylenes (BTEX).

2 = Samples are collected from wells I-9B, M-5B, M-9A, and M-9B on behalf of the MEW RGRP. Samples are analyzed for VOCs using Method 8260B.

3 = Water levels are measured in all site wells on the 4th Thursday of the month (except for November; 3rd Thursday of the month).

4 = Treatment system is currently off. Collect an influent and effluent sample each time a batch of ground water is discharged by the system. Assume 3x/year for cost etimating.

5 = Treatment system is currently off. Record totalizer readings prior to and after treatment and complete a system inspection report each time a batch of ground water is discharged by the system.

6 = Single annual deliverable beginning in 2005.

b = Also analyze for bioremediation parameters (alkalinity, chloride, nitrate, sulfate/sulfide, ferrous Fe, TOC, DO, ORP).

g = Also analyze for dissolved gases (ethene, ethane, and methane).

Weiss Associates

ATTACHMENT A

QA/QC SUMMARY TABLE

Table A-1. Summary of Sampling QA/QC for 2008 Phase I and II Performance Ground Water Monitoring Events, Enhanced *In-Situ* Bioremediation Pilot Test, Former Intel Facility, Mountain View, California

Who performed sampling (Firm name/address/contact/phone):	Weiss Associates 350 East Middlefield Road, Mountain View, CA 94043 Anja Verce (510) 450-6160 or (650) 968-7000
Chain of Custody forms completed for all samples?	YES
Field parameters stabilized prior to taking sample?	YES
Zero head space in sample containers (applicable to VOCs only)?	YES
Samples preserved according to analytical method?	YES
Required field QA/QC samples taken?	YES

*Explain any "NO" answers:

Table A-2. Summary of Analytical QA/QC for 2008 Phase I and II Performance Ground Water Monitoring Events, Enhanced *In-Situ* Bioremediation Pilot Test, Former Intel Facility, Mountain View, California

Who performed analysis (Lab name/address/contact/phone):	Curtis & Tompkins 2323 Fifth Street Berkeley, CA 94710 Anna Pajarillo (510) 486-0900 Microseeps, Inc. 220 William Pitt Way Pittsburgh, PA 15238 Becky Hans (412) 826-5245
Analytical methods (by method number and chemical category):	21 samples analyzed by USEPA 8260 for Halogenated Volatile Organic Compounds 12 samples analyzed by USEPA Method 8260B for Volatile Aromatic and Halogenated Volatile Organic Compounds Eight samples analyzed by USEPA Method 300.0 for Nitrate and Chloride Eight samples analyzed by USEPA Method 375.4 for Sulfate Eight samples analyzed by USEPA Method 6010B for Ferrous Iron Eight samples analyzed by USEPA Method 310.1 for Alkalinity Eight samples analyzed by USEPA Method 415.1 for Total Organic Carbon 13 samples analyzed by Method AM20GAX for Dissolved Gases
Is the lab state-certified for the above analytical methods?	YES
Analyses performed according to standard methods?	YES
Sample holding times met?	YES
Analytical results reported for all values above MDL?	YES
QA/QC analyses run consistent with analytical methods?	YES
QA/QC results meet all acceptance criteria?	YES[1,2]
QA/QC results and acceptance criteria on file?	YES

*Explain any "NO" answers:

1 = High surrogate recoveries were observed for bromofluorobenzene in sample 0508-01 (lab # 203429-001) and the method blanks for batch 138448. M,p-xylenes was detected above the RL in the method blank for batch 138448; this analyte was not detected in the sample at or above the RL. No other analytical problems were encountered.

2 = High RPD was observed for sulfide in the SDUP for batch 138445; the parent sample was not a project sample. No other analytical problems were encountered.