

A Report Prepared for:

Superfund Program SFD-7-3 US EPA Region IX Attention: Ms. Alana Lee 75 Hawthorne Street San Francisco, CA 94105

THIRD QUARTER 2019 STATUS REPORT SULFIDATED ZERO VALENT IRON IN-SITU PILOT TEST

SMI HOLDING LLC 455 AND 485/487 EAST MIDDLEFIELD ROAD MOUNTAIN VIEW, CALIFORNIA

OCTOBER 16, 2019

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1.0 INTRODUCTION

On behalf of SMI Holding LLC (SMI), PES Environmental, Inc. (PES) is submitting this Third Quarter (July through September) 2019 Quarterly Status Report for the voluntary sulfidated zero valent iron (ZVI) pilot test conducted at the former Siemens facility located at 455 and 485/487 East Middlefield Road (EMR) in Mountain View, California (the "Site"). The ZVI pilot test was implemented in July 2019 in accordance with PES's June 17, 2019 "Work Plan for Sulfidated Zero Valent Iron In-Situ Pilot Test" (Work Plan)¹. The Work Plan was approved by the United States Environmental Protection Agency Region IX (EPA) via electronic mail on June 17, 2019.²

The ZVI pilot test utilized flowable, micron-sized, sulfidated ZVI³ to promote the abiotic degradation or in-situ chemical reduction (ISCR) of trichloroethene (TCE)⁴. Sulfidated ZVI has less side reaction with water, enhanced reactivity with TCE, and increased longevity than unsulfidated ZVI.⁵ Micron-sized ZVI is easier to inject than larger sizes of ZVI and avoids the clumping associated with nano-sized ZVI. The micron-sized ZVI is suspended in a colloidal solution to allow the solution to be dispersed into the formation without fracturing or mechanical mixing in the subsurface.

This report summarizes the July 2019 ZVI injection activities and the performance monitoring results to date. The activities associated with injection activities included the construction of new groundwater monitoring wells (along with development and surveying) and soil vapor probes; pre-injection (baseline) monitoring of groundwater and soil vapor; indoor air sampling with the building's heating, ventilation, and air conditioning (HVAC) off; the actual injection activities; and post-injection groundwater and soil vapor sampling.

In order to implement the pilot test, an access agreement with the property owner was obtained; with the exception of the installation of new monitoring wells, the access agreement limited the injection activities to the month of July 2019 only.

This report is organized as follows:

Section 2 provides abbreviated background information;

PES. 2019. Work Plan for Sulfidated Zero Valent Iron In-Situ Pilot Test, SMI Holding LLC, 455 and 485/487 East Middlefield Road, Mountain View, California. June 17.

² EPA, 2019. Electronic mail from Ms. Alana Lee of EPA to Sue O'Connor of SMI entitled "EPA Approval – Work Plan for Sulfidated Zero Valent Iron (ZVI) In-Situ Pilot Test for SMI Holding LLC 455 and 485/587 East Middlefield Road, Mountain View, CA". June 17.

³ The ZVI used was micron-sized (less than 5 micron), consisting of a pre-mixed colloidal suspension liquid with 40% ZVI by weight, and was readily injected.

⁴ A more detailed discussion of the treatment technology was provided in the Work Plan.

⁵ EST, 2017. Mechanochemically Sulfidated Microscale Zero Valent Iron: Pathways, Kinetics, Mechanism, and Efficiency of Trichloroethylene Dechlorination. Environ. Sci. Technol. 2017, 51, 12653-12662. 1

- Section 3 discusses the field activities including permitting, utility clearance, soil vapor probe installation, monitoring well construction, indoor air sampling, reagent injection, waste disposal, and site restoration;
- Section 4 provides the monitoring results to date; and
- Section 5 discusses activities planned for the subsequent quarter.

2.0 BACKGROUND

2.1 Site Location and Features

The Site is located upgradient or on the south side of the Middlefield-Ellis-Whisman (MEW) Study Area (see Plate 1). Contaminant source control activities at the Site have been conducted in accordance with EPA's 1990 Section 1.6 Unilateral Administrative Order (106 Order)⁶, the May 1989 Record of Decision (ROD)⁷, and the 2010 Vapor Intrusion ROD Amendment⁸.

Site features are shown on Plate 2. Two buildings, 455 EMR and 485/487 EMR, may overlie shallow (A-aquifer) groundwater that has been impacted with TCE and degradation products of TCE including cis-1,2-dichlorethene (cis-1,2-DCE) and vinyl chloride.

2.2 Hydrogeology

A-aquifer materials are generally present at depths ranging from approximately 15 to 30 feet below ground surface (bgs) at the Site. The aquifer materials were likely deposited in alluvial environments. The deeper B1-aquifer, as characterized by well SO3-B1, has not been impacted with TCE (or TCE degradation products) above cleanup levels.

The general groundwater flow direction in the A-aquifer on the Site was historically to the north towards San Francisco Bay. However, subsequent to the installation of a slurry wall surrounding the downgradient Raytheon site located at 350 Ellis Street (the Raytheon site and slurry wall are shown on Plate 1), the groundwater flow direction bifurcated to the northeast and northwest on the northern portion of 455 EMR and 485/487 EMR.

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⁶ EPA, 1990. Administrative Order for Remedial Design and Remedial Action, Docket No. 91-4. November 29.

⁷ EPA, 1989. Fairchild, Intel, and Raytheon Sites, Middlefield/Ellis/Whisman (MEW) Study Area, Mountain View, CA, Record of Decision. June 9.

⁸ EPA, 2010. Record of Decision Amendment for the Vapor Intrusion Pathway, MEW Superfund Study Area. August 16.

2.3 Source Areas

As shown on Plate 2, two potential sources of volatile organic compounds (VOCs) were identified on the 455 EMR site⁹: (1) waste solvent/neutralization tanks formerly located near the southeastern corner of the 455 EMR building; and (2) suspected releases in the vicinity of the southeastern corner of the 455 EMR site. Results of chemical analyses of soil and groundwater samples from the area south of 485/487 EMR suggested a release of TCE across the southern portion of the 485/487 EMR property, but it is not known whether these sources were due to on-Site activities and/or off-Site activities¹⁰. Soil and groundwater impacts above the cleanup levels have not been identified at 501/505 EMR.

2.4 Upgradient Source

An upgradient source of TCE concentrations in groundwater is evident based on historical groundwater chemistry data for regional well R-24A located at 500 Ferguson Drive (ranging from 16 to 22 μ g/L between 2003 and 2006¹¹ and 12 to 16 μ g/L between 2009 and 2011)¹²; monitoring data for this well could not be found in the most recent MEW Regional Program report¹³.

2.5 Groundwater Extraction and Treatment System

In 1995, four source control recovery wells (SCRWs), or groundwater extraction wells (EW-1, EW-2, EW-3, and EW-4), were also installed in the A-aquifer. The extracted groundwater was treated by two granular activated carbon (GAC) vessels in series. The groundwater extraction and treatment system (GWTS) operated between 1997 and 2019. On June 18, 2019, the GWTS was shut down with EPA's approved¹⁴ for the duration of the in-situ pilot test.

2.6 Additional Background Information

Additional background information regarding other pilot tests and remediation activities was provided in the Work Plan.

⁹ PES, 1993. Source Investigation and Characterization – Addendum 1, Sobrato Property, 455 East Middlefield Road, Mountain View, California, July 30, 1993.

¹⁰ PES, 1992. Source Investigation and Characterization, Sobrato Properties, 485/487 and 501/505 East Middlefield Road, Mountain View, California, March 30, 1992.

¹¹ Weiss, 2009. 2008 Annual Progress Report for MEW Regional Groundwater Remediation Program. June 15.

¹² Geosyntec, 2014. 2013 Annual Progress Report for MEW Regional Groundwater Remediation Program. March 14.

¹³ Geosyntec, 2019. 2018 Annual Progress Report - Regional Groundwater Remediation Program - MEW Superfund Area, Mountain View and Moffett Field, CA. April 15.

¹⁴ EPA, 2019. Email from Alana Lee of EPA to Susan Gahry of PES. June 17.

3.0 FIELD ACTIVITIES

With prior EPA approval (see Section 2.5), the GWTS was turned off on June 18, 2019 in preparation for the injection activities.

3.1 Utility Clearance Activities

PES met with the property owner's fiber optics provider to facilitate location of underground fiber optic lines and utilized an underground utility service locating subcontractor (C. Cruz of Santa Cruz, California) to check that the drilling locations were clear of underground utilities. PES also notified Underground Service Alert prior to the drilling activities.

Additionally, each drilling/injection location was cleared of subsurface utilities using either air-knifing or hand-augering to a depth of 5 feet below ground surface (bgs). The air-knifing services were provided by Badger Daylighting, Inc. (Badger) of Martinez, California.

3.2 Monitoring Well and Soil Vapor Probe Construction

3.2.1 Permits

Groundwater monitoring well construction permits were obtained from the Santa Clara Valley Water District (SCVWD) prior to well installation activities and are included in Appendix A. Because the depth of the soil vapor probes and direct-push boreholes for reagent injection were less than 45 feet bgs, SCVWD permits were not required.

3.2.2 Monitoring Well Construction, Development, and Surveying

Between June 24 and 27, five new groundwater monitoring wells (SM-01 through SM-05) (see Plate 3) were installed by PeneCore Drilling of Woodland, California (PeneCore) under PES oversight.

Prior to installing the monitoring well, a direct-push pilot borehole was advanced with a Geoprobe 7822DT rig equipped with 2.25-inch diameter tooling to a total depth of approximately 35 feet bgs. The bottom 3 to 4 feet of each direct-push pilot borehole was backfilled with hydrated bentonite chips prior to drilling the well boreholes discussed below. The lithologic information obtained from the direct-push borehole was evaluated to assess the appropriate screen interval for the well. The borehole for the well was drilled directly over the direct-push boring using 10-inch outside-diameter hollow-stem augers. The wells were then constructed with 4-inch diameter PVC well casing and screened from approximately 15 to 30 feet bgs with 0.020-inch slotted well screen. Total depths of the wells are approximately 30 feet bgs. The wells were constructed following the procedures discussed in the Work Plan. The SCVWD inspected the placement of the grout seal. Well construction logs are included in Appendix B.

Well development activities were completed between July 1 and 3, 2019. Due to high historical turbidity measurements, wells R-20A and C-3 were also redeveloped on June 28 and July 3, 2019, respectively. The objective of well development is to remove fine-grained material inside the filter pack and casing, to stabilize and sort the filter pack around the well screen, and to produce representative water samples from the monitored zones. Except for wells R-20A and C-3, the wells were developed by Cascade Drilling, LP (Cascade), of Richmond, California, using a combination of bailing, swabbing, and pumping with a submersible pump. A PES engineer supervised the well development activities and recorded well development data on the well development forms included in Appendix C. Wells R-20A and C-3 are located near the sidewalk and had limited access; therefore, these wells were manually re-developed by Blaine Tech Services, Inc. (Blaine Tech) of San Jose, California, using a combination of bailing and swabbing. The well development logs for wells R-20A and C-3 are also included in Appendix C.

3.2.3 Soil Vapor Probe Installation

Four permanent soil vapor probes (SV-01 through SV-04) were installed at the Site on June 26 and 27, 2019 by PeneCore with PES oversight. At each soil vapor probe location, the borehole was hand augered to 5 feet bgs and then advanced using a Geoprobe 7822DT direct-push rig equipped with a 2.25-inch diameter rod to a total depth of 7 feet bgs. The soil vapor-probe was then installed with a stainless-steel vapor inlet set at 6.5 feet bgs and connected to ¼-inch outside diameter Teflon® tubing in accordance with the procedures discussed in the Work Plan.

3.3 Baseline Groundwater and Soil Vapor Monitoring

Baseline groundwater sampling was conducted on June 28, 2019 for the existing wells and July 10, 2019 for the new wells. Baseline soil vapor sampling was conducted at the four soil vapor probes on July 2, 2019. The groundwater and soil vapor sample collection and analyses were performed according to the procedures discussed in the Work Plan.

The groundwater samples were analyzed for VOCs using EPA Method 8260B, nitrate (as nitrogen) and sulfate using EPA Method 300.0, total iron using EPA Method 6010B, and dissolved gases (i.e., methane, ethane, ethene, and acetylene) using Test Method AM20GAX. Groundwater samples for dissolved gases analyses were submitted under chain-of-custody (COC) documentation to Pace Analytical in Pittsburgh, Pennsylvania. Groundwater samples for other analyses were submitted under COC documentation to Eurofins/TestAmerica, Inc. of Pleasanton, California.

Soil vapor samples were submitted to KPrime, Inc. of Santa Rosa, California under COC documentation for analyses of select VOCs (i.e., TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride) using EPA Method TO-15, and the propellant tracer 1,1-difluoroethane (1,1-DFA; a leak-check compound) using EPA Method TO-3.

3.4 Conduit Sealing and HVAC Off Indoor Air Sampling

On July 2, walk-throughs of 455 and 485/487 EMR were completed by Alana Lee of EPA and PES¹⁵ to assess potential pathway locations and to select the indoor air sampling locations. Simultaneously, PES' licensed electrical subcontractor sealed previously identified potential pathways that the property owner had not previously granted access for sealing. These potential pathways included the electrical conduits beneath the large electrical panels in the electrical room located in the southeast corner of 455 EMR. However, the conduits in the electrical room located in 485/487 EMR could not be sealed as they were connected to an underground high-voltage PG&E transformer that was not safe to access. The fire risers and other floor penetrations were also sealed in both 455 and 485/487 EMR. The sealant used was an expandable foam that did not contain chemicals of concern at the Site.

Indoor air sampling with the HVAC fully off (HVAC-off) indoor air sampling could not previously be completed at 455 EMR due to prior limitations imposed by the property owner. Thus, the indoor air sampling was completed to satisfy EPA's prior request for HVAC-off sampling at 455 EMR and to assess baseline indoor air conditions prior to implementation of the in-situ pilot test. The HVAC systems in both buildings (455 EMR and 485/487 EMR) were shut down at approximately 4 PM on July 8, 2019¹⁶. The HVAC systems remained off during the indoor air sampling. Indoor air sampling was completed between approximately 1 PM on July 10 and 1 PM on July 11, 2019. With prior EPA approval, indoor air sampling was completed in both buildings using RAD145¹⁷ Radiello[®] passive samplers rather than the Summa canister method discussed in the Work Plan. The samples were collected within the breathing zone (height of 4.5 feet above ground surface) over a 24-hour period. Ambient or outdoor air samples were also collected simultaneously to assess background concentrations.

The indoor air Radiello® passive samplers were sent under COC documentation to ALS Environmental (ALS) in Simi Valley, California for analyses of TCE using EPA Method TO-17.

3.5 Field Application of Reagents

As discussed in the Work Plan, the injections areas included: (1) the source area (vicinity of wells SO-PZ1 and SO-PZ2, where the highest residual TCE and cis-1,2-DCE concentrations were previously detected in groundwater; and (2) in the mid-plume and downgradient on-Site plume area between the source area and the northern property boundary (where wells R-20A and C-3 are located) as shown on Plate 3.

Between July 6 and 26, 2019, the injection activities were completed at the Site as discussed in the Work Plan at locations shown on Plate 3. The injections were completed near the former source areas via 81 grid-spaced injection points (I01 through I81).

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¹⁵ Susan Gahry and Scott Morrison of PES attended the building walk-throughs.

¹⁶ The HVAC units were off for approximately 40 hours prior to the initiation of HVAC off indoor air sampling.

¹⁷ The Radiello RAD145 samplers are analyzed using thermal desorption methodology.

Injections were also completed in rows in the mid-plume and distal plume area via 51 injection points (I82 through I132), although some rows were modified due to the presence of subsurface utilities. Some injections near the buildings were also completed using slant drilling to reach beneath sidewalks.

As discussed in the Work Plan, the reagents were obtained from and applied by Regenesis Remediation Services, Inc. of San Clemente, California (RRS). RRS supplied an injection trailer with reagent mixing and metering equipment. The reagents include sulfidated ¹⁸ micro-sized ZVI (AquaZVI™) and Chemical Reducing Solution (CRS®). AquaZVI™ is a sulfidated, micron-sized (less than 5 microns), colloidal suspension of 40% by weight ZVI in an aqueous medium. In some locations, a newer RRS product, S-MicroZVI™, was utilized as RRS no longer produces AquaZVI™ on a routine basis (and enough AquaZVI™ was not available for this project). AquaZVI™ has a shorter shelf life than S-MicroZVI™. S-MicroZVI™ is very similar to AquaZVI™ except S-MicroZVI™ also contains some glycerol to aid in maintaining the suspension of the ZVI in the aqueous solution.

A drilling rig was provided by PeneCore to advance the injection boreholes. The injection and drilling work were overseen by a PES geologist. PeneCore utilized either a Geoprobe 7822DT or 6610 DT direct-push drilling rig. The boreholes were advanced using 1.5-inch diameter drill rods, with a 3-foot retractable screen injection tooling used for the injections. Mixing water was obtained from a metered on-Site City of Mountain View fire hydrant under a City permit obtained by PES.

In general, no injection difficulties were encountered (at a few locations on the west side of the source area, high injection pressures and/or minor product surfacing was observed). The desired quantity of reagents was successfully applied. The borings were backfilled with neat cement grout in accordance with SCVWD requirements (even though SCVWD permits were not required).

In the grid-based (source area) injection area, a total of 26,350 pounds (lbs) of S-MicroZVI[™] and 4,294 lbs of CRS[®] (Chemical Reducing Solution), was mixed with water and injected at 4 or 5 intervals per location within the 15 to 30 target treatment depth. A total of 50,327 gallons of reagent solution was injected, with an average of approximately 36.67 gallons per foot injection rate at each of the 81 injection locations in the source area.

In the mid-plume and downgradient on-Site plume area (i.e., the barrier row injection area), a total of 3,650 lbs of S-MicroZVI™, 36,000 lbs of AquaZVI™, and 5,306 lbs of CRS®, was injected at 5 or 6 intervals per location within the 15 to 30 target treatment depth. A total of 38,250 gallons of reagent solution was injected, with an average of approximately 50 gallons per foot injection rate at each of the 51 injection locations in the mid-plume area.

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¹⁸ ES&T, 2017. Mechanochemically Sulfidated Microscale Zero Valent Iron: Pathways, Kinetics, Mechanism, and Efficiency of TCE Dechlorination. Environ. Sci. Technol. 2017, 51-12653-12662.

A total of 82,998 gallons of water was used for reagent mixing. A copy of RRS's application summary report is included in Appendix E.

3.6 Site Restoration

As requested by the property owner, the entire parking lot around 455 and 485/487 EMR was resurfaced and restriped by PES' subcontractor Bond Pavement Solutions Inc. of San Jose, California between July 27 and 29, 2019.

3.7 Post-Injection Groundwater and Soil Vapor Monitoring Activities

To date, two monthly post-injection groundwater monitoring events have been conducted, (August 19 and 20, 2019 and September 16 and 17, 2019), and one quarterly soil vapor monitoring event has been conducted (on August 19, 2019). The sampling followed the same procedures as those discussed in Section 3.3 for the baseline sampling events.

3.8 Waste Disposal

Wastes generated from groundwater monitoring well installation, development, and groundwater sampling were contained in secured, labeled Department-of-Transportation (DOT)-approved 55-gallon steel drums and stored temporarily on-Site pending waste characterization results. The wastes were then transported under non-hazardous waste manifest by American Integrated Services, Inc. (AIS) to Crosby & Overton, Inc. at Long Beach, California for disposal as non-hazardous wastes.

Soil and wastewater generated during air-knifing activities was contained in two roll-off bins supplied by Badger. Badger removed the soil and wastewater in the bins using a vacuum truck and transported these as non-hazardous waste to the Potrero Hills Landfill in Suisun City, California.

The totes used for the ZVI were recycled by Schuetz Container System to Recon Services, Inc. in Riverside, California.

The waste disposal documentation is included in Appendix F of this report.

4.0 MONITORING RESULTS

The indoor air, soil vapor, and groundwater monitoring results are discussed below.

4.1 HVAC-Off Indoor Air Monitoring

The HVAC-off indoor air monitoring results are summarized in Table 1 and illustrated on Plate 4. The indoor air TCE sampling results ranged from 0.15 micrograms per cubic meter $(\mu g/m^3)$ to 0.33 $\mu g/m^3$. The outdoor air TCE sampling results were non-detect (less than 0.051 $\mu g/m^3$).

The HVAC-off indoor air monitoring results are well below the indoor air cleanup levels for long-term exposure for the MEW site of $5.0 \,\mu\text{g/m}^3$ for commercial property use and $1.0 \,\mu\text{g/m}^3$ for residential property use. The indoor air cleanup levels are contained in the vapor intrusion (VI) Record of Decision (ROD) Amendment for the MEW site¹⁹.

Based on these results, the buildings should be classified as Tier 3B per the VI ROD Amendment. Tier 3B is used to designate an existing building where indoor air has been sampled with no engineering control operating with results at or within outdoor air (background) concentrations. The VI ROD Amendment states that outdoor concentrations of TCE typically range from below laboratory analytical detection limits to $0.4~\mu g/m^3$ in the MEW area. For Tier 3B buildings, no long-term indoor air monitoring is required.

4.2 Soil Vapor

Soil vapor monitoring results are summarized in Table 2 and illustrated on Plate 5. Only TCE was detected in the soil vapor samples collected on July 2 (prior to injections) and August 19 (within four weeks of the completion of injections). The soil vapor monitoring results are summarized below:

- **Pre-Injection:** The TCE detected in soil vapor ranged from 63 μ g/m³ (at location SV-02) to 800 μ g/m³ (in duplicate samples at location SV-04); and
- **Post-Injection:** The TCE detected in soil vapor ranged from 74.2 μ g/m³ (at location SV-02) to 546 μ g/m³ (at location SV-04).

As indicated in Table 2, the leak check compound (1,1-DFA) was detected in a sample from location SV-01 and a duplicate sample from location SV-04 at concentration of 37.5 and 13.4 parts per million by volume (ppmV), respectively. As indicated in the table, the percent ambient air leak in these samples were 0.02 percent and 0.2 percent, respectively, which are well below the 5 percent maximum acceptable amount per California Environmental Protection Agency Department of Toxic Substances Control (DTSC)'s most recent guidance document²⁰. 1,1-DFA was not detected above the laboratory reporting limit in the other samples.

The TCE concentrations in soil vapor did not increase and thus, did not trigger the contingency plan provided in the Work Plan.

4.3 Groundwater

Groundwater sampling results are summarized in Table 3 and illustrated on Plate 6. As previously discussed, baseline (pre-injection) groundwater monitoring was completed on

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¹⁹ EPA, 2010. Record of Decision Amendment for the Vapor Intrusion Pathway, MEW Superfund Study Area, Mountain View and Moffett Field, California. August 16.

²⁰ DTSC, 2015. Advisory – Action Soil Gas Investigation. Jointly developed by DTSC and the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB) and RWQCB, San Francisco Region (SFRWQCB). July.

June 28 (for existing wells) and July 10 (for new wells)²¹. Monthly post-injection monitoring was expanded beyond the program discussed in the Work Plan to include other wells; for those wells, the baseline monitoring results shown on Table 3 are those from the last annual monitoring event in November 2018. The groundwater monitoring results for chemicals of concern generally indicated lower concentrations after treatment as summarized below:

- **Pre-Injection**: The pre-injection TCE groundwater concentrations ranged from less than 0.50 micrograms per liter (μg/L) in source area well SO-PZ1 to 930 μg/L in downgradient (near northern property boundary) well C-3. The pre-injection cis-1,2-DCE concentrations ranged from less than 0.50 μg/L (upgradient wells SM-01 and SM-02, and mid-plume well SM-04) to 870 μg/L in source area (well SO-PZ1). The pre-injection vinyl chloride concentration ranged from less than 0.50 μg/L (in multiple wells) to 140 μg/L in source area well SO-PZ1; and
- **Post-Injection**: On September 16 and 17, 2019, approximately seven weeks after the injections were completed, and excluding the upgradient wells (SM-01, SM-02, and R-21A) and well R-20A, the TCE concentrations ranged from less than 0.50 μg/L (multiple wells) to 87 μg/L in well C-3. The TCE concentrations in upgradient wells SM-01, SM-02, and R-21A ranged from 18 μg/L (well R-21A) to 35 μg/L (well SM-01). The TCE concentration in well R-20A remained high (750 μg/L) and nearly the same as the pre-injection concentration of 840 μg/L.²² Cis-1,2-DCE concentrations ranged from less than 0.50 μg/L (well SM-04) to 240 μg/L (well EW-2). Vinyl chloride concentrations ranged from less than 0.50 μg/L (in multiple wells) to 25 μg/L in source area well SO-PZ2.

After the injections, the August 2019 post-injection monitoring results indicated the presence of 2-butanone (or methyl ethyl ketone [MEK]) and acetone in some wells at concentrations up to $810 / 910 \mu g/L$ (duplicate samples from well SM-05) and 1,100B $\mu g/L^{23}$ (well SM-03), respectively. The MEK and acetone (ketones) were apparently generated from ketone fermenter bacteria and/or abiotically²⁴; however, this is expected to be a transitory occurrence. In September 2019, MEK and acetone levels were lower (maximum concentrations of 900 $\mu g/L$ and 50 $\mu g/L$, respectively, in well SM-05).

The geochemical parameters (ORP/DO) for wells in the treatment areas indicated negative ORP and low DO concentrations (generally less than 1.0 mg/L). After injection, nitrate was not detected in most wells monitored in the treatment areas except for in well R-20A (and the upgradient wells). After injection, sulfate concentrations were lower in most wells monitored in the treatment area except for wells R-20A and C-3.

²¹ The wells sampled were those included in the pre- and post-injection monitoring program discussed in the Work Plan.

²² Well R-20A will be sampled at multiple depths in October 2019 to further assess the vertical concentration distribution.

²³ B is a data flag indicating the compound was also detected in the blank sample.

²⁴ Pollution Engineering, 2011. *The Generation of Acetone and Ketones – a Positive Process?* September. 37900706R001.docx

The TCE concentrations in groundwater did not increase and thus, did not trigger the contingency plan provided in the Work Plan.

5.0 PLANNED ACTIVITIES

Activities to be completed during Fourth Quarter 2019 (October through December) and thereafter include:

- Conduct the last monthly post-injection groundwater monitoring event in October 2019 (along with the annual groundwater monitoring event), with quarterly sampling thereafter (commencing in January 2020) in accordance with the monitoring schedule provided in the Work Plan;
- Complete a quarterly soil vapor monitoring event in November 2019, with quarterly sampling until May 2020 in accordance with the monitoring schedule provided in the Work Plan; and
- Submit the next quarterly monitoring report (for Fourth Quarter 2019) by the end of January 2020.

PES Environmental, Inc.

TABLES

Table 1
Indoor Air Monitoring Results - HVAC Off
SMI Holding LLC, 455 and 485/487 East Middlefield Road
Mountain View, California

	ZVI Injections Completed July 6 - 26, 2019								
Location	Date Radiello RAD145 Passive Sampler Deployed ¹	Trichloroethene (μg/m³)							
	455 East Middlefield Road								
455IA-01	7/10/2019	0.22							
455IA-02	7/10/2019	0.16							
455IA-03	7/10/2019	0.15							
455IA-04	7/10/2019	0.15							
455IA-05	7/10/2019	0.17 / 0.16							
OUT-01	7/10/2019	<0.051							
	485/487 East Middlefield Road	d							
487IA-01	7/10/2019	0.33							
487IA-02	7/10/2019	0.23							
487IA-03	7/10/2019	0.19							
487IA-04	7/10/2019	0.18							
487IA-05	7/10/2019	0.16 / 0.16							
OUT-02	7/10/2019	<0.051							
2010 VI ROD Amendme	nt Cleanup Level (Industrial Use) ²	5.0							
2010 VI ROD Amendme	nt Cleanup Level (Residential Use) ²	1.0							

Notes:

Detections are in **bold** fonts.

 μ g/m³ = micrograms per cubic meter.

HVAC = Heating, ventilation, and air conditiong.

ZVI = zero valent iron.

Laboratory analysis completed by ALS Environmental of Simi Valley, California.

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¹ Samplers were retrieved the next day after a 24-hour sampling period.

² The indoor air cleanup levels are defined in EPA's August 16, 2010 Vapor Intrusion (VI) Record of Decision (ROD) Amendment.

< 0.051 = analyte not detected at or above the laboratory reporting limit indicated.

Table 2
Soil Vapor Monitoring Results
SMI Holding LLC, 455 and 485/487 East Middlefield Road, Mountain View, California

				ZVI	Injections Compl	eted July 6 - 26, 2	019			
Sample Location	Date Sampled	Sample Depth (feet bgs)	TCE (µg/m³)	cis-1,2-DCE (μg/m³)	trans-1,2-DCE (μg/m³)	Vinyl Chloride (µg/m³)	Leak Check Compound 1,1-DFA (ppmV)	1,1-DFA Shroud Sample Result (ppmV)	% of 1,1-DFA in Soil Vapor / Shroud Concentration	Leak Check Acceptable (less than 5%)
SV-01	7/2/2019	6.5	146	<3.97	<3.96	<2.56	<10.0	10,300	0%	Yes
	8/19/2019		134 / 134	<3.97 / <3.97	<3.96 / <3.96	<2.56 / <2.56	37.5 / <10.0	215,000	0.02% / 0%	Yes / Yes
SV-02	7/2/2019	6.5	63.0	<3.97	<3.96	<2.56	<10.0	14,600	0%	Yes
	8/19/2019		74.2	<3.97	<3.96	<2.56	<10.0	58,400	0%	Yes
SV-03	7/2/2019	6.5	65.1	<3.97	<3.96	<2.56	<10.0	3,700	0%	Yes
	8/19/2019		75.2	<3.97	<3.96	<2.56	<10.0	36,700	0%	Yes
SV-04	7/2/2019	6.5	800 / 800	<3.97 / <3.97	<3.96 / <3.96	<2.56 / <2.56	<10.0 / 13.4	5,880	0% / 0.2%	Yes / Yes
	8/19/2019		546	<6.34	<6.34	<2.56	<10.0	20,500	0%	Yes
Contingency	y Measures App	licable if Soil	 Vapor Cond	entrations Exc	eed:					
1,000	0 x Indoor Air Cle	eanup Levels ¹	5,000	210,000	210,000	2,000				
100% of	the Baseline (7/2	2/2019) Conce	ntrations							

Notes:

Detections are shown in **bold** fonts. Baseline (pre-injection) sampling results are shaded grey.

bgs = below ground surface.

TCE = trichloroethene; DCE = dichloroethene; 1,1-DFA = 1,1-difluoroethane (leak check compound).

NA = Not analyzed, not available, or not applicable.

ppmV = parts per million by volume.

Laboratory analyses completed by KPrime, Inc. of Santa Rosa, CA.

37900706R001.xlsx 10/16/2019

¹ The indoor air cleanup levels are defined in EPA's August 16, 2010 Vapor Intrusion (VI) Record of Decision (ROD) Amendment. μg/m³ = micrograms per cubic meter.

< 3.97 = not detected at or above the indicated laboratory reporting limit.

Table 3 Groundwater Monitoring Results
SMI Holding LLC, 455 and 485/487 East Middlefield Road, Mountain View, California

							ZVI In	jections Comp	leted July 6	6 - 26, 2019)							
Marcia Mayor May																		
Column						-		(µg/L)	(µg/L)			_		-			Ferrous Iron (mg/L)	Total Iron (mg/L)
Minimary Minimary	7/40/	10040		.0.50	.0.50	.0.50	.50			0.00		.0.50	450			440		0
Page 1																		<1.0 <1.0
Minorian Minorian																		<1.0
Page																		<1.0
Mathematical Region																		5.3
1992.2019 24	9/16/2	5/2019	19	<0.50	<0.50	<0.50	<50	<50	11	3.3	5.5	<0.50	-87	0.8	<0.23	570	0	<1.0
18																		<1.0
																		5.4 <1.0
March Marc								Source /	Area Wells									
Section Sect	6/28/	3/2019	<0.50	870	5.5	140	<50	<50	NA	NA	NA	NA	-189	0.3	<0.23	130	0	2.7
Color Colo	8/19/	9/2019	<0.20	39	1.5	87	73	<30	NA	NA	NA	NA	-211	0.5	< 1.0	< 1.0	2.2	5.0
STINGTON CALCON	9/16/2	5/2019	<0.50	1.5	0.90	3.9	190	<50	NA	NA	NA	NA	-192	1.4	<0.23	< 1.0	2.0	1.4
	6/28/2	3/2019	3.9 / 5.8	250 / 290	6.1 / 7.6	41 / 32	<250 / <250	<250 / <250	NA	NA	NA	NA	-90	0.4	<0.23	160	0	<1.0
The color The	8/19/	9/2019	<0.20	24	3.0	220	<10	< 6.0	38	<0.10	4.7	<0.50	-135	0.3	<1.0	110	0	<1.0
EM-2 1182018 45 27 < <p></p>	9/16/	5/2019	<0.50	16	4.5	25	<50	<50	38	0.38	44	<0.50	-235	0.9	<0.23	110	0	<1.0
Region R								Mid-Plu	me Wells									
Secondary Seco			45		<0.50	<0.50	<5.0	<20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8/19/2019 39																		NA NA
R192019 39																		
916/2019 20																		NA
SM-03 710/2019 33 3860 <10 <10 <10 <10 <100 <1,000 <1,000 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1																		NA NA
SH-92019 4-20 36	9/10/.	0/2019	20	1.9	~0.50	\0.50	730	730	INA	INA	INA	INA	31	0.0	INA	INA	INA	INA
Sh-04 Sh-04 Sh-05 Sh-0	7/10/	0/2019	33	360	<10	<10	<1,000	<1,000	5.4		18	1.6	130	0.7	<0.23	150		<1.0
SM-04 Form SM-04 SM-04							· ·											<1.0 13
8/19/2019 -0.20 / -0.20 / -0.20 -0.20 / -0.20 / -0.20 / -0.20 -0.20 / -0.20 / -0.20 / -0.20 / -0.20 -0.20 /																		
SM-05																		1.3 5.3
8/19/2019 19/19 28/2.8 <0.20 / <0.20 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <0.020 <																		2.1
	7/10/2	0/2019	19 / 18	2.8 / 2.8	<0.50 / <0.50	<0.50 / <0.50	<50 / <50	<50 / <50	3.2	0.55	1.9	<0.50	143	0.7	2.1	120	0	<1.0
R-20A 7/10/2019 840 14 <5.0 <5.0 <5.0 <5.0 <5.0 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0	8/19/	9/2019	19 / 19	2.8 / 2.8	<0.20 / <0.20	<0.020 / <0.020	810 / 910	57B / 56B	13	4.4	8.9	<0.50	-60	0.5	<1.0	79	4.2	<1.0
R-20A	9/16/	6/2019	<0.50	21	<0.50	<0.50	700	50	22	4.0	8.5	<0.50	-58	0.8	<0.23	1.7	3.0	23
8/20/2019 660 11 0.68 0.11 <10 <6.0 <0.50 <0.50 <0.10 0.10 <0.50 -56 1.3 6.7 95 0.8 15 <10 <10 <10 <10 <10 <0.50 <0.67 0.28 0.11 <0.50 <-56 1.3 6.7 95 0.8 1.4 94 0.8 C-3 7/10/2019 930 13 0.51 <0.50 <50 <50 NA NA NA NA NA NA NA 129 0.5 2.8 96 NA² 8/20/2019 250 86 0.49 0.30 <10 <6.0 NA -115 0.7 <1.0 88 2.0 9/16/2019 87 140 <2.5 <2.5 <2.5 <2.5 <2.50 NA							Wells	s Near Norther	n Property	Boundary	I			ı			ı	
C-3																		<1.0
8/20/2019 250 86 0.49 0.30 <10 <6.0 NA NA NA NA NA NA -115 0.7 <1.0 88 2.0 9/16/2019 87 140 <2.5 <2.5 <2.5 <250 <250 NA																		<1.0 <1.0
8/20/2019 250 86 0.49 0.30 <10 <6.0 NA NA NA NA NA NA -115 0.7 <1.0 88 2.0 9/16/2019 87 140 <2.5 <2.5 <2.5 <250 <250 NA	7/10/	0/2019	930	13	0.51	< 0.50	<50	<50	NA	NA	NA	NA	129	0.5	2.8	96	NA ²	26
EW-1 11/8/2018 59 5.7 <0.50 <0.50 <5.0 <20 NA																		<1.0
8/20/2019 8.0 12 <0.20 0.24 32 <6.0 NA NA NA NA NA NA -191 0.6 NA	9/16/	6/2019	87	140	<2.5	<2.5	<250	<250	NA	NA	NA	NA	-88	1.3	<0.23	85	0.8	<1.0
9/16/2019 11 66 < 0.50 < 0.50 83 < 50 NA							<5.0		NA							NA	NA	NA
EW-3																		NA
8/20/2019	9/16/2	5/2019	11	66	<0.50	<0.50	83	<50	NA	NA	NA	NA	-274	3.0	NA	NA	NA	NA
9/16/2019 <0.50 / <0.50																		NA
Downgradient Well to North (North Side of Road) R-15A 6/28/2019 58 1.3 <0.50 <0.50 <50 <50 NA NA NA NA 110 3.3 6.1 100 0																		NA NA
R-15A 6/28/2019 58 1.3 <0.50 <0.50 <50 <50 NA NA NA NA 110 3.3 6.1 100 0	1																	
	6/28/	3/2019	58	1.3	<0.50	<0.50						NA I	110	3.3	6.1	100	0	1.2
																		23
9/17/2019 37 5.5 <0.50 <0.50 <50 <50 NA NA NA NA 14 2.7 <0.23 58 0																		<1.0

Notes:

 $\label{eq:decomposition} \mbox{Detections are shown in } \mbox{\bf bold fonts. Baseline (pre-injection) sampling results are shaded grey.}$

 μ g/L = micrograms per liter. mg/L = milligram per liter.

mV = millivolt.

mV = millivolt.

NA = not applicable or not analyzed.

TCE = trichloroethene; DCE = dichloroethene; MEK = methyl ethyl ketone; DO = dissolved oxygen; ORP = oxidation-reduction potential.

< 0.50 = analyte not detected at or above the laboratory reporting limit indicated.

B = Compound was found in blank and sample.

ZVI = zero valent iron.

Laboratory analysis performed by Eurofins/TestAmerica, Inc. of Pleasanton, CA, except dissolved gases which were analyzed by Pace Analytical in Pittsburgh, PA.

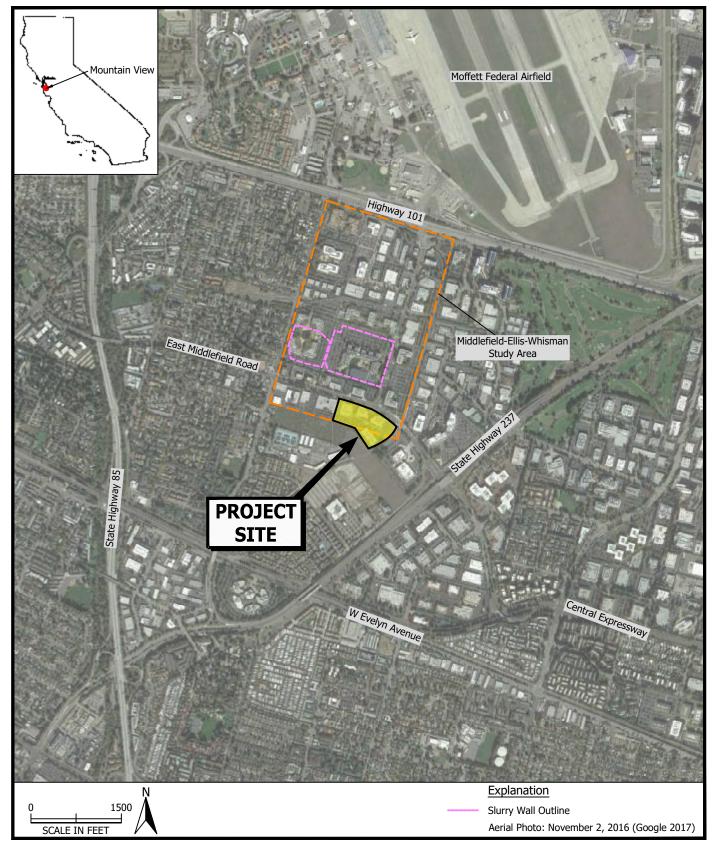
37900706R001.xlsx 10/16/2019

¹ Reading may not be accurate due to persistent high turbidity (>1,000 NTUs) during sampling.

² Water too turbid for ferrous iron field measurement with Hach kit.

PES Environmental, Inc.

ILLUSTRATIONS

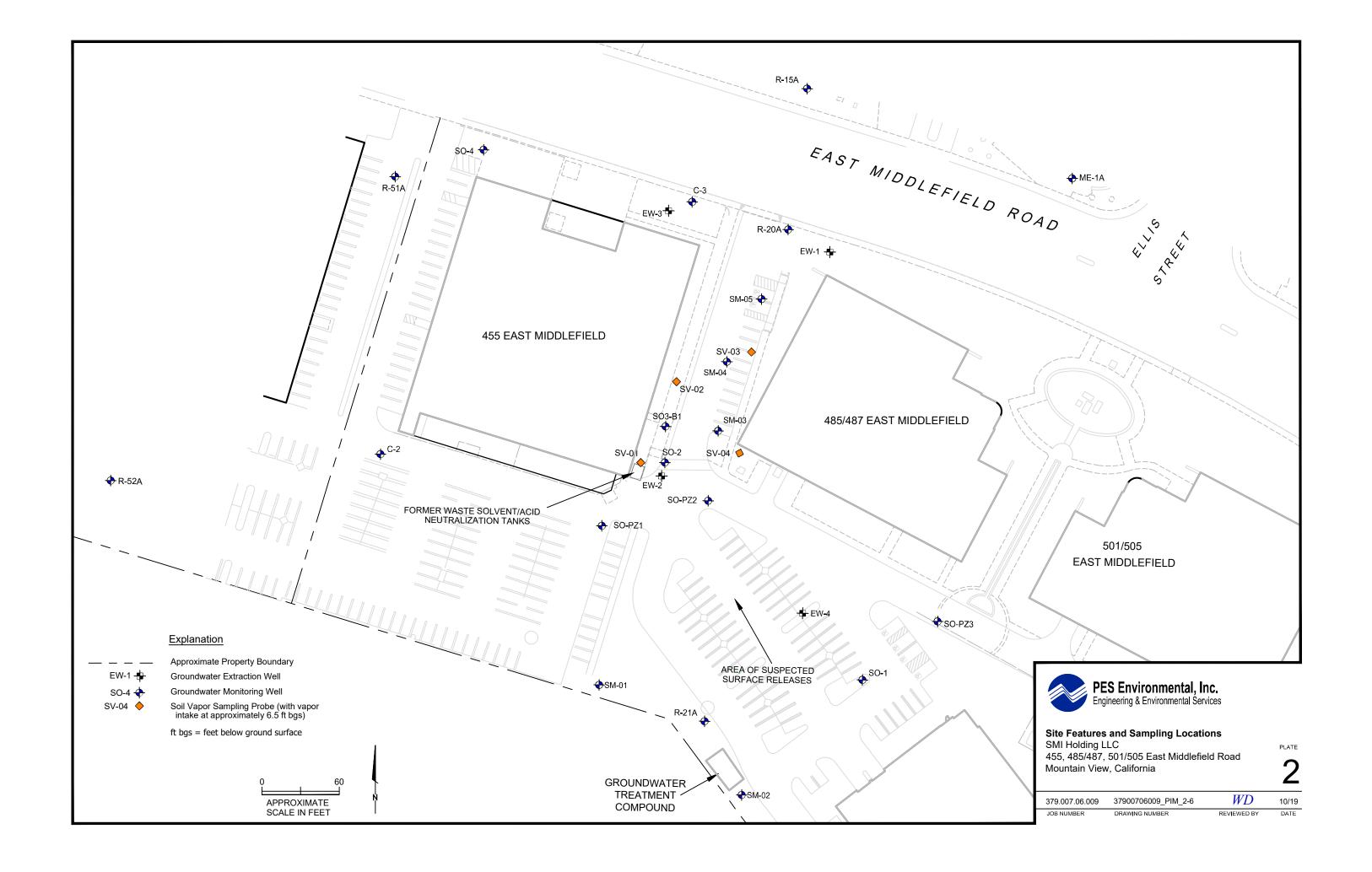


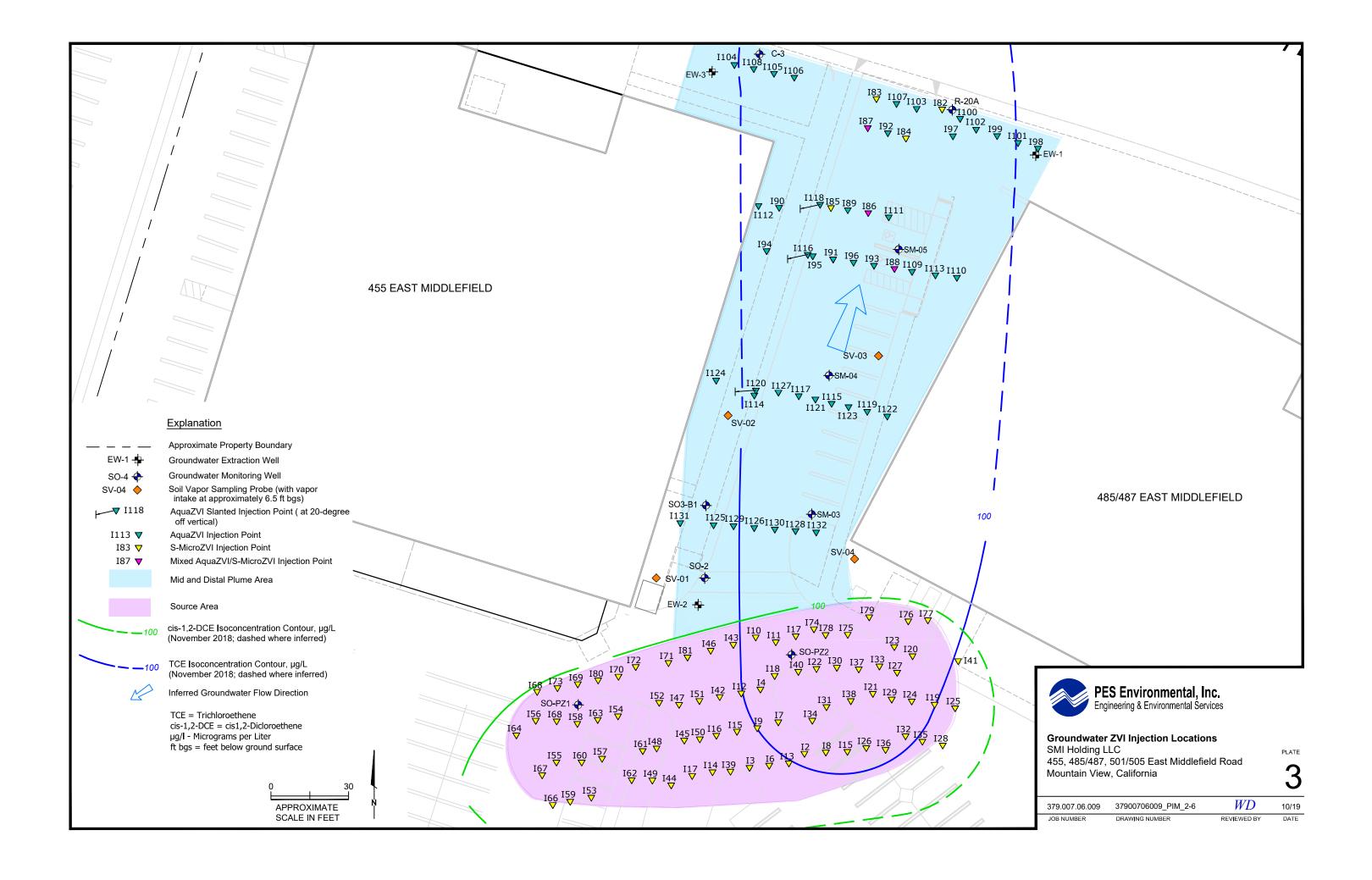


Site Location Map

SMI Holding LLC 455, 485/487, 501/505 East Middlefield Road Mountain View, California PLATE

1



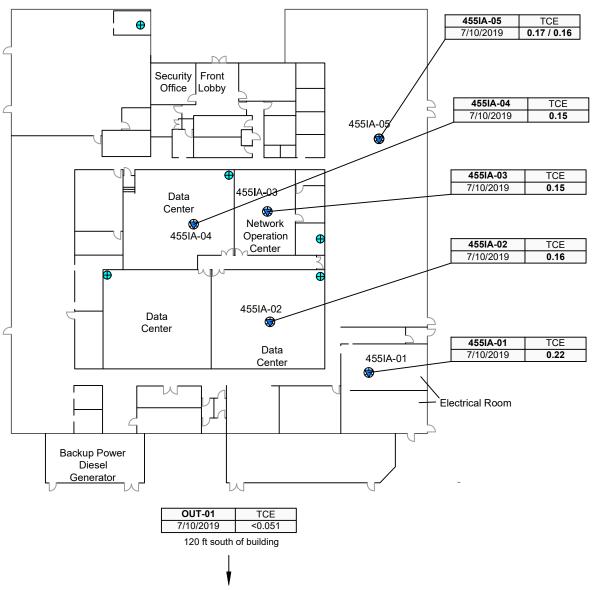


455 East Middlefield Road (First Floor)

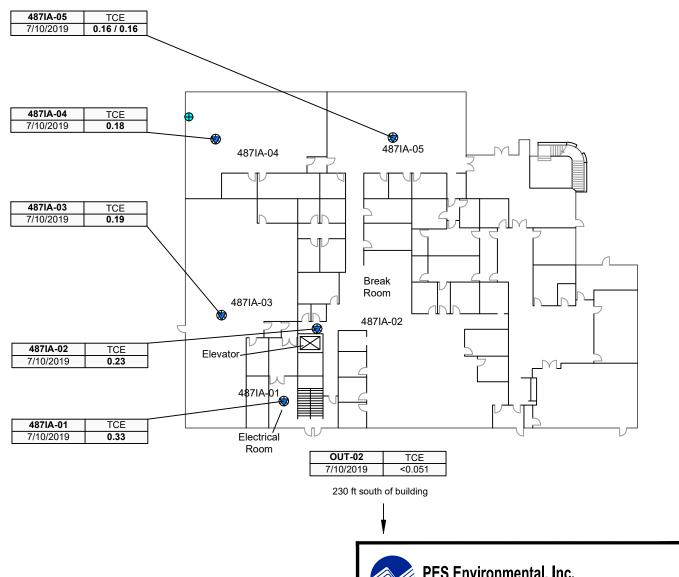
Explanation

487IA-04 Indoor Air Sample (Approximate Location)

Fire Riser (Approximate Location)



485/487 East Middlefield Road (First Floor)



APPROXIMATE

SCALE IN FEET

PES Environmental, Inc. Engineering & Environmental Services

Indoor Air Monitoring Results (HVAC Off)

SMI Holding LLC 455, 485/487, 501/505 East Middlefield Road Mountain View, California

PLATE

WD379.007.06.009 37900706009_PIM_2-6 10/19 DRAWING NUMBER REVIEWED BY DATE

Notes:

EMR = East Middlefield Road All results are shown in microgram per cubic meter (μ g/m³).

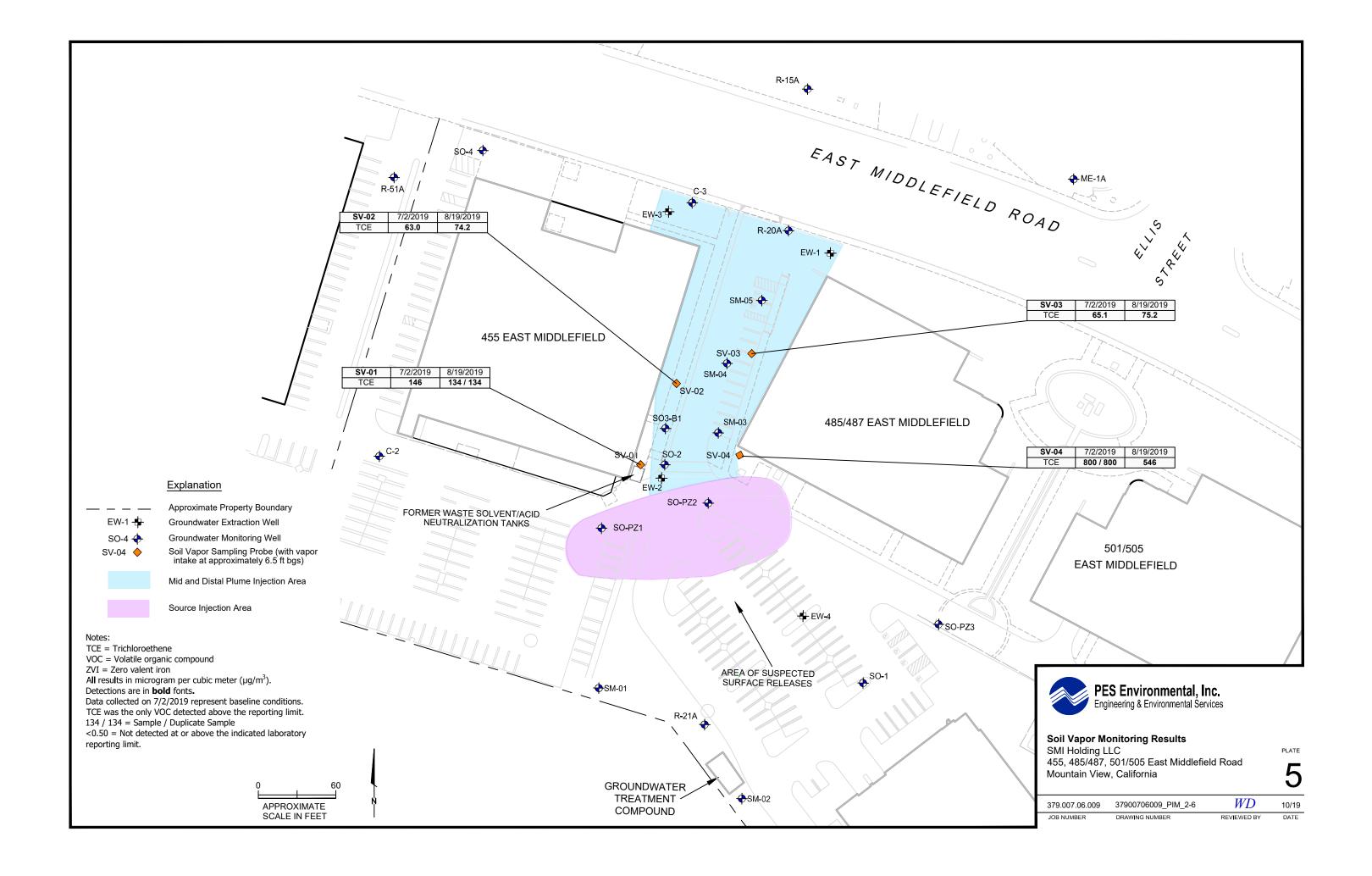
Detections are in **bold** fonts. < 0.051 = Not detected at or above the indicated laboratory

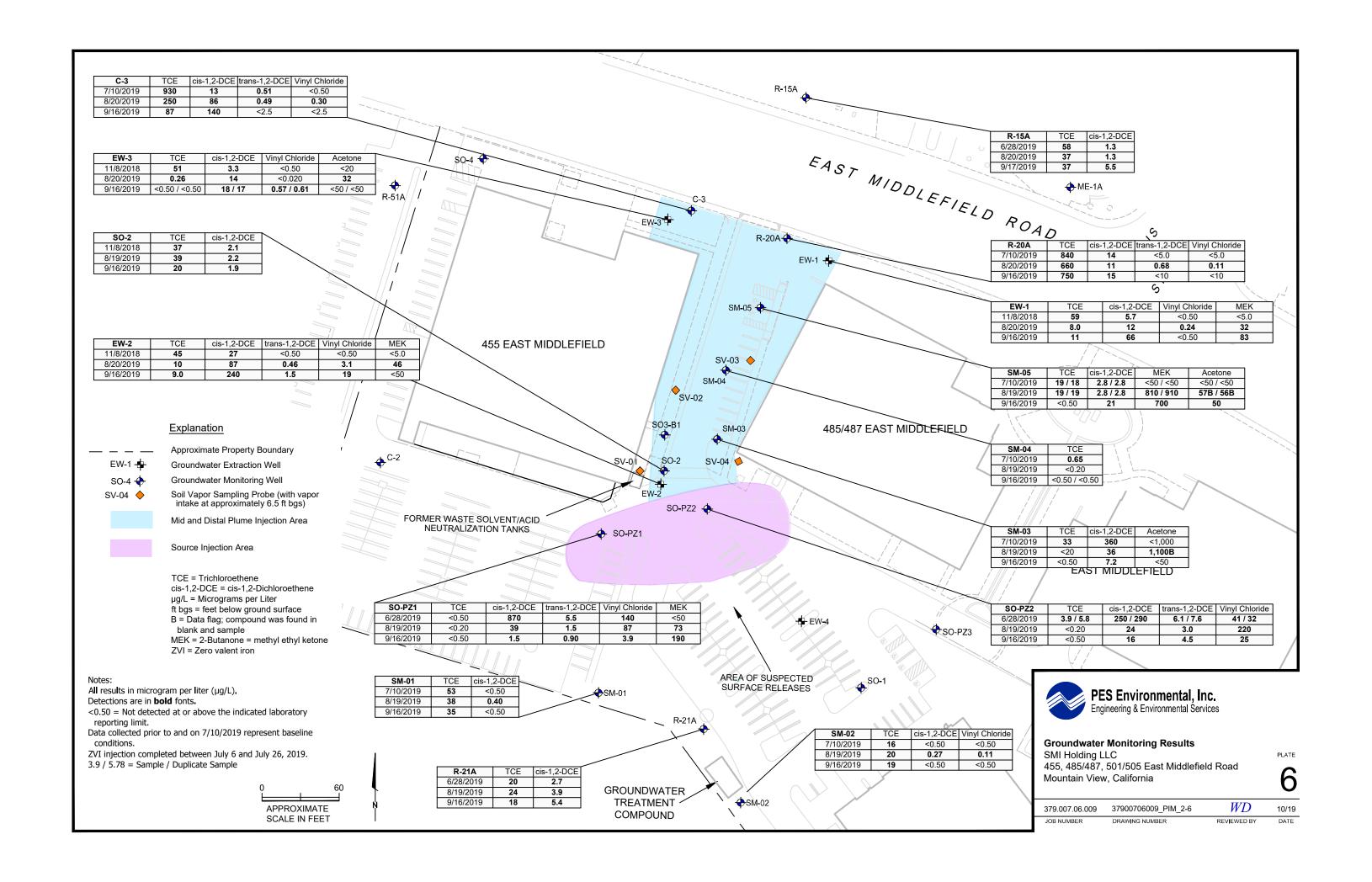
reporting limit.

HVAC = Heating, Ventilation and Air Conditioning

0.17 / 0.16 = Sample / Duplicate Sample

TCE = Trichloroethene





APPENDIX A

SCVWD WELL CONSTRUCTION PERMITS

Sonto Goro Volley Woter District 5750 Almaden Expressway San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

400	enter tide a como como a como a como como como com	on Manual or equipment and property of	200120-2					H-COURSE SEE				Page 1 of 2	
		(1 22 10 00	-		COMPLE	189.4						T. GOLDSGERMEN Brookska Lodes	
├	strict Permit No.:	C201905	30001		Date Issued: 5/30/19 Expiration Date: 5/30/2-0					Well Registration No.:			
Ge	eologic Setting:								Driller's Log	No.:			
200				TO BE COM		OWN	R AND DI	RILLE	R	0-8627550-			
48	ell Owner: MI Holding, LI			Property Own EMBP 455 I						Name of Business at Well Site: Buildings are vacant			
	ell Owner's Mailing 350 Quadrangle	g Address: Boulevard, MC	-222-SRE	Property Own		Addre	38;		Address of				
1	ty, State, Zip			City, State, Zi					1		: Middlefie	eld Road	
3	clando, FL 32	817	,	Mountain V		94043	.		City, State, Z Mountain	•	ifovnia		
Te	lephone No. & Co	intact Name:		Telephone No					Telephone N		ILOINIA		
40	7-810-3204			650-527-80				Esq.) Not Appli				
Ov	wner's/Consultant'	s Well No.: SM-0	1	Ass	essor's Pa	rcel No.	of Well Si	te:	Book 160	Page 52	Parc	el 024	
	onsultant (Compar					Drillin	g Company	/ :		<u> </u>		· · · · · · · · · · · · · · · · · · ·	
PE	ES Environment	al, Inc.				[Core Dri	•	3				
3 -	ldress:					Addre	ss:				T-101-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	W-draftelerinitellerererere <u>diplomate</u> and ca	
		oulevard, Suite				£	N. East						
	lephone No.:	vato, CA 9494	5			**********		Wood	lland, CA 957				
	15-899-1600						hone No.: 681-3198			C-57 Licen	se No.:		
		or phone number I	hanned as	***************************************					r phone number h	906899			
		BE COMPLETED		NITORING W	ELLE OP E	VTDA	TIOMBEC	2016	palone number n	as changed			
Ca	ise Name/No.: Pa	art of MEW Site			ELLS ON E	T			Alana Lee			-	
		U.S. EPA (Regi							B No.: 510-622-	2212			
	~	the trade the second freeze, where end or members any but			·	L	TOTAL TOTAL	, pi ioi ic	5140. 310-622-	2313			
	Dans	-0-			5/17/	19	Gary	Thom	nas		(No subs	titution of will be	
	Signature of Res	ponsible Professio	nal		Date		Print	Name	}	(1991 (M. M. Marcell Commission (1995) (1995) <u>(2005) (</u>	accepted		
١.				OR	No. 827	8							
	Civil Engineer Ro	egistration No.		OK	Geologis	t Regis	tration No.						
	limated Depth of (TO THE A STATE OF THE PARTY OF		han 50 feet	☐ 50 to				300 feet	Other:	***********************		
W	ell is to be constru	cted: In a pub	lic sldewalk	☐ In a public	road 🗵	On publ	c property		On private propert	y ☐ On D *See G	istrict property eneral Conditi	/easement*	
		×											
TYPE/USE	WATER PRODUCTION	MONITORING	Rem	EDIATION	DEWAT	ERING	HEAT EXCHAN		INJECTIO	N	CATHODIC PROTECTION	OTHER	
토	Agricultural	☑ GW Level	☐ Air Spa	•	☐ Perm		☐ Close	ed	☐ Groundwater	Cleanup	A composition of the con-		
	☐ Domestic ☐ Industrial	☑ GW Quality	☐ GW Ext		☐ Tem	porary	Loop		Reinjection				
WELL	☐ Municipal	☐ Inclinometer ☐ Vapor	☐ Vapor 8	Emplacement			☐ Open Loop		☐ Stormwater ☐ Water Supply	Dachama			
	C. Mornospar	☐ Other	Other					ĺ	Other	izemiaiña			
Ot	her wells exist on		Yes No		atus: 🗵	Active	☐ Inactive		Abandoned				
2.51					SIGNA) and an experience of the control o	1 Continues parties	
l V	nderstand and ag	ree that all work as	sociated with	this permit is re	equired to b	e done	in accorda	nce w	th Santa Clara V	Waler I	Dietaki (Dietak	il Well	
O.	ainance 90-1, the	District Well Stand	ards, and the	conditions of ti	nis cermil (:	see bad	e 2) I ced	ifu İha	the information of	duan in His	Samuelo dece	Ánt to the	
611	iorceable, raiso (e and that the sign certify that a right of	enuv/encro	achmeni anreer	nani has be	ant nac	ialized bet	ผลลักวั	the stall number on	daran artu w	م تلکی کو انگلام	ا مائلات	
ais	io understand that plication.	it is my responsibi	lity, as the w	ell owner, to not	ify the Dist	rict of ar	y changes	in the	purpose of this v	rell, from wh	ich, is indicat	ed on this	
	·									- / 	·		
	gnature of Propert	•		Date	e:			Print N	Vame of €roperty.	Owner/Ager	d;		
Signature of Well Owner/Agent: O'Connor Susan May 14, 2019 Print Name of Well Owner/Agent: Susan R. O'Connor													
Sig	gnature of Well Dr	iller/Agent:		Date	e:	- Duban			Name of Driller/Ag	ent			
Sid	gnature of Consult	lant/Agent:		Date	9: /		1	Print N	Name of Consultar	t/Accet			
<u>`</u> ا	Dans 6	-		Dati	5/17/	19		Gar	vame of Consultar	PESE	hviron mes	tel Inc.	
		A minimum 24-ho											

Sonio Garo Volley Water District San Jose, CA 95118-3686 (408) 285-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

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		v. i u kobbaj na Kabb				OMPLE	TED BY	DISTRI	CT .				estelle Personal			
-	strict Permit No.;				Date	Issued:				Well Registr	ation No.:					
G	ologic Setting:					ation Date				Driller's Log	No.:					
1886				TO BE CC	MPL	ETED BY	OWNE	R AND	DRILLI	ER 🤲		professional and Samuel				
1	ell Owner: II Holding, Ll			Property C						Name of Bu						
\vdash				EMBP 455							455-Digicert, Inc.; 485/487-vacant					
	ell Owner's Malling 150 Ouadrand Le	g Address: Boulevard, MC	. 222 . gp#	Property C		_	Addres	9:		Address of						
l	y, State, Zip	. 200201020, 12	, 222 010	350 E11		creec				į.		t Middlefi	eld Road			
	lando, FL 32	817		City, State Mountair		aw. CA	94043			City, State, 2 Mountain	•)ifavaia				
Te	lephone No. & Co	ntact Name:		Telephone						Telephone N		TATOTHE				
1	7-810-3204			650 527					g, Esq.	.) Not Appli						
O/	vner's/Consultant'	s Well No.: SM 0	1			ssor's Pa				Book 160	Page 52	Pare	cel 024			
Co	nsullani (Compan	ıy):					·····	Compa								
	S Environment						! '	ore Dr	•	g						
	dress:					·	Addre	ss:								
		oulevard, Suite					1	I. East								
		vato, CA 9494	5							dland, CA 957						
	lephone No.: 15-899-1600							none No.			C-57 Licer	ise No.:				
								81-319			906899					
E conomic		or phone number I								r phone number h	as changed	Home				
		BE COMPLETED NET OF MEW Site		ONITORING	WEL	LS OR E										
_										Alana Lee						
Š	erangent Agency.	U.S. EPA (Regi	ion 1X)				Casev	orker 16	epnon	ne No.: 510-622-	2313					
								Gar	y Tho	mas		(No sub: algnature	stitution of			
'	Signature of Res	ponsible Professio	nai	AA CONSTITUTE AR CONSTITUTE AND A	ar v	Date	EUOSA Cite manytak digit ong		nt Nam		No i social description de de la company	accepted				
						No. 827	В									
•	Civil Engineer Re	egistration No.		OR	-			ration No								
Es	limated Depth of (Completed Well;	⊭ Less i	han 50 feet		☐ 50 to	-	and district Assessment	***	300 feet	Other:					
W	ell is to be constru	cted: 🔲 in a pub				_		_				listrict propert	v/easement			
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S	WATER	MONITORING	Rem	EDIATION		DEWATI	RING	HEA		INJECTIO	N	CATHODIC	OTHER			
ត្រ	PRODUCTION	E ON						EXCHA				PROTECTION				
WELL TYPE/USE	☐ Agricultural ☐ Domestic	区 GW Level 区 GW Quality	☐ Air Spa ☐ GW Ex	-	ŀ	Pem		☐ Clo		☐ Groundwater Reinjection	Cleanup					
IL	☐ Industrial	☐ Inclinometer		raciion I Emplacem	ent	☐ Tem	porary	☐ Opt		Stormwater						
W	☐ Municipal	☐ Vapor	☐ Vapor 6	•	۱			Loc		☐ Water Supply	/ Recharge					
		☐ Other	☐ Other							☐ Other	_	ŀ				
Ot	her wells exist on	this property? 🗵	Yes 🔲 No) If yes	, stat	us: K	Active	🔲 Inacti	ve [Abandoned		•				
68					WAS I	SIGNA	TURES		1349			70.00	W. 0287.213			
Lu	ndersland and ag	ree that all work as	sociated with	this permit	is req	ulred to b	e done	in accord	lance v	vith Santa Clara V	alley Water	District (Distri	d) Well			
DI he	dinance 90-1, the st of my knowledo	District Well Stand e and that the sign	ards, and the	conditions (of this	s permit (see pag	e 2). I ce	ertify th	at the information	given in this	permit is con	rect to the			
i en	forceable. I also c	certify that a right o	f entry/encro	achment aor	reeme	ent has be	en form	alized b	atween	the well owner an	d property (wner if nartis	as differ I			
Bis	o understand that plication.	il is my responsibl	Illy, as the w	ell owner, to	notify	the Dist	rict of ar	y chang	es in th	e purpose of this v	vell, from w	hich, is Indica	led on this			
	·	Dwner/Anent			Date:				Driei	Name of Ocean	Oumani Arr					
"	Signature of Bropen Symer/Agent: Date:				May 2	8.2	019		Name of Property Eunice	Owner/Age	HG					
SI	Signature of Well Owner/Agent: O'Connor Susan Englishments (1997)				Date: Drint M			Name of Well Own								
Ö	'Connor	Susan 🕍 🕷	mi by Grierer Estan es Sainn, seismons, entifestances, ent entifestances, ent	[]	I Material Control				an R. O'Connor	_						
	Signature of Well Driller/Agent:								Name of Driller/Agent:							
											•	- I the table of placing on				
Si	gnature of Consul	ant/Agent:		(Date:				Print	Name of Consulta	nt/Agent:	· · · · · · · · · · · · · · · · · · ·				

Soolo Cloro Volley Woler Dahiel 5750 Almaden I xp ensway San Jose CA 95118 3686 (408) 265 2600

WELL CONSTRUCTION APPLICATION

FC 158 (03 26-15) Page 1 of 2

TO BE COMPLETED BY DISTRICT								
District Permit No	Dale Issued	energer en la lacalitación de lacalitación de la lacalitación de la lacalitación de la lacalitación de la lacalitación de laca	Well Registration No					
Geologic Setting	Expiration Date		Driller's Log No					
	TO BE COMPLETED BY OWNE		g +- #					
Well Owner:	Properly Owner		Name of Business at Wel	l Site				
7th Holding, LLC	858 438 LLC		Suildings an maca					
Well Owner's Mailing Address.	Property Owner's Mailing Address	ss	Address of Well Site					
City State, Zip	City, State, Zip		City State Zip	• • • • • • • • • • • • • • • • • • • •				
orlando, FL 32817	Councain View, CA 91049		Ecuntain View. 21	at sinta				
Telephone No. & Contact Name:	Telephone No & Contact Name	- mention of services is assume the contract of	Telephon: No.					
497-61 0-3204	1 50-527 0600 (2/o Maigar	et Song.Pic	168 April cause					
Owner's/Consultant's Well No 1 884-91	Assessor's Parcel No.	of Well Site Bo	ok 160 [rage -4	Parcel Cod				
Consultant (Company)	Dritting	g Company						
Sea dry. Orrett. Last.	الارداد مستقد المستقد المستقدم	Tail Sill.		water property from the first gallering and adjusted to the contract of the co				
Address:	Addre							
- A66 Renuroi B. Javard, Suite 2	i i	L. East Sit State Zan Was item	A Zith time is					
City, State, Zip 11 Wat 6.A 94845		State, Zip - Macditan hone No.:		so Mo				
Telephone No	· · · · · · · · · · · · · · · · · · ·	none No.: 681-3198	Ç 57 Licens	SC 110 .				
Check if address or phone number has changed		-	one number has changed	ALCO TORONO MARTINO				
THIS SECTION TO BE COMPLETED FOR ALL M		niducen nemalación irranocai a racucais a comercanistic		danimakan meminingkan menassi ketera dara sarah mengangan permanan mengan				
Case Name/No. Par of MEN city	and the second of the second o	worker Name: Alac	Charles and the Control of the Contr	na nitro e i foto i arabinoscom ma				
Oversight Agency U.S. EPA (Region 1)		worker Telephone No						
Groundly Late Care 102517			The second secon	if to substitution of				
Signature of Responsible Professional	Date	Gery Tourse Pont Name	y state of the sta	siduating withs				
	OR : *:^.							
Civil Engineer Registration No	Geologist Regis		zingen (1980)					
	than 50 feet [] 50 to 300 fee			Company for the same of the same polynomials and the same same same same same same same sam				
Wed is to be constructed In a public sidewalk	ि in a pobic road (शे) On publ	lit propedy 🔲 On p						
and the same to the same of th	provide the contract of the co	THE RESERVE OF THE PARTY OF THE		meral Condition F. page 2				
H Maria Mariana Ba	DEVACERING	□ Heat	∏ Injection	CATHODIC OTHER				
W WATER MONITORING REM	SEDIATION DEWATERING	EXCHANGE	HANG HON	PROTECTION				
PRODUCTION Agricultural B GW Level C Air Sp. Domestic M GW Quality C GW E	-		Grouridwate: Cleanup	i				
		Loop	Reinjection					
111	al Emplacement		Stormwater Water Supply Recharge					
Municipal Vapor Vapor Vapor Other	Extraction	`	Other					
Other wells exist on this property? Yes	lo If yes status 🖹 Active		andoned	** * * * * * * * * * * * * * * * * * *				
Other Acid evistorium higherth, Mings Cla	SIGNATURES							
I understand and agree that all work associated will	programme and the second secon		Santa Clara Vakev Water	District (District) Well				
Ordinance 90.1, the District Well Standards, and the	ie conditions of this permit (see pag	ge 2) I certify that th	e information given in this	permit is correct to the				
hest of my knowledge and that the signature bears	whether arginal electronic or ph	notocopied is authoria	zed and valid and is affixe	ed with the intent to be				
also understand that it is my responsibility as the	enforceable. I also certify that a right of entry encreachment agreement has been formalized between the well owner and properly owner, if parties differ. I also understand that it is my responsibility, as the well owner to notify the District of any changes in the purpose of this well, from which is indicated on this							
also understand that it is my responsibility as the well owner to noilly the district of any changes of the purpose of this well district is indicated of this application.								
A CONTRACT OF THE CONTRACT OF	well owner to notify the District of a	any changes in the pu	irpose of this well-from wh	irch is mulcaled on this				
Signature of Property Owner-Agent	well owner to notify the District of a	any changes in the pu	rpose of this well from whose of Property Owner/Age					
Signature of Property Owner-Agent Signature of We Owner-Agent	well owner to notify the District of a	nny changes in the pu						
	Well owner to notify the District of a	nny changes in the pu Print Nan ^{एर} ा भी Nan	ne of Property Owner/Age					
Signature of Wei Owner-Agent	Date Date	Print Nam Print Nam Print Nam Print Nam Print Nam	ne of Well Owner/Agent					

Santo Garo Volley Woter District San Jose, CA 95118-3686 (408) 265-2600

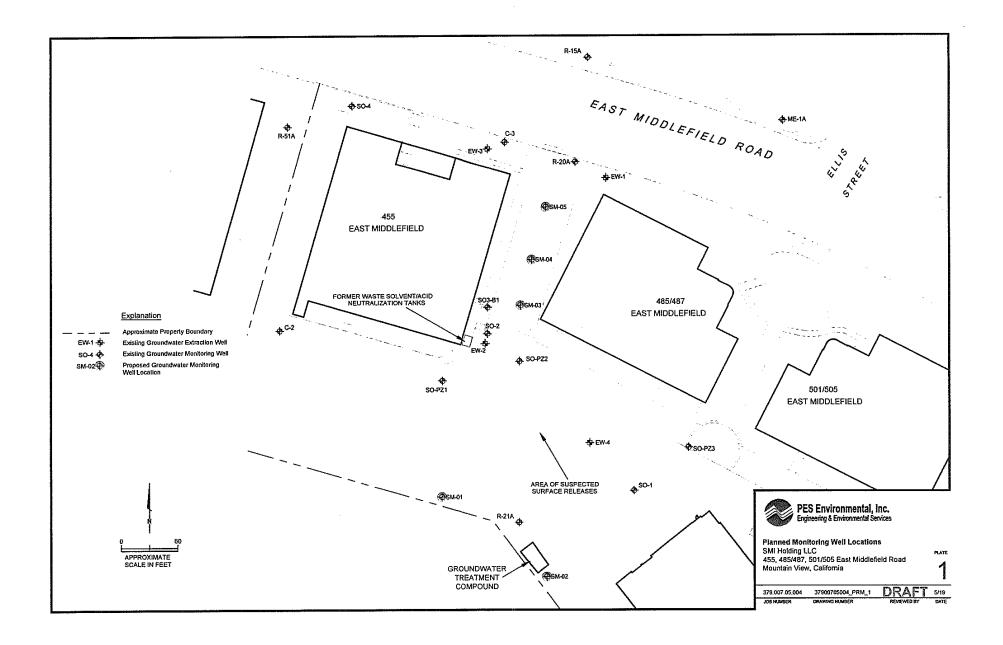
WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15) Page 2 of 2

DISTRICT WELL PERMIT NO. C.20190520001

	DISTRICT WELL PERMIT NO.:	Carriosacer					
(drill	ed on information on this application and attachment(s) hereto (if any) and subject to approval noted be the described well. Permission to start work may be withheld until a field check verifies all statements act to the "General" and "Special" Conditions stated below.						
	SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROV	AL (Water Supply Well Only)					
NOT	E: Department of Environmental Health approval must be granted before this application will be accept	oted by Santa Clara Valley Water District.					
Аррі	oved by:	Approved as submitted Approved as corrected					
		Date:					
SITE	PLAN	. ,,,					
A 81	2" x 11" paper site plan must be attached to this application, including:						
1.	Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.						
2.	North arrow and scale						
3.	Location of proposed well with dimensions in feet from well to nearest cross streets.						
GE	IERAL CONDITIONS						
A.	District (telephone 408-265-2607, ext. 2660) must be notified a minimum of one working day befine authorized District representative must be on site to witness the construction of the annular seal. This District representative. If the District waives the inspection requirement, the District may request the perjury, that the well was constructed in accordance with the District Well Standards and with the permitted of the permitt	requirement may be walved by an authorized permittee(s) to furnish certification, under penalty of					
В.	Permittee agrees to construct, operate, and maintain the well according to provisions of the latest Dist of District Well Standards to the end that this well will not cause pollution or contamination of groundw welfare of the people of the District.						
C.	This permit is valid only for the purpose specified herein. Well construction methods authorized unde approval of an authorized District representative, and only if the District believes that such a change v District and State Well Standards (e.g., if the District representative finds that site conditions warrant s	vill result in equal or superior compliance with the					
D.	This permit is only valid for the Assessor's Parcel No. indicated on it.	•					
E.	E. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that was constructed under this permit must be destroyed in accordance with District and State Well Standards.						
F.	If any work associated with this permit will take place on District property/easement, an encroachmen District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).						
G.	Before the well constructed under this permit can be used as a drinking water source, its use must be over such use (typically the Santa Clara County Department of Environmental Health or the State of Completed Well Inventory Form must also be approved.						
Н.	If the well constructed under this permit cannot be or is not being used for its intended purpose, perm according to the District Well Standards and under permit from the District. Any test holes drilled und completion of testing activities. Destruction activities must be completed according to District standar 24 hours prior to destruction.	er this permit must be destroyed within 24 hours of ds. District must be notified a minimum of					
J.	Within 30 days of the completion of the well construction activities, the driller or consultant identified of DWR Form 188 and mail the original to the District's Wells and Water Production Unit.						
J.	The permittee(s) shall assume entire responsibility for all activities and uses under this permit and sha officers, agents, and employees, free and harmless from any and all expense, cost, and liability in cor- exercise of this permit including, but not limited to, property damage, personal injury, and wrongful de	nnection with or resulting from the granting or					
K.	Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.						
L.	A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.						
M.	construction, well development, pump testing, or other activities associated with this permit will be sall according to all applicable federal, state, and local statutes regulating such. In no case shall these m potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must n work is being completed.	fely handled, properly managed, and disposed of aterials and/or waters be allowed to enter, or ot be allowed to move off the property where the					
N.	The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation in						
O.	This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension authorized District representative.	of the permit expiration date is granted by an					
P.	This permit must be kept on site during all activities associated with it and shall immediately be prese request.	,					
Q.	Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging].					
SP	ECIAL CONDITIONS						
Co	nmunity Projects Review Unit Approval (if needed):	CPRU Permit No.:					
	proved by:	Date: , ,					
"	Alash Theles	5/30/2019					

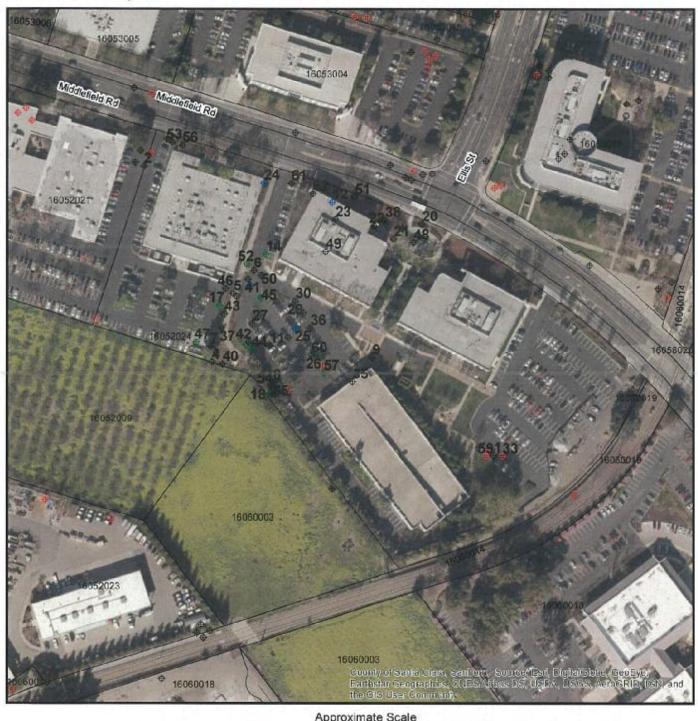
Please allow 10 working days to process this application.



EMBP 455, 485/487 LLC

APN 160-52-024 MOUNTAIN VIEW, CA







ID		CONSULTANT	PERMIT	WELLID	WELLSTATUS
	1	R22B-1	86W1400	06S02W23L012	A
	2	R50B-2	87W0305	06S02W23E126	Α
	3	R53B(3)	87W0308	06S02W23L016	Α
	4	R54B-3	87W0309	06S02W23L018	Α
	5	MW-2	89W1535	06S02W23L025	Α
	6	SB03-B1	92W0313	06S02W23L026	Α
	7	B-22	93W0561	06S02W23M042	Α
	8	VP-PZ-1	93W0596	06S02W23L030	Α
	9	SO-PZ-3	93W0558	06S02W23L031	Α
		SO-PZ-2	93W0557	06S02W23M044	Α
		B-17	92W0318	06S02W23L033	Α
		EW-1	95W00385	06S02W23L036	A01
		VE-5	95W00402	06S02W23L040	A02
		VE-3	95W00395	06S02W23E266	A02
		AS-3	95W00399	06S02W23E262	Α
		AS-5	95W00407	06S02W23L038	A
		VE-4	95W00396	06S02W23E264	A02
		VE-8	95W00404	06S02W23L039	A02
		VP-2 VP-3	95W00387	06S02W23L048	A
		VP-5	95W00388	06S02W23L052	A
		VP-6	95W00390 95W00391	06S02W23L050	A
		VP-7	95W00391	06S02W23L051 06S02W23L045	A A
		EW-3	97W00259	06S02W23L054	A01
		EW 4	97W00260	06S02W23L056	A01
	26	E VV -1	98D00048	UNREGISTERED	D
		AS-2	95W00406	06S02W23L037	A
		EW 2	97W00258	06S02W23L053	A01
		PZ-3	00W01140	06S02W23L059	A
		PZ-4	00W01141	06S02W23L060	A
	31	R49B2	97D01401	06S02W23E125	D
	32		92D0116	UNREGISTERED	D
	33	R48B(3)	97D01402	06S02W23L015	D
	34	PZ-1	00W01138	06S02W23E332	Α
	35	MW-2	89W1536	06S02W23L024	Α
	36	B-24	93W0555	06S02W23L032	Α
	37	AS-1	95W00398	06S02W23E265	Α
	38	VP-1	95W00386	06S02W23L047	Α
	39	R22B-2	86W1783	06S02W23L011	Α
		R52B2	87W0307	06S02W23L014	Α
		S0-2(R)	90W2399	06S02W23M033	Α
		B-23	93W0554	06S02W23L029	Α
		SO-PZ-1	93W0559	06S02W23M043	A
		VE-2	95W00401	06S02W23L042	A02
		VE-6	95W00403	06S02W23L041	A02
	46	AS-4	95W00400	06S02W23E263	Α

47 VE-1	95W00394	06S02W23E267	A02
48 VP-4	95W00389	06S02W23L049	Α
49 VP-8	95W00392	06S02W23L044	Α
50 B-15	92W0316	06S02W23L028	Α
51 VP-10	95W00409	06S02W23L046	Α
52 VE 7	95W00397	06S02W23L057	A02
53 PZ-2	00W01139	06S02W23E333	Α
54 R21A	85W1185	06S02W23L002	Α
55 RP22B	85W1710	06S02W23L006	Α
56 SO-4	95W00384	06S02W23E261	Α
57 VE 9	95W00405	06S02W23L058	A02
58 R-47A	01D00421	06S02W23L010	D
59 R47B-2	97D01253	06S02W23L017	D
60 B-18	92W0319	06S02W23L027	Α
61 VP-9	95W00393	06S02W23L043	Α
62 R-20A	85W0626	06S02W23L001	Α

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Santa Clara Valley Water District

5750 Almaden Expressway San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15) Page 1 of 2

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District Permit No.: C2019 0530002					TO BE COMPLETED BY DISTRICT Date issued: 5/30/19					Well Begins	Well Registration No.:			
Geologic Setting:					Expiration Date: 5/30/30						Driller's Log No.:			
TO BE COMPLETED BY OWNER AND DRILLER														
Well Owner: Prope					roperty Owner: MBP 455 LLC				<i></i>	Name of Business at Well Site: Buildings are vacant				
2050 0003					Property Owner's Mailing Address: 350 Ellis Street						Address of Well Site: 455 & 485/487 East Middlefield Road			
1	ity, State, Zip zlando, FL 3:	City, State Mountai	9404:	94043		City, State, 2	City, State, Zip Mountain View, California							
F	elephone No. & Co 07 - 810 - 3204	Telephone No. & Contact Na 650-527-8000 (c/o Mar				:	o Fea	Telephone N	lo.:					
70	wner's/Consultant							Book 160			4 024			
C	onsultant (Compa		Drilling Company: PeneCore Drilling											
Address: 7665 Redwood Boulevard, Suite 200						Address:								
City, State, Zip Novato, CA 94945							220 N. East Street City, State, Zip Woodland, CA 95776							
Telephone No.: 415 - 899 - 1600						Telephone No.: 530-681-3198			.:	alutte, en jj	C-57 License No.: 906899			
☐ Check if address or phone number has changed							Check if address or pho			r shana numbar h	1			
1700					WEL	LSOR	FXTRAC	TION/R	FCOVE	DV WELLE	as crianged		· · · · · · · · · · · · · · · · · · ·	
THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS Case Name/No.: Part of MEW Site Caseworker Name: Alana Lee														
Oversight Agency: U.S. EPA (Region IX)							Caseworker Telephone No.: 510-622-2313							
Signature of Responsible Professional 5/17//9 Gary Thomas Signature of Responsible Professional No. 8278 (No substitution of signature will be accepted)														
Civil Engineer Registration No. OR Geologist Registration No.														
Estimated Depth of Completed Well: Less than 50 feet 50 to 300 feet Over 300 feet Other:														
Well is to be constructed: In a public sidewalk In a public road In On public property On private property On District property/easement *See General Condition F, page													//easement* on F, page 2	
SE	□ WATER	WATER MONITORING REI		EDIATION		DEWAT		NG HEA		AT INJECTIO		CATHODIC	OTHER	
WELL TYPE/USE	PRODUCTION Agricultural	⊠ GW Level	☐ Air Sparge			☐ Pen	nanent	EXCH/		☐ Groundwater	Cleanup	PROTECTION	was made at a section.	
E L	☐ Domestic ☑ GW Quality ☐ GW Extraction ☐ Industrial ☐ Inclinometer ☐ Material Empla				placement		porary	Loop Open Loop		Reinjection Stormwater				
×	☐ Municipal	☐ Municipal ☐ Vapor ☐ Vapor Extraction ☐ Other ☐ Other								☐ Water Supply ☐ Other	Water Supply Recharge			
0	iher wells exist on	this property?	Yes □ No	lf yes	s, statu	15: X	Active	☐ Inact	ive [] Abandoned		1		
8IGNATURES SIGNATURES														
I understand and agree that all work associated with this permit is required to be done in accordance with Santa-Clara-Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and the conditions of this permit (see page 2). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ. I also understand that it is my responsibility, as the well owner, to notify the District of any changes in the purpose of this well, from which, is indicated on this application.														
Signature of Property Owner/Agent:									<u> </u>	rint Name of Property Owner/Agent:				
Signature of Well Owner/Agent:: O'Connor Susan Enterprise of the Connection of the C					Date: May 14, 2019					Print Name of Well Owner/Agent:				
Signature of Well Driller/Agent:					Date:				Print Name of Driller/Agent:					
Signature of Consultant/Agent: Day						Date: 5/17/19 P				Print Name of Consultant/Agent:				
	DOBTANT	U. A minimum 2/Llm	CONTRACTOR CONTRACTOR		jarja salah d	STORES STORES	@1016Ubany35Ent	şanışının en en e					×0.00000000000000000000000000000000000	

Sonlo Garo Volley Water District 5750 Almaden Expressway San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

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Ge	ologic Setting:			Exp	iration Dat	e:			Driller's Log	No.:			
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W	ell Owner;			Property Own					Name of But	iness at We	Il Site:		
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38	50 Quadrangle	Boulevard, MC	-222 -SRE	350 Ellis	Street				455 & 485	455 & 485/487 East Middlefield Road			
Cit	ly, State, Zip			City, State, Zi	p				City, State, 2	lip			
Or	lando, PL 32	817		Mountain V	iew, CA	94043	3		Mountain	Mountain View, California			
1	lephone No. & Co	ntact Name:		Telephone No	. & Contac	t Name:			Telephone N	lo.:			
407-810-3204 650-527-8000 (c/o Margaret Song, Esq.) Not Applicable													
Ov	vner's/Consultant'	s Well No.: SM-0	2	Ası	essor's Pa	rcel No.	of Well S	Site:	Book 160	Page 52	Parc	el 024	
Co	ensullant (Compar)y):				Drillin	g Compa	ny:					
PE	S Environment	al, Inc.				Pene	Core Dr	illin	ıg				
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<u>o</u>	rersight Agency:	U.S. EPA (Regi	on IX)			Case	vorker Te	lephor	ne No.: 510-622-	-2313			
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1	Signature or Res	sponsione mionessio	1141		Date		Pfil	nt Nam	æ			·	
Ι.				OR	No. 827								
_	Civil Engineer R		***************************************				tration No	0.					
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		X]							
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ale	so understand that	t it is my responsible	ilty, as the w	ell owner, to no	tify the Dist	rict of a	ny chang	es in ti	he purpose of this	well, from wi	nich, is indical	led on this	
ар	plication.	<u></u>					· · · · · · · · · · · · · · · · · · ·	,		······			
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-		Susan Edition	er files, tofice at, recelerations of the lighted of the		y 14, 201	19			an R. O'Connor				
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Sanlo Cloro Volley
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\$750 Almaden Expressway
San Jose, CA 95118 3686
(408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26 15) Page 1 of 2

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District Permit No	Date Issued		. Well Registration No									
Geologic Setting	Expiration Date		Driller's Log No.									
- Cooking	TO BE COMPLETED BY OW	NER AND DRILLE										
Well Owier	Property Owner		Name of Business at Wel	I Site								
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Telephone No. & Contact Name	Telephone No. & Contact Nam		Telephone No									
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Owner's/Consultant's Well No. 3%	Assessor's Parcel N	o of Well Site	Book 15 Page 19	Parce	2.4							
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Santo Goro Volley Woter District San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

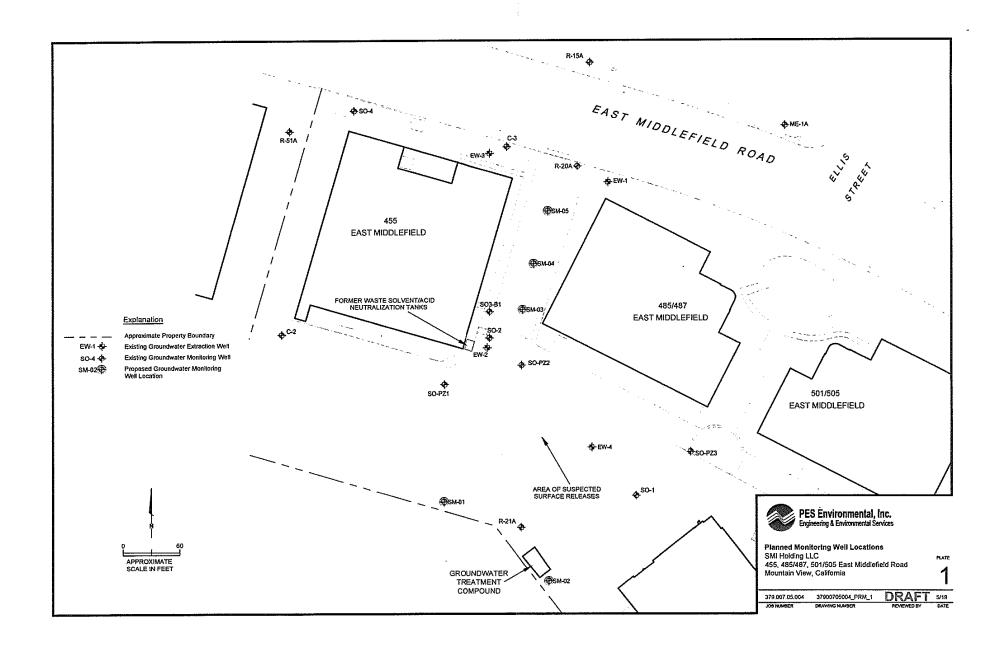
FC 158 (03-26-15) Page 2 of 2

DISTRICT WELL PERMIT NO.:

C2019 05.30002

(dril	ed on information on this application and attachment(s) hereto (if any) and subject to approval noted bi i) the described well. Permission to start work may be withheld until a field check verifies all statement ject to the "General" and "Special" Conditions stated below. 8ANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROV	s made on application by permittee and is also
NO.	TE: Department of Environmental Health approval must be granted before this application will be acce	
	roved by:	Approved as submitted Approved as corrected
		Date:
	E PLAN	
	1/2" x 11" paper site plan must be attached to this application, including:	
1.	Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.	
2.	North arrow and scale	
3.	Location of proposed well with dimensions in feet from well to nearest cross streets.	·····
	NERAL CONDITIONS	
В.	District (telephone 408-265-2607, ext. 2660) must be notified a minimum of one working day bef authorized District representative must be on site to witness the construction of the annular seal. This District representative. If the District waives the inspection requirement, the District may request the perjury, that the well was constructed in accordance with the District Well Standards and with the per Permittee agrees to construct, operate, and maintain the well according to provisions of the latest District Well Standards to the end that this well will not cause pollution or contamination of groundwelfare of the people of the District.	requirement may be walved by an authorized permittee(s) to furnish certification, under penalty on intromotions. trict Ordinance and the latest published revisions water or otherwise jeopardize the health, safety, or
C.	This permit is valid only for the purpose specified herein. Well construction methods authorized unde approval of an authorized District representative, and only if the District believes that such a change v District and State Well Standards (e.g., if the District representative finds that site conditions warrant s	ill result in equal or superior compliance with the
D.	This permit is only valid for the Assessor's Parcel No. indicated on it.	
E.	This permit may be voided if it contains incorrect information. If the permit is voided after work has be this permit must be destroyed in accordance with District and State Well Standards.	
F.	If any work associated with this permit will take place on District property/easement, an encroachmen District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).	
G.	Before the well constructed under this permit can be used as a drinking water source, its use must be over such use (typically the Santa Clara County Department of Environmental Health or the State of Completed Well Inventory Form must also be approved.	California Department of Public Health). A
H.	If the well constructed under this permit cannot be or is not being used for its intended purpose, permit according to the District Well Standards and under permit from the District. Any test holes drilled und completion of testing activities. Destruction activities must be completed according to District standard 24 hours prior to destruction.	er this permit must be destroyed within 24 hours of ds. District must be notified a minimum of
l.	Within 30 days of the completion of the well construction activities, the driller or consultant identified of DWR Form 188 and mail the original to the District's Wells and Water Production Unit.	
J. K.	The permittee(s) shall assume entire responsibility for all activities and uses under this permit and sha officers, agents, and employees, free and hamless from any and all expense, cost, and liability in corexercise of this permit including, but not limited to, property damage, personal injury, and wrongful de Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.	nection with or resulting from the granting or
L.	A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.	
М.	Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all mater construction, well development, pump testing, or other activities associated with this permit will be saf according to all applicable federal, state, and local statutes regulating such. In no case shall these materials permit will be saft according to all applicable federal, state, and local statutes regulating such. In no case shall these materials permit will be saft according to all applicable federal, state, and local statutes regulating such. In no case shall these materials waters must not be saft according to all applicable federal, state, and local statutes regulating such. In no case shall these materials waters must not be saft as a such as a	ely handled, properly managed, and disposed of
N.	The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation in	surance on file with District.
О.	This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension authorized District representative.	of the permit expiration date is granted by an
P.	This permit must be kept on site during all activities associated with it and shall immediately be preserrequest.	
Q.	Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging	,
SPI	ECIAL CONDITIONS	
Cor	nmunity Projects Review Unit Approval (if needed):	CPRU Permit No.:
App	roved by: Bless Buldy	Date: 5/30/2019

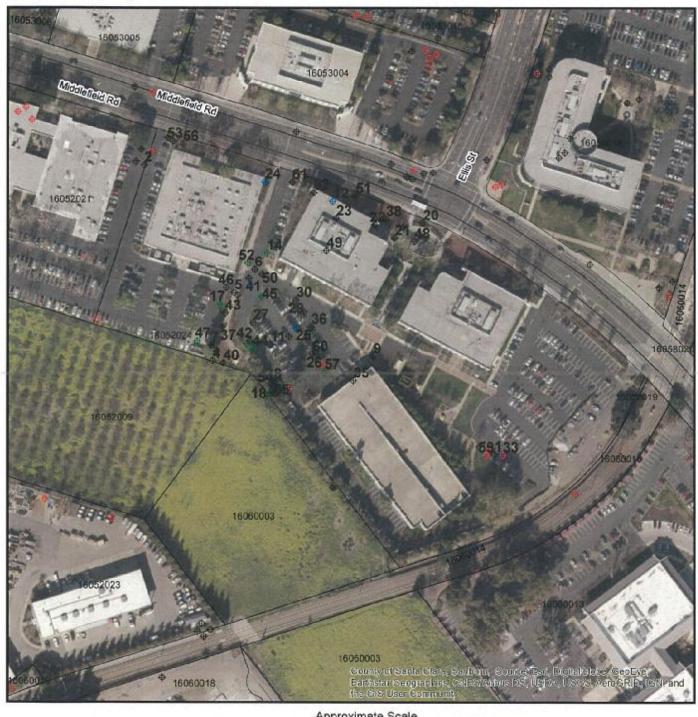
Please allow 10 working days to process this application.

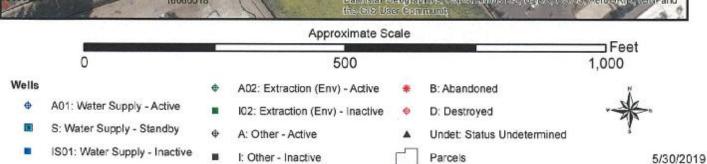


EMBP 455, 485/487 LLC

APN 160-52-024 MOUNTAIN VIEW, CA







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J	>	ь					
		ID		CONSULTANT	PERMIT	WELLID	WELLSTATUS
			1	R22B-1	86W1400	06S02W23L012	Α
			2	R50B-2	87W0305	06S02W23E126	Α
			3	R53B(3)	87W0308	06S02W23L016	Α
			4	R54B-3	87W0309	06S02W23L018	Α
			5	MW-2	89W1535	06S02W23L025	Α
	•		6	SB03-B1	92W0313	06S02W23L026	Α
			7	B-22	93W0561	06S02W23M042	Α
			8	VP-PZ-1	93W0596	06S02W23L030	Α
			9	SO-PZ-3	93W0558	06S02W23L031	Α
			10	SO-PZ-2	93W0557	06S02W23M044	Α
			11	B-17	92W0318	06S02W23L033	Α
			12	EW-1	95W00385	06S02W23L036	A01
			13	VE-5	95W00402	06S02W23L040	A02
			14	VE-3	95W00395	06S02W23E266	A02
			15	AS-3	95W00399	06S02W23E262	Α
			16	AS-5	95W00407	06S02W23L038	Α
			17	VE-4	95W00396	06S02W23E264	A02
			18	VE-8	95W00404	06S02W23L039	A02
			19	VP-2	95W00387	06S02W23L048	Α
			20	VP-3	95W00388	06S02W23L052	Α
				VP-5	95W00390	06S02W23L050	Α
				VP-6	95W00391	06S02W23L051	A
				VP-7	95W00408	06S02W23L045	A
				EW-3	97W00259	06S02W23L054	A01
				EW 4	97W00260	06S02W23L056	A01
			26		98D00048	UNREGISTERED	D
				AS-2	95W00406	06S02W23L037	A
				EW 2	97W00258	06S02W23L053	A01
				PZ-3	00W01140	06S02W23L059	A
				PZ-4	00W01140	06S02W23L060	A
				R49B2	97D01401	06S02W23E125	D
			32	114702	92D0116	UNREGISTERED	D
				R48B(3)	97D01402	06S02W23L015	D
				PZ-1	00W01138	06S02W23E332	A
				MW-2			
				B-24	89W1536	06S02W23L024	A
					93W0555	06S02W23L032	A
				AS-1	95W00398	06S02W23E265	A
				VP-1	95W00386	06S02W23L047	A
				R22B-2	86W1783	06S02W23L011	A
				R52B2	87W0307	06S02W23L014	A
				SO-2(R)	90W2399		A
				B-23	93W0554	06S02W23L029	A
				SO-PZ-1	93W0559	06S02W23M043	
				VE-2	95W00401	06S02W23L042	A02
				VE-6	95W00403	06S02W23L041	A02
			46	AS-4	95W00400	06S02W23E263	Α

47 VE-1	95W00394	06S02W23E267	A02
48 VP-4	95W00389	06S02W23L049	Α
49 VP-8	95W00392	06S02W23L044	Α
50 B-15	92W0316	06S02W23L028	Α
51 VP-10	95W00409	06S02W23L046	Α
52 VE 7	95W00397	06S02W23L057	A02
53 PZ-2	00W01139	06S02W23E333	Α
54 R21A	85W1185	06S02W23L002	Α
55 RP22B	85W1710	06S02W23L006	Α
56 SO-4	95W00384	06S02W23E261	Α
57 VE 9	95W00405	06S02W23L058	A02
58 R-47A	01D00421	06S02W23L010	D
59 R47B-2	97D01253	06S02W23L017	D
60 B-18	92W0319	06S02W23L027	Α
61 VP-9	95W00393	06S02W23L043	Α
62 R-20A	85W0626	06S02W23L001	Α

Santa Clara Valley Water District

5750 Almaden Expressway San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15) Page 1 of 2

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48.7	cologie Cetalig.				piration Dat		<u> </u>	90	Driller	's Log	No.:		
10	ell Owner:			TO BE COM		LOWN	EK AN	DRIL		Alada lata			
Si	MI Holding, L			Property Ow EMBP 455	The state of the s				Name of Business at Well Site: Buildings are vacant				
	'ell Owner's Mailin 350 Quadrangle	Property Ow 350 Ellis	-	Addre	ss:		- 1	Address of Well Site: 455 & 485/487 East Middlefield Road					
1	t <mark>y, State, Zi</mark> p rlando, FL 3;	City, State, Z	ip				City, S	State, I	Zip		iera kosa		
	elephone No. & Co	Mountain							View, Ca	lifornia			
4	7-810-3204			Telephone N 650-527-8				ng, Esc	q.) Telepi		Vo.: icable		
O	wner's/Consultant	's Well No.: вм-о	3	As	sessor's Pa	rcel No.	of Wel	i Site:	Book 1	50	Page 52	2 Pa	rcel 024
	onsullant (Compai Es Environment						g Comp	pany: Orilli	7.0				
A	dress:			······································		Addre			119				
		oulevard, Suit						at Str	eet				
C	ty, State, Zip No	vato, CA 9494	5			,			odland, CA	95	776		
	lephone No.: 15-899-1600					Telep	hone N	0.:			C-57 Licer	se No.:	
	Check if address	or phone number	nas changed			L			or phone nu	nher l		······	
		BE COMPLETED			ELLS OR E	XTRAC	TION	RECOV	FRY WELLS	iibei i	ias Giangeu	I	
Cŧ	ise Name/No.: Pi	art of MEW Sit	*:*·						Alana Le				
O/	versight Agency:	U.S. EPA (Reg	on IX)	**************************************		t		~~	ne No.: 510		-2313		
	Ð		-			,					W	/Nn eu	bstitution of
	Day Z	sponsible Profession			5/17/	19		ry The	·			signatu	re will be
	Olgridici (PO) (Ve:	sponsible Fluiessio	IIdi	•	Date		P	rint Nan	ne			accepto	80)
	Civil Engineer R	anistration No	NAME -	OR	No. 827								
F	timated Depth of		W 1 4	h = - 50 / 1	Geologis								
L		•		han 50 feet	☐ 50 to			∐ Ove	r 300 feet		Other:	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
		icted: 🔲 In a put			HOAD KI	UN PUDI	c prope	erty L	On private	prope	ty ∐ On D See G	istrict proper eneral Cond	rty/easement* lition F, page 2
		×							· · · · ·				
WELL TYPE/USE	WATER PRODUCTION	MONITORING	REM	EDIATION	DEWATE	ERING		EAT HANGE	1	IJECTI	МС	CATHODIC PROTECTION	,
7P	☐ Agricultural	☑ GW Level	Air Spai		☐ Perm			losed	Groun	dwate	Cleanup		-
	☐ Domestic ☐ Industrial	☑ GW Quality ☐ Inclinometer	GW Ext		_ ☐ Tem _l	porary	·	оор	Reinje				
Š	Municipal	☐ Vapor	☐ Vapor E	Emplacement Extraction	' }	:		oob beu	☐ Slorm	vater Suppl	Recharge		
		☐ Other	☐ Other						☐ Oher		1) WE	H W Hen	
Ot	her wells exist on	this property? 🗵	Yes No	lf yes, s	tatus: 🗷 A	ctive	☐ Inac	ctive [⊐ Abandone	d 📗	NAAV O	9 2019	Control
304				we with substitute at Deben	SIGNA		Calvania issue Pap (2005)CS)	Okio i melas Asi entre iga			NIFIT Za	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
l u Or	nderstand and ag dinance 90-1. the	ree that all work as	sociated with	this permit is	equired to b	e done	in acco	rdance	with Santa C	lara V	alley Water	District (Dist	rict) Well 🕴
		District Well Stand be and that the sign											
	IVIOGRAPIG, I GISO (SOLINIA MESE SELECTION OF	BANIV/BIKTO:	Kument adree	ment nae na	DO TOM	המכוובו	hohusoi	n fina wali aw		مدينة المكالة القيموجو المر		!a:dra:
ap	plication.	t it is my responsibi	ity, as the we	sii owner, to no	ury the Distr	nct of ar	iy chan	ges in t	he purpose o	fthis	well, from wi	nich, is indica	ated on this
Sig	nature of Propert	y Owner/Agent:		Da	e:		7.01.1	Print	Name of Pr	perty	Owner/Ager	nt:	
Sig	nature of Well Ov	wner/Agent:	et by a cause Brew	Dai				Print	l Name of We	ll Ow	ner/Agent:	·	
		Susan Eller	Potestieners Cap.		y 14, 201	9		ļ	an R. O'C			***************************************	
) 	mature of Well Dr	mer/Agent:		Dai	e;			Print	Name of Dri	ller/Aç	jent:		
Sig	mature of Consult	lant/Agent: 9 au	70	Da	e: 5/1	7/19)	Print	Name of Co	nsulta	nt/Agent:		
IM	PORTANT	A minimum 24-ho		ist be given to	Santa Cla	ra Vallo	v Wate	n Distri	rt Wali Inch	ne i e		Colored to provide a	

Sonto Cloro Volley Woler District San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

					PHUE I OI Z			
	TO BE COMPLET	ED BY DISTRICT						
District Permit No.:	Date Issued:		Well Registration No.:					
Geologic Setting:	Expiration Date	l .	Driller's Log No.:	Driller's Log No.:				
	TO BE COMPLETED BY	OWNER AND DRILLE	R	200				
Well Owner:	Property Owner:		Name of Busines					
SMI Holding, LLC	EMBP 455 LLC		455-Digicert	455-Digicert, Inc.; 485/487-vacant				
Well Owner's Mailing Address:	Property Owner's Mailing	Address:	Address of Well	Address of Well Site:				
3850 Quadrangle Boulevard, MC-222-SRE	350 Ellis Street			7 East Middlefie	ld Road			
City, State, Zip	City, State, Zip		City, State, Zip					
Orlando, FL 32817	Mountain View, CA	94043	Mountain Vie	w, California				
Telephone No. & Contact Name: Telephone No. & Contact Name: Telephone No.:								
407-810-3204 650-527-8000 (c/o Margaret Song, Esq.) Not Applicable								
Owner's/Consultant's Well No.: SM-03	Assessor's Par	cel No. of Well Site:	Book <u>160</u> Pa	ige 52 Parce	el <u>024</u>			
Consultent (Company):		Drilling Company:						
PES Environmental, Inc.		PeneCore Drilling						
Address:		Address:						
7665 Redwood Boulevard, Suite 200		220 N. East Stree						
City, State, Zip Novato, CA 94945		City, State, Zip Wood		P#11				
Telephone No.:		Telephone No.: 530-681-3198		57 License No.: 16899				
415-899-1600								
Check if address or phone number has changed		☐ Check if address or	CONTRACTOR OF THE PARTY OF THE	mangeu				
THIS SECTION TO BE COMPLETED FOR ALL MI	UNITORING WELLS OR E		······································					
Case Name/No.: Part of MEW Site		Caseworker Name:						
Oversight Agency: U.S. EPA (Region IX)		Caseworker Telephone	No.: 510-622 231					
		Gary Thom	A D	ėdus off) enutangis	litulion of			
Signature of Responsible Professional	Date	Print Name		accepted				
Olgridia di Noopoliolalo (10.00010110)			•					
Civil Engineer Registration No.	OR No. 827	8 it Registration No.						
C		120000000000000000000000000000000000000		Oll	· · · · · · · · · · · · · · · · · · ·			
	than 50 feet 50 to			Other:				
Well is to be constructed; In a public sidewalk	Tiu s bronc to sq Ki	On public property L	On private property	See General Conditi				
□ E REM	DEWATION DEWATI	·	П Інјестіон	CATHODIC	☐ Other			
WATER PRODUCTION Agricultural SGW Level Air Spanner Domestic SGW Quality GW Extention Industrial Inclinameter Material Municipal Vapor Vapor	EDIATION DEWAT	EXCHANGE	INJECTION	PROTECTION	OTHER			
Agricultural M GW Level Air Spa	orge	nament	Groundwater Cis	anup				
Domestic GW Quality GW Ex	· 1 ==	1 1	Reinjection					
I Industrial I Indinometer I Materia	al Emplacement	☐ Open	☐ Stormwater	.				
S ☐ Municipal ☐ Vapor ☐ Vapor	Extraction	Loop	☐ Water Supply Re	echarge				
Other Other			Other					
Other wells exist on this property? Yes N	o If yes, stalus: 🗵	Active 🔲 Inactive 🗀	Abandoned					
	SIGNA	TURES						
I understand and agree that all work associated wit								
Ordinance 90-1, the District Well Standards, and the								
best of my knowledge and that the signature below enforceable. I also certify that a right of entry/encro								
also understand that it is my responsibility, as the v	vell owner, to notify the Dist	rict of any changes in th	e purpose of this well	, from which, is indicat	ed on this			
application.								
Signature of Property Owner/Agent:	Date:		Name of Property Ow	/				
	May 20		annice r	15m				
Signature of Well Owner/Agent: O'Connor Susan	Date: May 14, 20:		Name of Well Owner/ in R. O'Connor	Agent:				
Signature of Well Driller/Agent:	Date:	Pont	Name of Driller/Agent	L.				
Signalure of Consultant/Agents	Date	Signature of Consultant/Agent: Date: Print Name of Consultant/Agent:						
Signature of Consultant/Agent:	Date:	Print	Name of Consultant/	Agent:				
Signature of Consultant/Agent: IMPORTANT: A minimum 24-hour notice in					stalling the			

Soolo Cloro Volley
Woler District
San Jose CA 95118 3686
(408) 265 2600

WELL CONSTRUCTION APPLICATION

FC 158 (03 25 15) Page 1 of 2

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	TO BE COMPLETED BY DISTRICT	
District Pennit No.	Date Issued	Well Registration No
Geologic Setting	Expiration Date	Driller's Log No
	TO BE COMPLETED BY OWNER AND DRILL	······································
Well Owner,	Property Owner	Name of Business at Well Site
EMT He ding, 1.7	FM91 4 ·	Building are dayer:
Well Owner's Mailing Address Feb. Qualitation to the control of the	Properly Owner's Mailing Address	Address of Well Site
		A55 & 4-3-467 East North for a comment
City, State, Zip	City, State Zip	City, State Zip
	Telephone No & Contact Name	Telephone No
Telephone No. & Contact Name 417-316-3264	650 327-4114 "1413414 L 05.F.	1 '
Owner's/Consultant's Well No	Assessor's Parcel No of Well Site	Book 160 Page 52 Parcel 44
Consultant (Company)	Drilling Company	and the same of th
rt S. El 1 r s	.45 17 .4 2000	: q
Address	Address	
7.65 Reiku . P. (.641.012) 5.176	5 1 ast 111	ret
City, State Zip 18	City State Zip %	Bland. CA S. /
Telephone No	Telephone No	C-57 License No
115-893-16	(1 > n) v (2) (2) (3)	90.50
Check if address or phone number has change		or phone number has changed
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Signature of Respons ble Professiona	Oate 1 tot war	i st.
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	— OR Contains Department No.	
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Estimated Depth of Compreted Well:	Geologist Registration No I than 50 feel	On private property On District property/easomer the See General Condition Figure 2 Cathoolic Other
Estimated Depth of Compreted Well:	Geologist Registration No I than 50 feel	On private property On District property/easomer the See General Condition Figure 2 Cathoolic Other
Estimated Depth of Compreted Well:	Geologist Registration No I than 50 feel	On private property On District property/easomer (*) See General Condition Figure 2 INJECTION CATHODIC OTHER PROTECTION Groundwater Cleanup Reinjection Stormwater Water Supply Recharge Other Abandoned evilth Santa Clara Valley Water District (District) We'l that the information given in this permit is correct to the authorized and valid and is affixed with the intent to be en the well owner and property owner if parties differ the purpose of this well from which is indicated on it is not Name of Property Owner/Agent In Name of Well Owner Agent
Estimated Depth of Compreted Well:	Geologist Registration No I than 50 feel	On private property On District property/easomer the See General Condition Figure 2 Cathoold Other Protection Cathoold Other Protection
Estimated Depth of Compreted Well:	Geologist Registration No I than 50 feel	On private property On District property/easomer to See General Condition Figure 2 See General Condition Figure 2 Injection Cathooic Other Protection

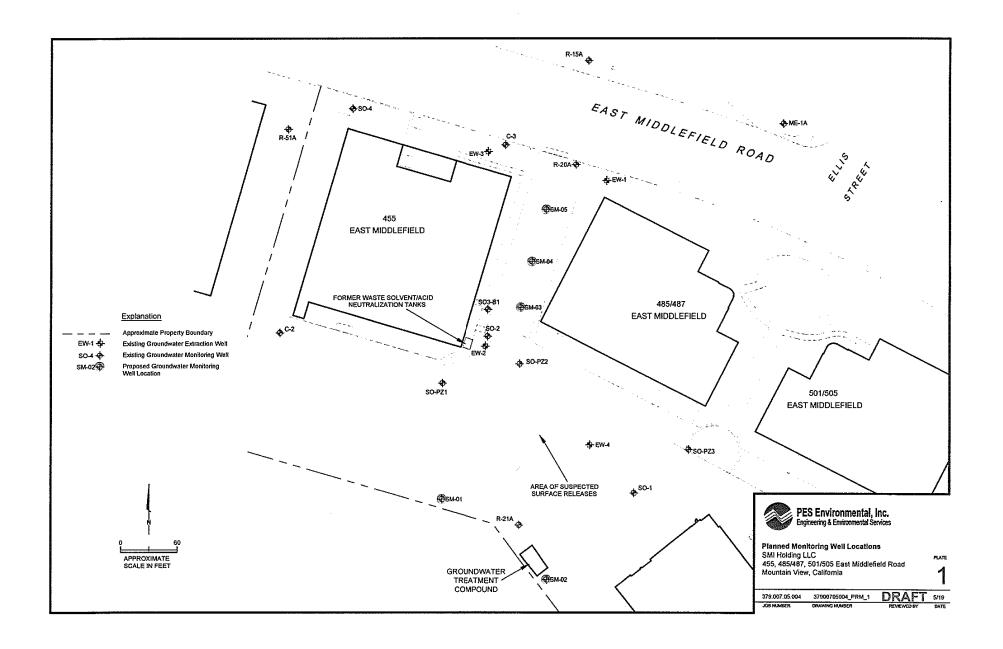
Santa Clara Valley Water District 5750 Almaden Expressway San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15) Page 2 of 2

DISTRICT W	ELL PERMIT NO.:	<u>U20190530803</u>						
Based on information on this application and attachment(s) hereto (if any) and subject (drill) the described well. Permission to start work may be withheld until a field check value to the "General" and "Special" Conditions stated below.	erifies all statemer	nts made on application by permittee and is also						
SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL	HEALTH APPRO	VAL (Water Supply Well Only)						
NOTE: Department of Environmental Health approval must be granted before this app	lication will be acc	epted by Santa Clara Valley Water District.						
Approved by:	, R.E.H.S	☐ Approved as submitted ☐ Approved as corrected						
OPP DIAM		Date:						
SITE PLAN								
A 8½" x 11" paper site plan must be attached to this application, including: 1. Location of site features, including major buildings, landscaped areas, tank fields.								
 Location of site features, including major buildings, landscaped areas, tank fields, North arrow and scale 	existing wells, etc.							
Location of proposed well with dimensions in feet from well to nearest cross stree	la.							
GENERAL CONDITIONS	15.							
authorized District representative must be on site to witness the construction of the District representative. If the District waives the inspection requirement, the District perjury, that the well was constructed in accordance with the District Well Standar	e annular seal. Th ct may request the ds and with the pe	is requirement may be walved by an authorized permittee(s) to furnish certification, under penalty of mit conditions.						
B. Permittee agrees to construct, operate, and maintain the well according to provisi of District Well Standards to the end that this well will not cause pollution or conta welfare of the people of the District.	mination of ground	water or otherwise jeopardize the health, safety, or						
approval of an authorized District representative, and only it the District believes t								
 This permit is only valid for the Assessor's Parcel No. indicated on it. 		- '						
this permit must be destroyed in accordance with District and State Well Standard	This permit may be voided if it contains incorrect information, if the permit is voided after work has begun, the well or beging that was constructed under							
F. If any work associated with this permit will take place on District property/easeme District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).								
G. Before the well constructed under this permit can be used as a drinking water sou over such use (typically the Santa Clara County Department of Environmental He completed Well inventory Form must also be approved.	aith or the State of	California Department of Public Health). A						
H. If the well constructed under this permit cannot be or is not being used for its inter according to the District Well Standards and under permit from the District. Any to completion of testing activities. Destruction activities must be completed according 24 hours prior to destruction.	est holes drilled und g to District standa	der this permit must be destroyed within 24 hours or rds. District must be notified a minimum of						
 Within 30 days of the completion of the well construction activities, the driller or co DWR Form 188 and mail the original to the District's Wells and Water Production 	Unit							
J. The permittee(s) shall assume entire responsibility for all activities and uses unde officers, agents, and employees, free and harmless from any and all expense, cos exercise of this permit including, but not limited to, property damage, personal inju	it, and liability in co kry, and wrongful de	nnection with or resulting from the granting or eath.						
K. Permittees are required to be in full compliance with Cal/OSHA California Labor C	ode Section 6300.							
L. A current C-57 Water Well Drilling Contractor's License is required for the constru	ction of all wells.							
M. Permittee, permittee's contractors, consultants, or agents shall be responsible to a construction, well development, pump testing, or other activities associated with the according to all applicable federal, state, and local statutes regulating such. In no potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materwork is being completed.	ols permit will be sa case shall these m	lifely handled, properly managed, and disposed of						
 N. The driller and consultants (if applicable) shall have an active copy of their Worker O. This permit shall expire if not exercised within 180 calendar days of its approval, authorized District representative. 	r's Compensation lo Intess an extension	nsurance on file with District. of the permit expiration date is granted by an						
P. This permit must be kept on site during all activities associated with it and shall im request.	mediately be prese	ented to an authorized District representative upon						
Q. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811	prior to any digging	g.						
SPECIAL CONDITIONS								
Community Projects Review Unit Approval (if needed):		CPRU Permit No.:						
Approved by:		Date: /30/2019						
		1 - / = / · / ·						

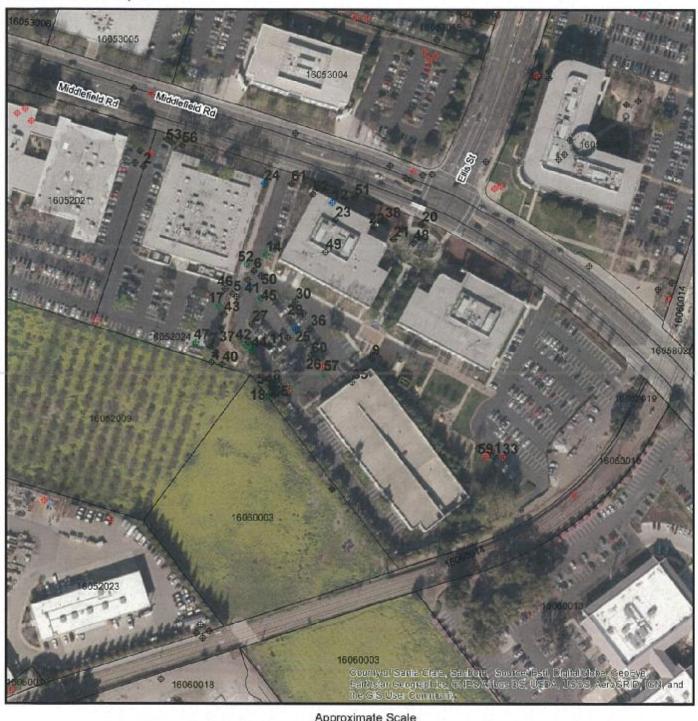
Please allow 10 working days to process this application.

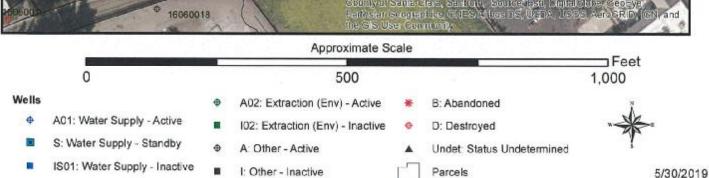


EMBP 455, 485/487 LLC

APN 160-52-024 MOUNTAIN VIEW, CA







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i ş				
ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
	1 R22B-1	86W1400	06S02W23L012	Α
	2 R50B-2	87W0305	06S02W23E126	Α
	3 R53B(3)	87W0308	06S02W23L016	Α
	4 R54B-3	87W0309	06S02W23L018	Α
	5 MW-2	89W1535	06S02W23L025	Α
	6 SB03-B1	92W0313	06S02W23L026	Α
	7 B-22	93W0561	06S02W23M042	Α
	8 VP-PZ-1	93W0596	06S02W23L030	Α
	9 SO-PZ-3	93W0558	06S02W23L031	Α
	10 SO-PZ-2	93W0557	06S02W23M044	Α
	11 B-17	92W0318	06S02W23L033	Α
	12 EW-1	95W00385	06S02W23L036	A01
	13 VE-5	95W00402	06S02W23L040	A02
	14 VE-3	95W00395	06S02W23E266	A02
	15 AS-3	95W00399	06S02W23E262	Α
	16 AS-5	95W00407	06S02W23L038	Α
	17 VE-4	95W00396	06S02W23E264	A02
	18 VE-8	95W00404	06S02W23L039	A02
	19 VP-2	95W00387	06S02W23L048	Α
	20 VP-3	95W00388	06S02W23L052	Α
	21 VP-5	95W00390	06S02W23L050	Α
	22 VP-6	95W00391	06S02W23L051	Α
	23 VP-7	95W00408	06S02W23L045	Α
	24 EW-3	97W00259	06S02W23L054	A01
	25 EW 4	97W00260	06S02W23L056	A01
	26	98D00048	UNREGISTERED	D
	27 AS-2	95W00406	06S02W23L037	Α
	28 EW 2	97W00258	06S02W23L053	A01
	29 PZ-3	00W01140	06S02W23L059	Α
	30 PZ-4	00W01141	06S02W23L060	Α
	31 R49B2	97D01401	06S02W23E125	D
	32	92D0116	UNREGISTERED	D
	33 R48B(3)	97D01402	06S02W23L015	D
	34 PZ-1	00W01138	06S02W23E332	Α
	35 MW-2	89W1536	06S02W23L024	Α
	36 B-24	93W0555	06S02W23L032	Α
	37 AS-1	95W00398	06S02W23E265	Α
	38 VP-1	95W00386	06S02W23L047	Α
	39 R22B-2	86W1783	06S02W23L011	Α
	40 R52B2	87W0307	06S02W23L014	Α
	41 SO-2(R)	90W2399	06S02W23M033	Α
	42 B-23	93W0554	06S02W23L029	Α
	43 SO-PZ-1	93W0559	06S02W23M043	Α
	44 VE-2	95W00401	06S02W23L042	A02
	45 VE-6	95W00403	06S02W23L041	A02
	46 AS-4	95W00400	06S02W23E263	Α

47 VE-1	95W00394	06S02W23E267	A02
48 VP-4	95W00389	06S02W23L049	Α
49 VP-8	95W00392	06S02W23L044	Α
50 B-15	92W0316	06S02W23L028	Α -
51 VP-10	95W00409	06S02W23L046	Α
52 VE 7	95W00397	06S02W23L057	A02
53 PZ-2	00W01139	06S02W23E333	Α
54 R21A	85W1185	06S02W23L002	Α
55 RP22B	85W1710	06S02W23L006	Α
56 SO-4	95W00384	06S02W23E261	Α
57 VE 9	95W00405	06S02W23L058	A02
58 R-47A	01D00421	06S02W23L010	D
59 R47B-2	97D01253	06S02W23L017	D
60 B-18	92W0319	06S02W23L027	Α
61 VP-9	95W00393	06S02W23L043	Α
62 R-20A	85W0626	06S02W23L001	Α

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Sanka Clara Valley Water District

5750 Almaden Expressway San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15) Page 1 of 2

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District Permit No.: C2090530004 Date Issued: 5/30//9 Well Registration No.:										end have been transfer to the contract of the			
Di	strict Permit No.:	C201905	30004		e Issued: 、			Well Registration No.:					
G	eologic Setting:			Exp	iration Date	e: <u>51</u>	<u> 30/3</u>	<i>₽</i> ට	Driller's Log	No.:			
69/				TO BE COMP	LETED BY	OWNE	R AND I	PRILLI	ER	Granders (1905) en en en Granders (1905) en en en en			
	ell Owner: 11 Holding, LI	LC		Property Own EMBP 455 L						Name of Business at Well Site: Buildings are vacant			
	ell Owner's Mailin 350 Quadrangle	g Address: Boulevard, MC	:-222-SRE	Property Own	•	Addres	ss:			Address of Well Site: 455 & 485/487 East Middlefield Road			
Cit	ty, State, Zip			City, State, Zir					City, State,	•	MIGGIETT	eru koau	
Or	lando, FL 32	817		Mountain V	iew, CA	94043				View, Cal	ifornia		
Telephone No. & Contact Name: Telephone No. & 650-527-8000								z. Earr	Telephone N		·		
Owner's/Consultant's Well No.: SM-04 Assessor's Parcel No. of Well Site: Book 160 Page 52 Parcel 024													
Consultant (Company): PES Environmental, Inc.						Drillin	g Compa	ny:				<i></i>	
}	ldress:	AL, INC.		·		Addre	Core Dr	11111	<u> </u>				
E		oulevard, Suite	200				ss: N. East	Stre	er				
Cit	ly, State, Zip No	vato, CA 9494	5						dland, CA 95'	776			
	lephone No.: 15-899-1600				**************************************	Telep	hone No.	:		C-57 Licen	se No.:	· · · · · · · · · · · · · · · · · · ·	
	Check if address	or phone number I	nas changed						or phone number h				
Τŀ	IIS SECTION TO	BE COMPLETED	FOR ALL M	ONITORING WE	LLS OR E								
		art of MEW Sit			er derlier alance protessant describe				Alana Lee				
O,	ersight Agency:	U.S. EPA (Regi	ion IX)			 			ne No.: 510-622	-2313	***************************************		
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	- Dang	2		#50466/Address	3//7/	119		y Tho		***************************************	signatur	a will be	
	Signature of Res	sponsible Professio	nal		Date		Prir	nt Nam	e		accepte	0)	
				— OR	No. 827								
_	Civil Engineer R	****					tration No).					
	timated Depth of		NAVY AS A SAME AND A SAME A	than 50 feet	☐ 50 to		_		300 feet	Other:			
W	ell is to be constru	icted: 🔲 In a pub	dic sidewalk	In a public	road 🗵	On publ	ic propert	by 🗀	On private proper			y/easement* ion F, page 2	
		×]							
WELL TYPE/USE	WATER PRODUCTION	MONITORING	Rem	EDIATION	DEWATI	ERING	HEA EXCHA		IMECTI	ON	CATHODIC PROTECTION	OTHER	
Ē	Agricultural	☑ GW Level	☐ Air Spa	-	☐ Pem		Clo		☐ Groundwate	Cleanup		· · · · · · · · · · · · · · · · · · ·	
11	☐ Domestic	☑ GW Quality	☐ GW Ex		☐ Tem	porary	Loo	•	Reinjection		F.A		
	☐ Industrial ☐ Municipal	☐ Inclinometer☐ Vapor	│	l Emplacement			Ope Loo		Stormwater Water Suppl		A-1		
] ===	wandpar	Other	☐ Other	zxuacuon				•	Other	y recharge:			
01	her wells exist on		Yes N	o If yes, st	atus: 🗵 /	Active	☐ Inacti	ve [Abandoned W/	Y 2 9 20	19-		
30.3					SIGNA	TURES							
Lu	inderstand and ag	ree that all work as	sociated with	this permit is re	equired to b	e done	in accord	iance	with Santa Olara V	alley Water	District (Distri	ict) Well	
be	omance 90-1, the st of my knowledd	District Well Stand ge and that the sign	iaros, ano tri iature below.	if to anoillions of whether origina	1is permit (: 1. electroni	see pag c. or nh	19 2). I ce ntoconied	ertify th	lat the information	given in this	permit is cor	rect to the	
en	itorceable. I also :	certify that a right o	f entry/encro	achment agreer	nent has bi	een fom	nalized br	etweer	the well owner at	id broberty o	umer if narti	se diffor 1	
als	so understand that plication.	t it is my responsibi	ility, as the w	ell owner, to not	ify the Dist	rict of a	ny chang	es in tr	ne purpose of this	well, from wh	nich, is indica	ted on this	
<u></u>	gnature of Proper	h Ouner/Anent		Date				Detail	Nama - 6Dti	0		····	
1		-		Date				rnnt	Name of Property	Owner/Age	nt:		
Si	gnature of Well O	wner/Agent:: Susan	mes by C'Cortos E.tw. misting buildings; mi Sites believes; mi Sites buildings;	Date May	3: [,] 14, 201	19		!	Name of Well Ow an R. O'Conno	-			
Si	gnature of Well Di	riller/Agent:		Date	B:	Print Name of Driller/Agent:				.,			
Si	gnature of Consul	tant/Agent:	50	Date	B: 5/1	7/19	7	Print	Name of Consulta	nt/Agent:			
ΪV	PORTANI:	A minimum 24-ho	DZIANO ZAKAS NOSTA BODINSKA DINGGA	ust be given to	Santa Cla	ira Valli	ıv Water	Dietri	ct Well Inchestic	. Danarian		etalling tha	

Sorto Goro Volley Woter District 5750 Almaden Expressway San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15) Page 1 of 2

												Page 1 of
1.74				TO B	E COMPLE	TED BY	DISTRIC	3 T /(4%)		inda Bier		400 (ABB)
-	strict Permit No.:			Di	ite Issued:				Well Registr	ation No.;		
G	eologic Setting:			E)	piration Dat	9:			Oriller's Log	No.:		
17.00				TO BE CON	PLETED BY	OWNE	R AND I	DRILLE	R			
Well Owner: Properly Owner:									Name of Bu	iness al W	ell Site:	
91	SMI Holding, LLC EMBP 455 LLC								455-Digio	ert, Inc.	: 485/487-	vacant
	ell Owner's Mailin			Property Ow	ner's Malling	Addres	8:		Address of	Well Site:		
31	350 Quadrangle	Boulevard, M	2 · 222 · SRE	350 Ellis	Street				455 & 485	/487 Eas	t Middlefi	eld Road
	ly, State, Zip		•	City, State, 2					City, State, 2	!ip		
0:	rlando, FL 32	2817		Mountain	View, CA	94043			Mountain	View, Cal	lifornia	
	lephone No. & Co	intact Name:		Telephone N					Telephone N	lo.:		
	07-810-3204			650 527-8	000 (c/o	Margar	et Song	, Esq.) Not Appli	cable		
Q1	wner's/Consultant'	6 Well No.: SM-0	4	As	sessor's Pa	rcel No.	of Well S	Site:	Book _160	Page 52	Par	cel 024
C	onsultant (Compar	ıy):				Drilling	Compa	ny:		······································		***************************************
Pi	S Environment	al, Inc.				Penec	ore Dr	illin	3			
	idress:					Addre	ss:		**************************************			
		oulevard, Suit				220 N	ì. East	Stre	et			
CI	ly, State, Zip No	vato, CA 9494	5			City, S	itate, Zip	Wood	lland, CA 957	76		
	lephone No.:					Teleph	ione No.:	:		C-57 Licer	se No.:	
	15-899-1600					530-6	581-319	8		906899		
		or phone number l							r phone number h	as changed		
TI	IIS SECTION TO	BE COMPLETED	FOR ALL M	ONITORING V	ELLS OR E	XTRAC	TION/RE	COVE	RY WELLS			
Ca	ise Name/No.: Pa	art of MEW Sit	e			Casew	vorker Na	me:	Alana Lee			
O١	ersight Agency:	U.S. EPA (Reg	on IX)			Casew	vorker Te	lephon	e No.; 510-622-	2313		
Г											(No eulo	stitution of
	ing to the contract of the con	i de la composition	Province in the second contract to	PY-drift*** - no amont trovo annula (massa).	Trainer, Scr., Goldenströck und		Gary	y Thon	es		signatur	
	Signature of Res	ponsible Professio	па		Date		Prin	t Name	3		accepted	4)
					No. 827	8						
	Civil Engineer Re	egistration No.		OR	Geologis	t Regist	ration No),				
Es	limated Dapih of t	Completed Well:	⊭ Less	han 50 feet	☐ 50 to	300 feet		Over 3	300 feet	Other:	h	
W	ell is to be constru	cted: 🔲 in a put			o road 🕅	ildua aC					istrict propert	vleasement*
								,	p pp	'See G	eneral Condit	ion F, page 2
		त्र										
밇	WATER	MONITORING	Rem	EDIATION	DEWATE			INJECTIO	N	CATHODIC	OTHER	
3	PRODUCTION					EXCHANGE				PROTECTION	4111211	
TYPETUSE	☐ Agricultural	☑ GW Level	☐ Air Spa	ıðe	☐ Pera		Clos	sed	Groundwater	Cleanup		
1	☐ Comestic	图 GW Quality	☐ GW Ex	raction	☐ Tem	рогагу	_ Loop	' 1	Reinjection	•		
WELL	☐ industrial	☐ Inclinometer	1.2	l Emplacemen	t [☐ Ope		☐ Stormwater			
3	☐ Municipal	☐ Vapor	☐ Vapor E	xtraction		ł	Loo	۲	☐ Water Supply	/ Recharge		
		Other	Other						Other			
O	her wells exist on	this property? 🗵	Yes No	lf yes, e			*	ve 🗌	Abandoned			
186)						TURES		Mini	en e			
l i	inderstand and ag	ree that all work as	sociated with	this permit is	required to b	e done	in accord	ance w	ith Santa Clara V	alley Water	District (Distri	ct) Well
he	oinance vu-1, the st of my knowledo	District Well Stand e and that the sign	Bros, and int	t conditions of whather origin	inis permit (: .a.) plactronic	see pago	e 2). I ce Jaconiad	rify the	It the information	given in this	permit is con	rect to the
en	iforceable. I also (ceriily that a right o	f entry/encro	achment agree	ment has be	en form	alized be	elween	the well owner an	d nroperty c	wer if nartie	as differ I
als	so understand that	tit is my responsibi	lity, as the w	ell owner, to no	olify the Distr	ict of an	y change	es In the	purpose of this v	vell, from wi	nich, is indical	led on this
j ap	plication.	·										
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SI	gnature of Propert	y Dynar/Agent:	=.	Da		7 ~~	ו מנ					
	gnature of Propert		=		May 28	3,20	19		<u>Eunice</u>	KI	n .	
	gnature of Propert		ed by Charles	Da	May 28 le:		19		Vame of Well Own	ner/Agent:	n_	
Si O	gnature of Property gnature of Well Ov 'Connor	wner/Agent:: Susan English	rails (charactures) in this otherwise distinguist checo-	Da Ma	May 28 te: 19 14, 201		19	Susa	Name of Well Own n R. O'Connor	ner/Agent:	<u> </u>	
Si O	gnature of Propert	wner/Agent:: Susan English	raity (clinics fines if this edicade distribution of the	Da	May 28 te: 19 14, 201		19	Susa	Vame of Well Own	ner/Agent:	iv	
Si O Si	gnature of Property gnature of Well Ov 'Connor's gnature of Well Dr	wner/Agent: Susan services iller/Agent:	eal to 6-times from 21 faith, whitevent, 155 faith, whitevent, 155 faithful - theory	Da Ma Da	May 28 le: by 14, 201 le:		19	Susa Print I	Name of Well Own n R. O'Connox Name of Driller/Ag	ner/Agent:	<u> </u>	
SI O Si	gnature of Property gnature of Well Ov 'Connor	wner/Agent: Susan services iller/Agent:	ral by 6-Stores fairs of fairs, self-eral of fairs, self-eral of fairs of the	Da Ma Da	May 28 te: 19 14, 201		19	Susa Print I	Name of Well Own n R. O'Connor	ner/Agent:	n .	

Sonia Clara Valley
Water District

5750 Almaden Expressway
San Jose, CA 95118-3666
(408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26 15) Page 1 of 2

	TO BE COMPLETED BY DISTRICT	
District Perm t No.:	Date Issued	Well Registration No
Geologic Setting	Expiration Date:	Driller's Log No.:
occordic bearing	TO BE COMPLETED BY OWNER AND DRIL	
Well Owner		
VVEN OWNER	Property Owner EMBP 1 1 2 7	Name of Business at Well Site
		Buildings are vacar-
Well Owner's Mailing Address	Property Owner's Mailing Address	Address of Well Site
on S. Quarta opis Boulerto, on OC-722-SFE	350 Flar Subset	455 & 485/487 \$ast Midd ef.e)d R 1:
City State 7ip	City, State, Zip	City, State, Zip
2.4 d 8. 19817	Mounta Mex. CA 91 1:	Rountain View, Cal. Prmis
Telephone No. & Contact Name	Telephone No. & Contact Name	Telephone No.:
1 7 310 5263	(50 52 R 0 tc/c Margager F 650 L2	
Owner's/Consultant's Well No	Assessor's Parcel No. of Well Site	Book 160 Page 52 Parcel Cal
Consultant (Con pany)	Driling Company	
A Subset Care	10 to 20 miles	-
Address	Address	
ro - 18 of Poulevard, Truce 200	. d 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$ 7 th 1 th
City State Zip (Unado, CA 1915)	City State Zip	218 M. CA 95776
Telephone No	Telephone No	C-57 License No
9. #1 w		976259
Check d'address or phone number has charged	☐ Check I address	or phone number has changed
THIS SECTION TO BE COMPLETED FOR ALL M	ONITORING WELLS OR EXTRACTION/RECOV	VERY WELLS
Case Name/No Tipart NEW Time	Caseworke Nan e	land fue
Oversight Agency: U.S. LPA Pagion (X)	Caseworker Teleph	one No : 510-522-2313
		· · · · · · · · · · · · · · · · · · ·
	380% "!	lo noitulitadus (No. 25 de 1997) od Frw. Barbangia Barban
Signature of Responsible Professional	Date Pont Na	
C vr. Engineer Registration No.	OR Geologist Registration No	
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La ☐ Agricultural 图 GW Level ☐ All Spi		☐ Groundwater Cleanup
Domestic	· ·	Reinjection
☐ Industrial ☐ Inclinor refer ☐ Materi	al Emplacement	☐ Stormwater
[[]	Extraction Loop	
Other Other		□ Other
Other wells exist on this property? X Yes [] N	lo If yes status (X) Active (;) Inactive	☐ Abandoned
	SIGNATURES	
Lundare and and agree that all work associated will		e with Santa Clara Valley Water District (District) Well
Ordinance 90.1, the District Well Standards, and the	ne conditions of this permit (see page 2). I certify	that the information given in this permit is correct to the
best of my knowledge and that the signature below	whether original electronic or photocopied is	authorized and valid, and is affixed with the intent to be
enforceable I also certify that a right of entry/encre	pachment agreement has been formalized between	en the well owner and property owner if parties differ
also understand that it is my responsibility as the capplication	well owner to holly the District of any changes in	the purpose of this well from which is indicated on this
Signature of Property Owner/Agent	Date	int Name of Property Owner/Agent
Signature of Froperty Owneringers	; Detc	an italia or roping Omloringen
Signature of Well Owner/Agent	Date Pri	int Name of Well Owner/Agent
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Signature of Weit tim len Agent	Date Pr	t Name of Duller/Agent
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Signature of Consultant/Agent	- (9 <i>1</i> 9 / /	1 N TUT CXY ILL
Digitations of Constitutional Page 11	Date	int Name of Consultant/Agent
1	Date Pr	int Name of Consultant/Agent
IMPORTANT: A minimum 24 bour notice		_
IMPORTANT: A minimum 24-hour notice annula, seal. Call (408) 265-		trict Well inspection Department prior to installing the

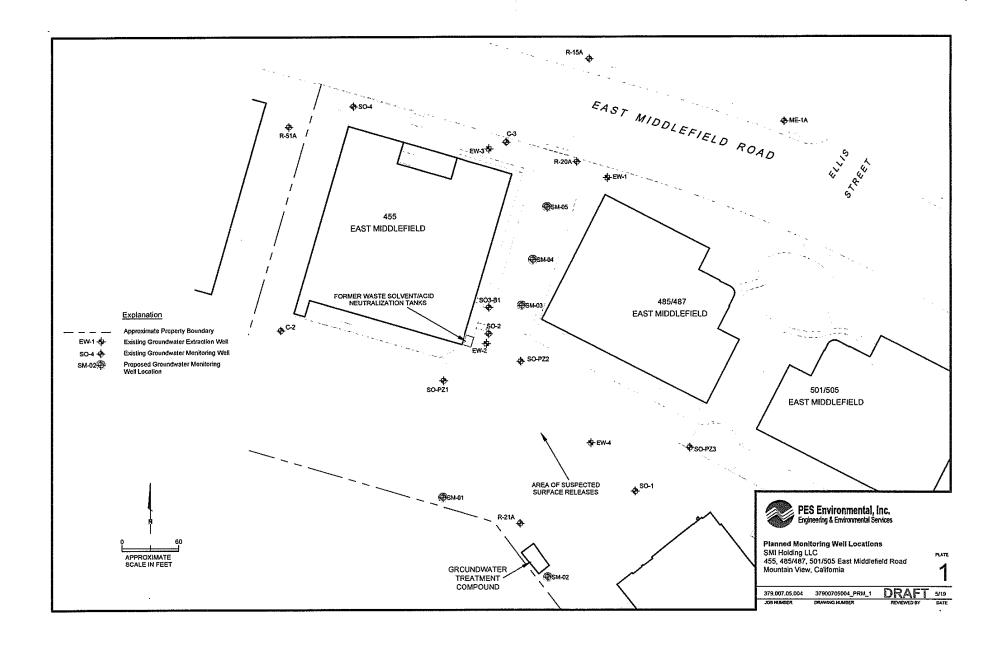
Santa Clara Valley Water District A 5750 Almaden Expressway San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15) Page 2 of 2

DISTRICT WELL PERMIT NO.: Based on information on this application and attachment(s) hereto (if any) and subject to approval noted below, permission is hereby granted to construct (drill) the described well. Permission to start work may be withheld until a field check verifies all statements made on application by permittee and is also subject to the "General" and "Special" Conditions stated below. SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVAL (Water Supply Well Only) NOTE: Department of Environmental Health approval must be granted before this application will be accepted by Santa Clara Valley Water District. Approved by: Approved as submitted . R.E.H.S ☐ Approved as corrected Date: SITE PLAN A 8½" x 11" paper site plan must be attached to this application, including: Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc. North arrow and scale Location of proposed well with dimensions in feet from well to nearest cross streets. 3. **GENERAL CONDITIONS** District (telephone 408-265-2607, ext. 2660) must be notified a minimum of one working day before construction of the annular seal. An authorized District representative must be on site to witness the construction of the annular seal. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification, under penalty of perjury, that the well was constructed in accordance with the District Well Standards and with the permit conditions. Permittee agrees to construct, operate, and maintain the well according to provisions of the latest District Ordinance and the latest published revisions of District Well Standards to the end that this well will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety, or welfare of the people of the District. This permit is valid only for the purpose specified herein. Well construction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative finds that site conditions warrant such a change). D. This permit is only valid for the Assessor's Parcel No. indicated on it. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that was constructed under this permit must be destroyed in accordance with District and State Well Standards. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589). G. Before the well constructed under this permit can be used as a drinking water source, its use must be approved by the regulatory agency with authority over such use (typically the Santa Clara County Department of Environmental Health or the State of California Department of Public Health). A completed Well Inventory Form must also be approved. if the well constructed under this permit cannot be or is not being used for its intended purpose, permittee is hereby required to destroy the well according to the District Well Standards and under permit from the District. Any test holes drilled under this permit must be destroyed within 24 hours of completion of testing activities. Destruction activities must be completed according to District standards. District must be notified a minimum of 24 hours prior to destruction. Within 30 days of the completion of the well construction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and mail the original to the District's Wells and Water Production Unit, The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees, free and harmless from any and all expense, cost, and liability in connection with or resulting from the granting or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death. K. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300. A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials or waters generated during drilling, well construction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must not be allowed to move off the property where the N. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with District. O. This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension of the permit expiration date is granted by an authorized District representative. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging. SPECIAL CONDITIONS Community Projects Review Unit Approval (if needed): CPRU Permit No.: Approved by: Date:

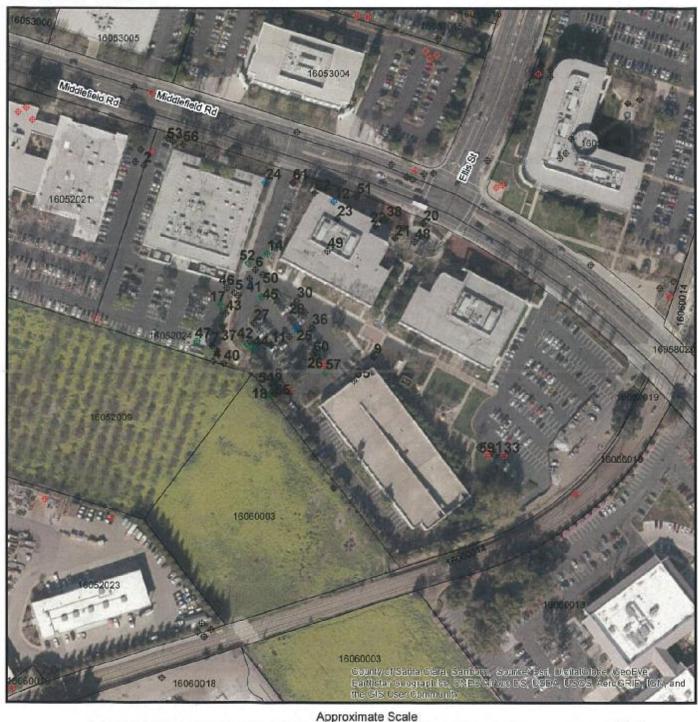
Please allow 10 working days to process this application.

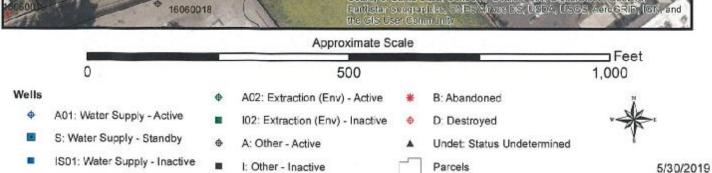


EMBP 455, 485/487 LLC

APN 160-52-024 MOUNTAIN VIEW, CA







ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	R22B-1	86W1400	06S02W23L012	Α
	R50B-2	87W0305	06S02W23E126	Α
3	R53B(3)	87W0308	06S02W23L016	Α
4	R54B-3	87W0309	06S02W23L018	Α
5	MW-2	89W1535	06S02W23L025	Α
6	SB03-B1	92W0313	06S02W23L026	Α
7	B-22	93W0561	06S02W23M042	Α
8	VP-PZ-1	93W0596	06S02W23L030	Α
9	SO-PZ-3	93W0558	06S02W23L031	Α
10	SO-PZ-2	93W0557	06S02W23M044	Α
11	B-17	92W0318	06S02W23L033	Α
12	EW-1	95W00385	06S02W23L036	A01
13	VE-5	95W00402	06S02W23L040	A02
14	VE-3	95W00395	06S02W23E266	A02
15	AS-3	95W00399	06S02W23E262	Α
16	AS-5	95W00407	06S02W23L038	Α
17	VE-4	95W00396	06S02W23E264	A02
18	VE-8	95W00404	06S02W23L039	A02
19	VP-2	95W00387	06S02W23L048	Α
20	VP-3	95W00388	06S02W23L052	Α
21	VP-5	95W00390	06S02W23L050	Α
22	VP-6	95W00391	06S02W23L051	Α
23	VP-7	95W00408	06S02W23L045	Α
24	EW-3	97W00259	06S02W23L054	A01
25	EW 4	97W00260	06S02W23L056	A01
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27	AS-2	95W00406	06S02W23L037	Α
28	EW 2	97W00258	06S02W23L053	A01
29	PZ-3	00W01140	06S02W23L059	Α
30	PZ-4	00W01141	06S02W23L060	Α
31	R49B2	97D01401	06S02W23E125	D
32		92D0116	UNREGISTERED	D
33	R48B(3)	97D01402	06S02W23L015	D
34	PZ-1	00W01138	06S02W23E332	Α
35	MW-2	89W1536	06S02W23L024	Α
36	B-24	93W0555	06S02W23L032	Α
37	AS-1	95W00398	06S02W23E265	Α
38	VP-1	95W00386	06S02W23L047	Α
39	R22B-2	86W1783	06S02W23L011	Α
40	R52B2	87W0307	06S02W23L014	Α
41	S0-2(R)	90W2399	06S02W23M033	Α
42	B-23	93W0554	06S02W23L029	Α
43	SO-PZ-1	93W0559	06S02W23M043	Α
44	VE-2	95W00401	06S02W23L042	A02
45	VE-6	95W00403	06S02W23L041	A02
46	AS-4	95W00400	06S02W23E263	Α

47 VE-1	95W00394	06S02W23E267	A02
48 VP-4	95W00389	06S02W23L049	Α
49 VP-8	95W00392	06S02W23L044	Α
50 B-15	92W0316	06S02W23L028	Α
51 VP-10	95W00409	06S02W23L046	Α
52 VE 7	95W00397	06S02W23L057	A02
53 PZ-2	00W01139	06S02W23E333	Α
54 R21A	85W1185	06S02W23L002	Α
55 RP22B	85W1710	06S02W23L006	Α
56 SO-4	95W00384	06S02W23E261	Α
57 VE 9	95W00405	06S02W23L058	A02
58 R-47A	01D00421	06S02W23L010	D
59 R47B-2	97D01253	06S02W23L017	D
60 B-18	92W0319	06S02W23L027	Α
61 VP-9	95W00393	06S02W23L043	Α
62 R-20A	85W0626	06S02W23L001	Α

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Sonto Goro Volley Woter District San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15) Page 1 of 2

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annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

Sonlo Goro Volley Woter District San Jose, CA 95118-3686 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

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Santa Gara Valley Water District 5750 Almaden Expressway San Jose, CA 95118-3686 (408) 265-2600

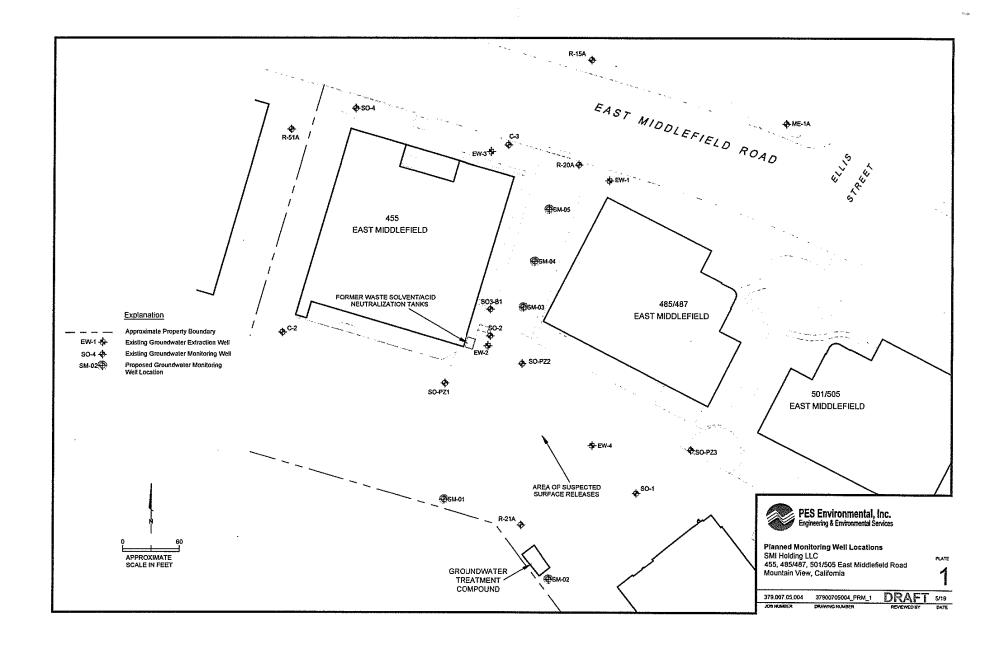
WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15) Page 2 of 2

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	DISTRICT WELL PERMIT NO.:	(JH)19 05 30 005
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	SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPRO	VAL (Water Supply Well Only)
NO	TE: Department of Environmental Health approval must be granted before this application will be acce	apted by Santa Clara Valley Water District.
	proved by: , R.E.H.S	Approved as submitted Approved as corrected
SIT	E PLAN	Date:
_	1½" x 11" paper site plan must be attached to this application, including:	
1.	Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.	
2.	North arrow and scale	
3.	Location of proposed well with dimensions in feet from well to nearest cross streets.	
GE	NERAL CONDITIONS	· · · · · · · · · · · · · · · · · · ·
A.	District (telephone 408-265-2607, ext. 2660) must be notified a minimum of one working day bet authorized District representative must be on site to witness the construction of the annular seal. This District representative. If the District waives the inspection requirement, the District may request the perjury, that the well was constructed in accordance with the District Well Standards and with the per	s requirement may be waived by an authorized permittee(s) to furnish certification, under penalty o mit conditions.
В.	Permittee agrees to construct, operate, and maintain the well according to provisions of the latest Dis of District Well Standards to the end that this well will not cause pollution or contamination of grounds welfare of the people of the District.	vater or otherwise jeopardize the health, safety, or
C.	This permit is valid only for the purpose specified herein. Well construction methods authorized unde approval of an authorized District representative, and only if the District believes that such a change valid that State Well Standards (e.g., if the District representative finds that site conditions warrant to the conditions was a conditional to the conditiona	idli regult in periol or cumodan associance cuttle the
D.	This permit is only valid for the Assessor's Parcel No. Indicated on it.	* •
Ε.	This permit may be voided if it contains incorrect information. If the permit is voided after work has be this permit must be destroyed in accordance with District and State Well Standards.	
F.	If any work associated with this permit will take place on District property/easement, an encroachmen District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).	
G.	Before the well constructed under this permit can be used as a drinking water source, its use must be over such use (typically the Santa Clara County Department of Environmental Health or the State of completed Well Inventory Form must also be approved.	Catifornia Department of Public Health). A
Н.	according to the District Well Standards and under permit from the District. Any test holes drilled under completion of testing activities. Destruction activities must be completed according to District standar 24 hours prior to destruction.	er this permit must be destroyed within 24 hours of ds. District must be notified a minimum of
l.	Within 30 days of the completion of the well construction activities, the driller or consultant identified of DWR Form 188 and mail the original to the District's Wells and Water Production Unit.	
J.	The permittee(s) shall assume entire responsibility for all activities and uses under this permit and sha officers, agents, and employees, free and hamiless from any and all expense, cost, and liability in corexercise of this permit including, but not limited to, property damage, personal injury, and wrongful de	anaction with an enguliar from the
K.	Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.	
L. M.	A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.	
IVI.	construction, well development, pump testing, or other activities associated with this permit will be saff according to all applicable federal, state, and local statutes regulating such. In no case shall these mapping enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must now work is being completed.	ely handled, properly managed, and disposed of aterials and/or waters be allowed to enter, or of be allowed to move off the property where the
N. O.	The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation in This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension authorized District representative.	of the permit expiration date is granted by an
P.	request.	
Q.	Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging	•
SPI	ECIAL CONDITIONS	*
Cor	nmunity Projects Review Unit Approval (if needed):	CPRU Permit No.:
App	proved by:	Date: /
niin aai	Jely Thitel	5/30/19

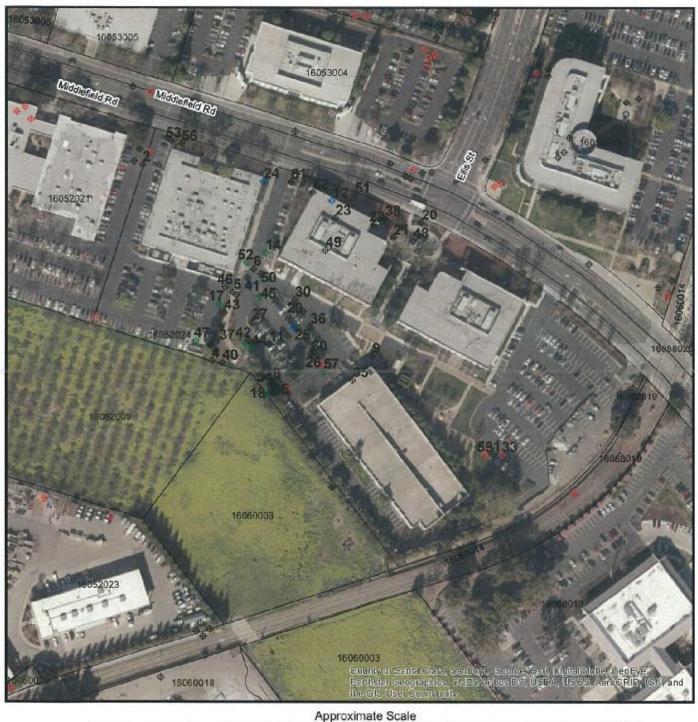
Please allow 10 working days to process this application.

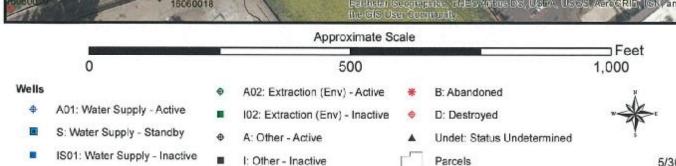


EMBP 455, 485/487 LLC

APN 160-52-024 MOUNTAIN VIEW, CA







5/30/2019

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	R22B-1	86W1400	06S02W23L012	Α
2	R50B-2	87W0305	06S02W23E126	Α
3	R53B(3)	87W0308	06S02W23L016	Α
4	R54B-3	87W0309	06S02W23L018	Α
5	MW-2	89W1535	06S02W23L025	Α
6	SB03-B1	92W0313	06S02W23L026	Α
7	B-22	93W0561	06S02W23M042	Α
8	VP-PZ-1	93W0596	06S02W23L030	Α
9	SO-PZ-3	93W0558	06S02W23L031	Α
10	SO-PZ-2	93W0557	06S02W23M044	Α
11	B-17	92W0318	06S02W23L033	Α
12	EW-1	95W00385	06S02W23L036	A01
13	VE-5	95W00402	06S02W23L040	A02
14	VE-3	95W00395	06S02W23E266	A02
15	AS-3	95W00399	06S02W23E262	Α
16	AS-5	95W00407	06S02W23L038	Α
17	VE-4	95W00396	06S02W23E264	A02
18	VE-8	95W00404	06S02W23L039	A02
19	VP-2	95W00387	06S02W23L048	Α
20	VP-3	95W00388	06S02W23L052	Α
21	VP-5	95W00390	06S02W23L050	Α
22	VP-6	95W00391	06S02W23L051	Α
23	VP-7	95W00408	06S02W23L045	Α
24	EW-3	97W00259	06S02W23L054	A01
25	EW 4	97W00260	06S02W23L056	A01
26		98D00048	UNREGISTERED	D
27	AS-2	95W00406	06S02W23L037	Α
28	EW 2	97W00258	06S02W23L053	A01
29	PZ-3	00W01140	06S02W23L059	Α
30	PZ-4	00W01141	06S02W23L060	Α
31	R49B2	97D01401	06S02W23E125	D
32		92D0116	UNREGISTERED	D
33	R48B(3)	97D01402	06S02W23L015	D
34	PZ-1	00W01138	06S02W23E332	Α
35	MW-2	89W1536	06S02W23L024	Α
36	B-24	93W0555	06S02W23L032	Α
37	AS-1	95W00398	06S02W23E265	Α
38	VP-1	95W00386	06S02W23L047	Α
		86W1783	06S02W23L011	Α
		87W0307	06S02W23L014	Α
	• •	90W2399	06S02W23M033	Α
42	B-23	93W0554	06S02W23L029	Α
43	SO-PZ-1	93W0559		Α
44	VE-2	95W00401	06S02W23L042	A02
		95W00403	06S02W23L041	A02
46	AS-4	95W00400	06S02W23E263	Α

47 VE-1	95W00394	06S02W23E267	A02
48 VP-4	95W00389	06S02W23L049	Α
49 VP-8	95W00392	06S02W23L044	Α
50 B-15	92W0316	06S02W23L028	Α
51 VP-10	95W00409	06S02W23L046	Α
52 VE 7	95W00397	06S02W23L057	A02
53 PZ-2	00W01139	06S02W23E333	Α
54 R21A	85W1185	06S02W23L002	Α
55 RP22B	85W1710	06S02W23L006	Α
56 SO-4	95W00384	06S02W23E261	Α
57 VE 9	95W00405	06S02W23L058	A02
58 R-47A	01D00421	06S02W23L010	D
59 R47B-2	97D01253	06S02W23L017	D
60 B-18	92W0319	06S02W23L027	Α
61 VP-9	95W00393	06S02W23L043	Α
62 R-20A	85W0626	06S02W23L001	Α

s = 5

PES Environmental, Inc.

APPENDIX B

MONITORING WELL AND SOIL VAPOR PROBE CONSTRUCTION LOGS

Г		MAJOR DIVIS	SIONS			TYPICAL NAMES
			CLEAN GRAVELS	GW		WELL-GRADED GRAVELS WITH OR WITHOUT SAND
	SIEVE	GRAVELS MORE THAN HALF	WITH LESS THAN 15% FINES	GP		POORLY-GRADED GRAVELS WITH OR WITHOUT SAND
	LS N NO. 200	COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	GRAVELS WITH	GM		SILTY GRAVELS WITH OR WITHOUT SAND
	SER THA		15% OR MORE FINES	GC		CLAYEY GRAVELS WITH OR WITHOUT SAND
	COARSE-GRAINED SOILS HALF IS COARSER THAN NO.		CLEAN SANDS	sw		WELL-GRADED SANDS WITH OR WITHOUT GRAVEL
	CO/	SANDS MORE THAN HALF	WITH LESS THAN 15% FINES	SP		POORLY-GRADED SANDS WITH OR WITHOUT GRAVEL
	MORE THAN	COARSE FRACTION IS FINER THAN NO. 4 SIEVE SIZE	SANDS WITH 15%	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			OR MORE FINES	SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
	200 SIEVE		ML			INORGANIC SILTS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
	HALF IS FINER THAN NO. 200 S HALF IS FINER THAN NO. 200 S TIMIT DINDIT		CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL	
				OL		ORGANIC SILTS OR CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
	INE-GRAI	NE-GRAIN ALF IS FINE		МН		INORGANIC SILTS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
	F MORE THAN H	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		СН		INORGANIC CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
	MOR					ORGANIC SILTS OR CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
		HIGHLY ORGANIC	SOILS	PT	7 77 77 7 77 77	PEAT AND OTHER HIGHLY ORGANIC SOILS
		ABBREVIA	TION KEY			SYMBOLS KEY
PI	ID (PPM) - Photo Ionization D million from field h	etector readings in parts eadspace sample scree		_	o Soil Sample Recovered
Bl	LOWS/6	indicated on the lo	drive sampler 6 inches a gs using sample drive h ds falling 30 inches.		⊠ u	artial Soil Sample Recovered ndisturbed Soil Sample Recovered pil Sample Submitted for Laboratory Analysis
2.	.5YR 6/2	- Soil Color accordir (1994 Revised Edi	ng to Munsell Soil Color tion)	Charts		ydropunch Sample
	et MSL et BGS	- feet above Mean S - feet below ground				rst Encountered Groundwater Level

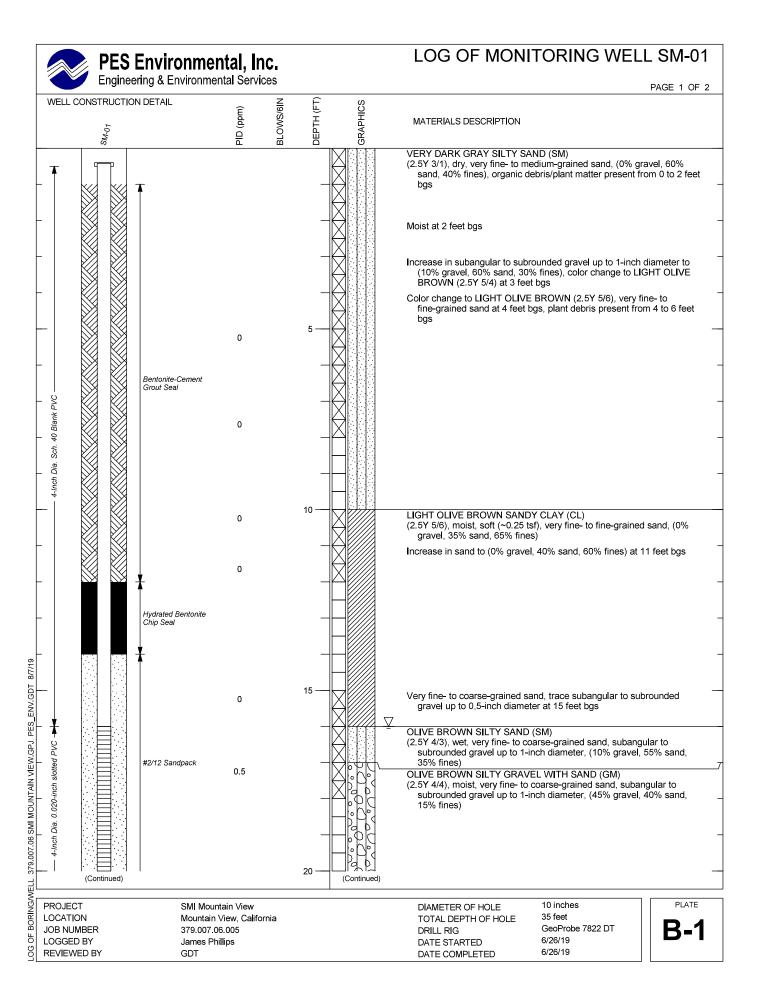


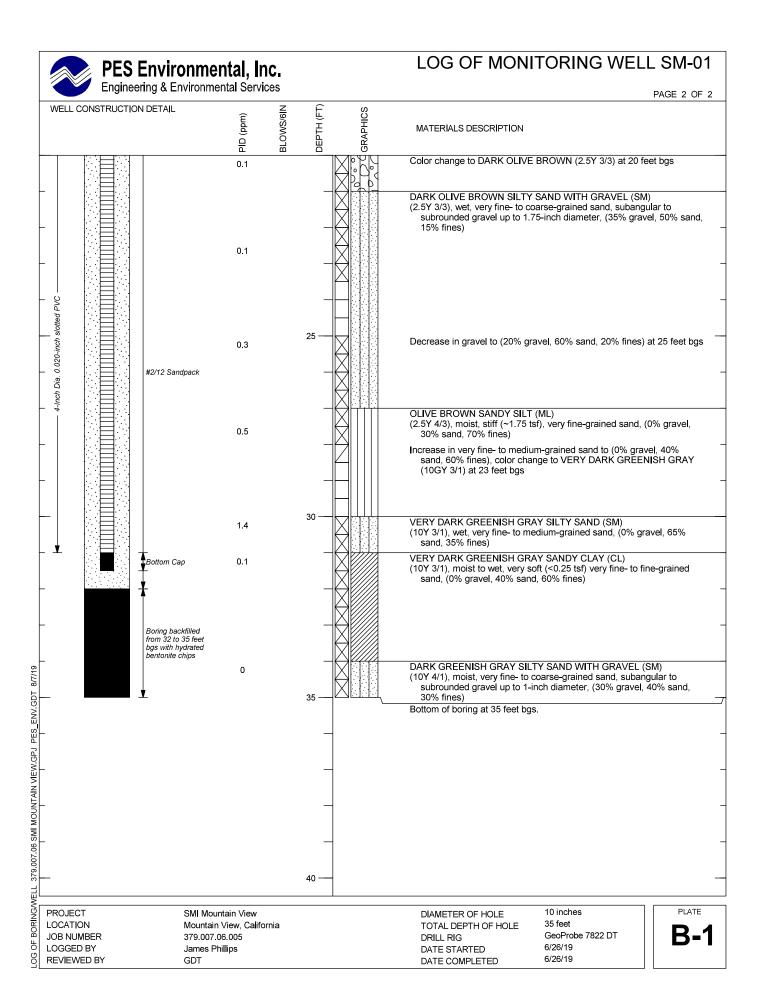
Unified Soil Classification System Chart SMI Mountain View Mountain View, California PLATE

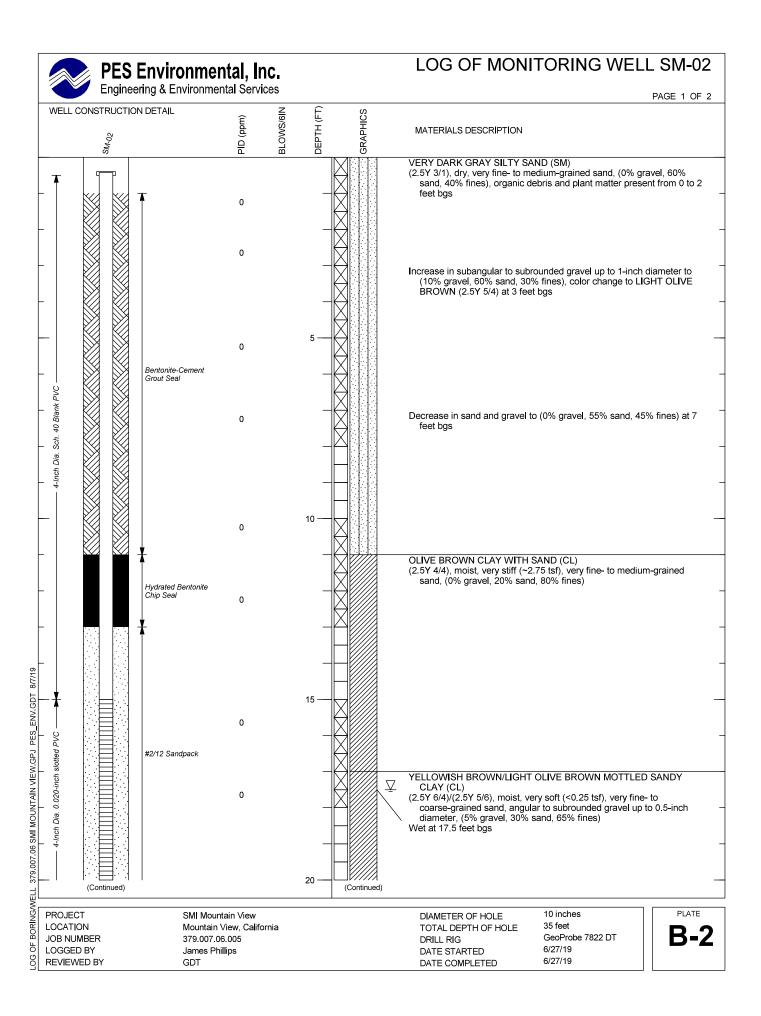
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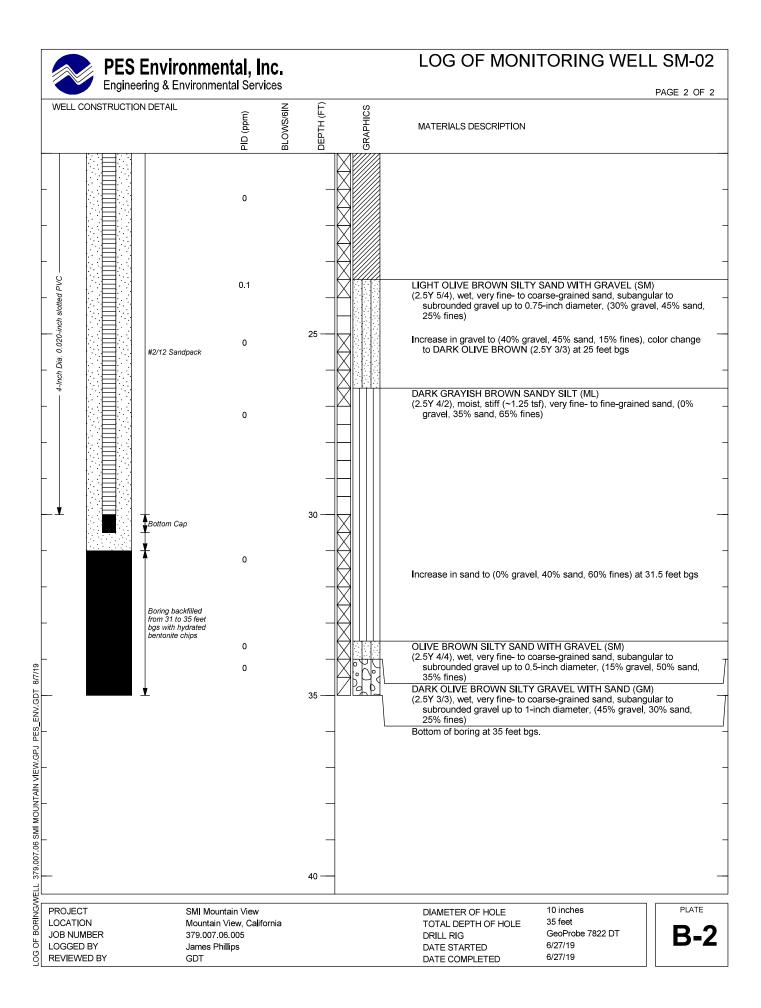
 379.007.06.005
 USCS Chart
 GDT
 10/8/2019

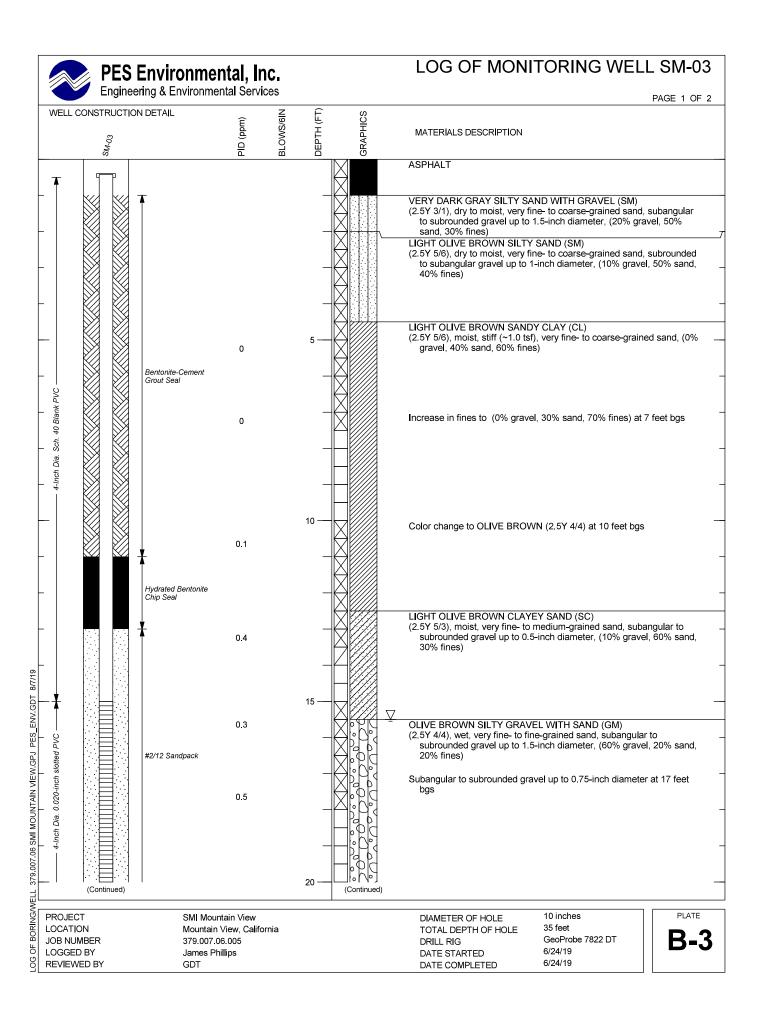
 JOB NUMBER
 DRAWING NUMBER
 REVIEWED BY
 DATE

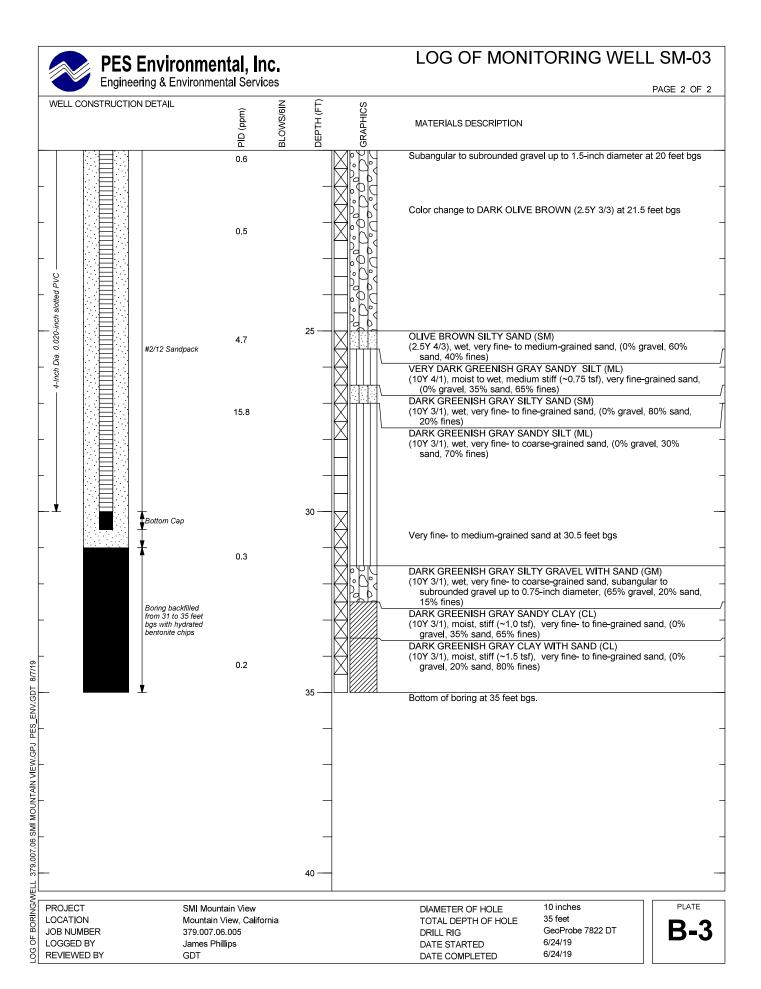


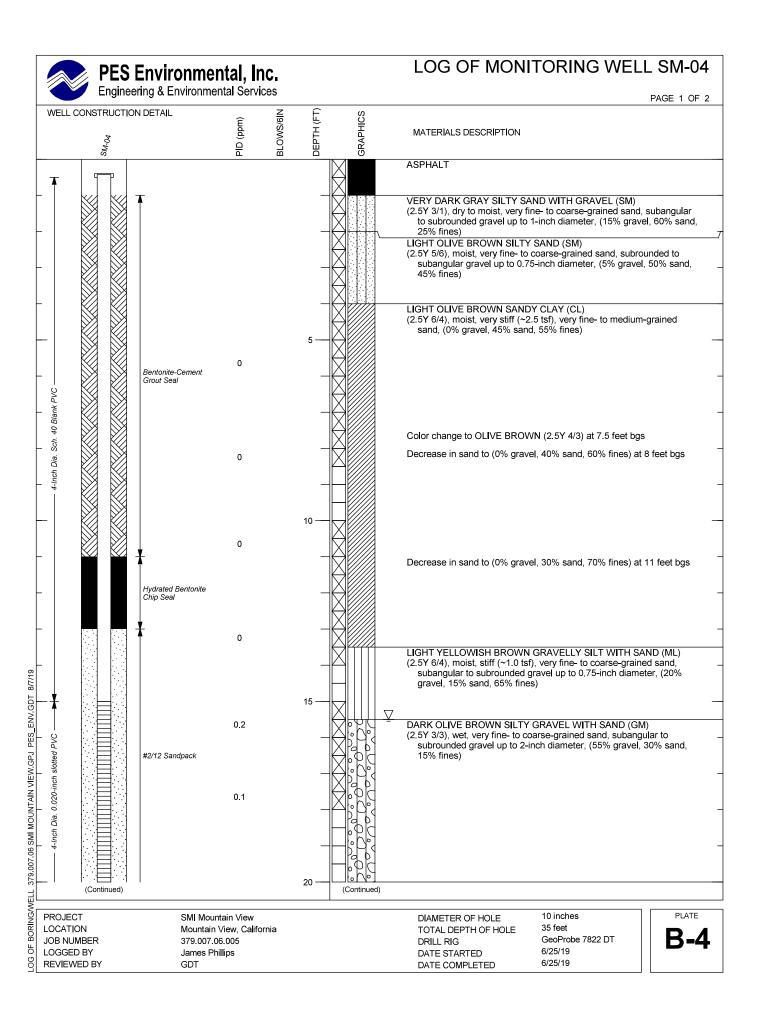


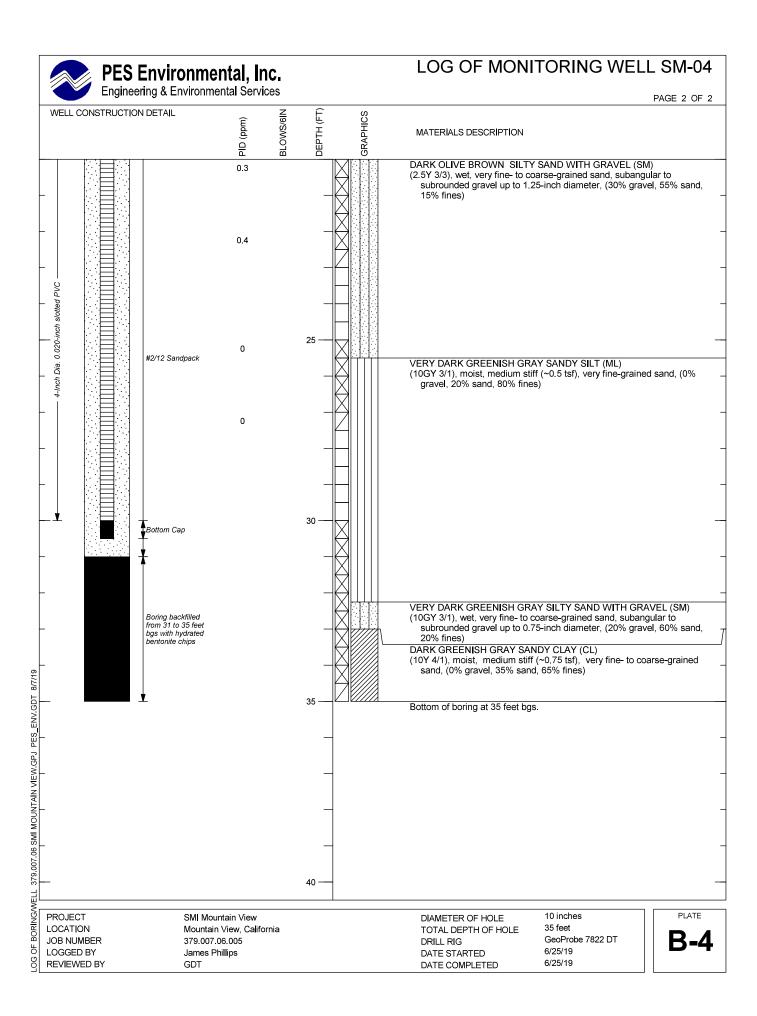


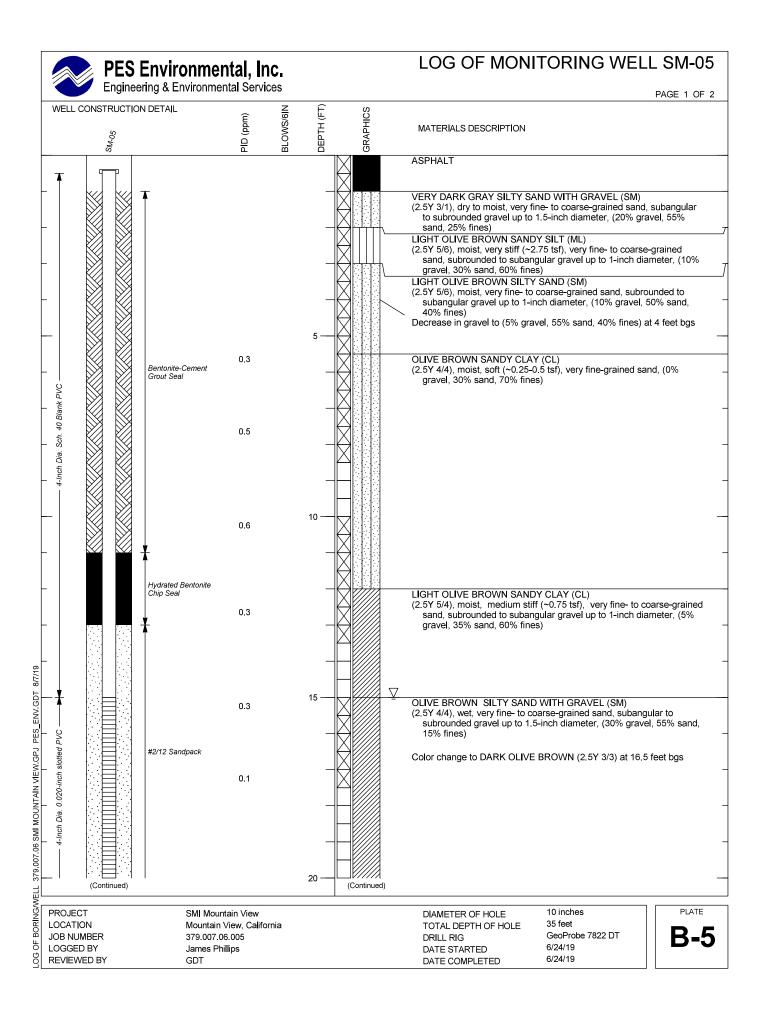


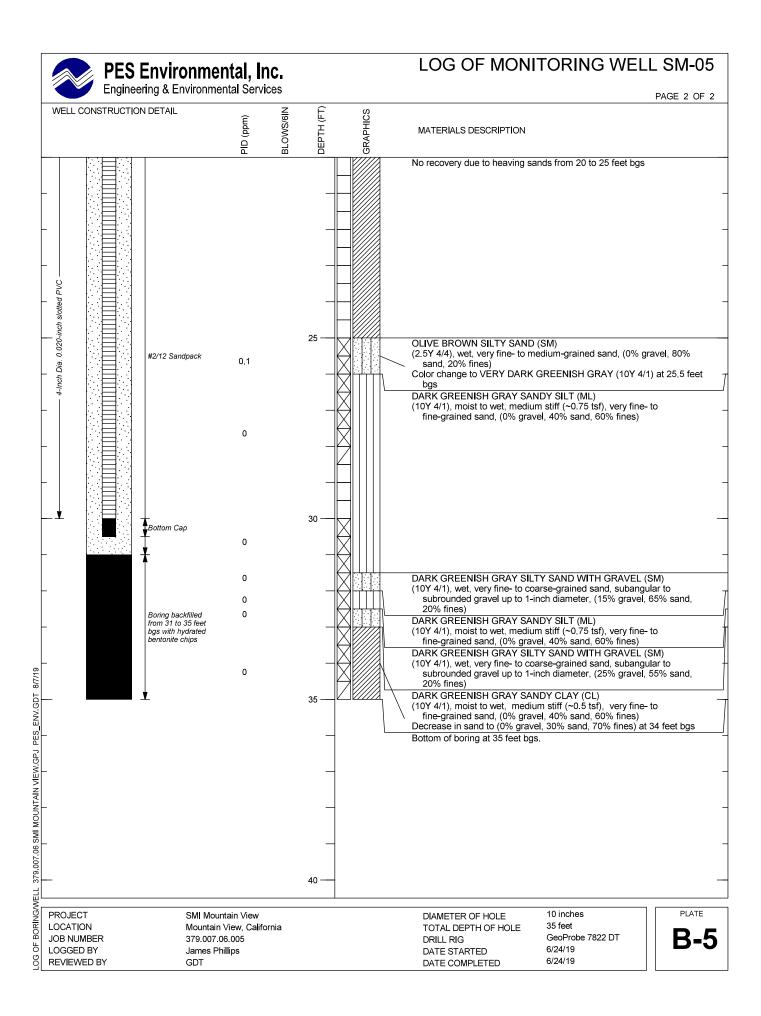


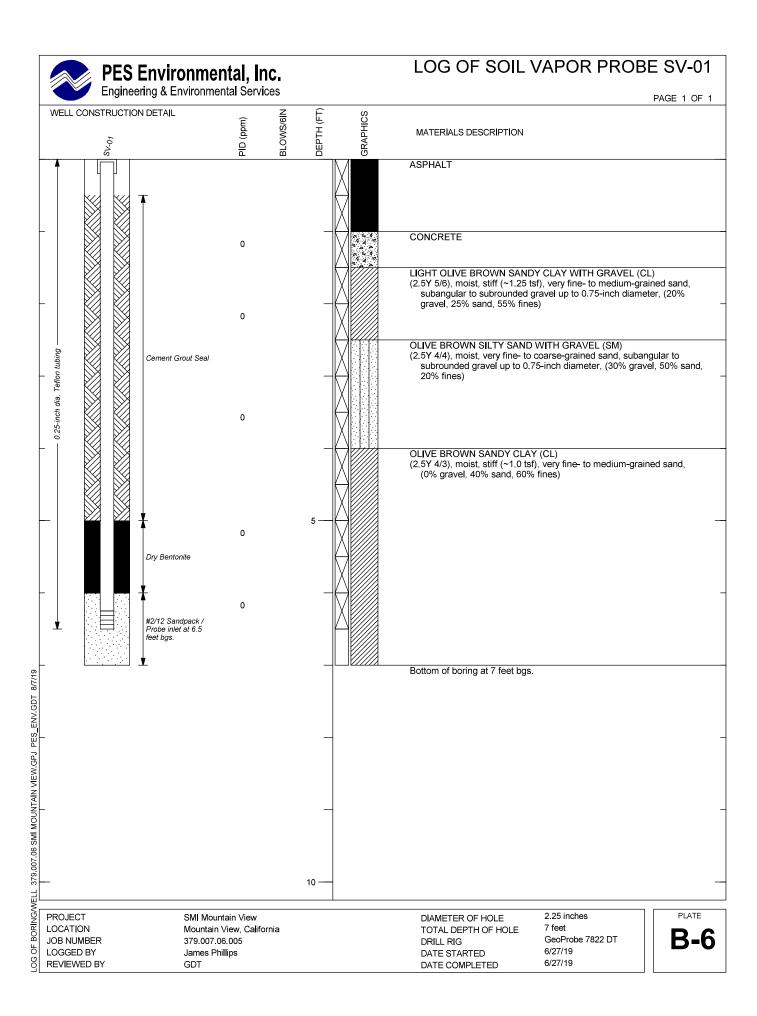


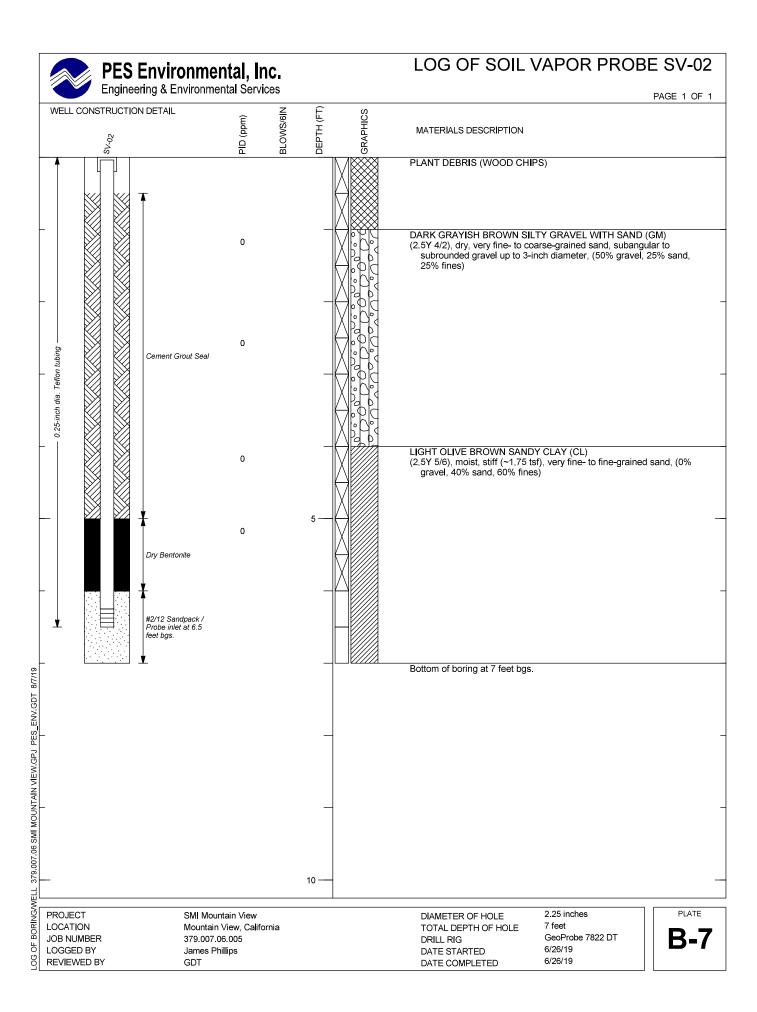


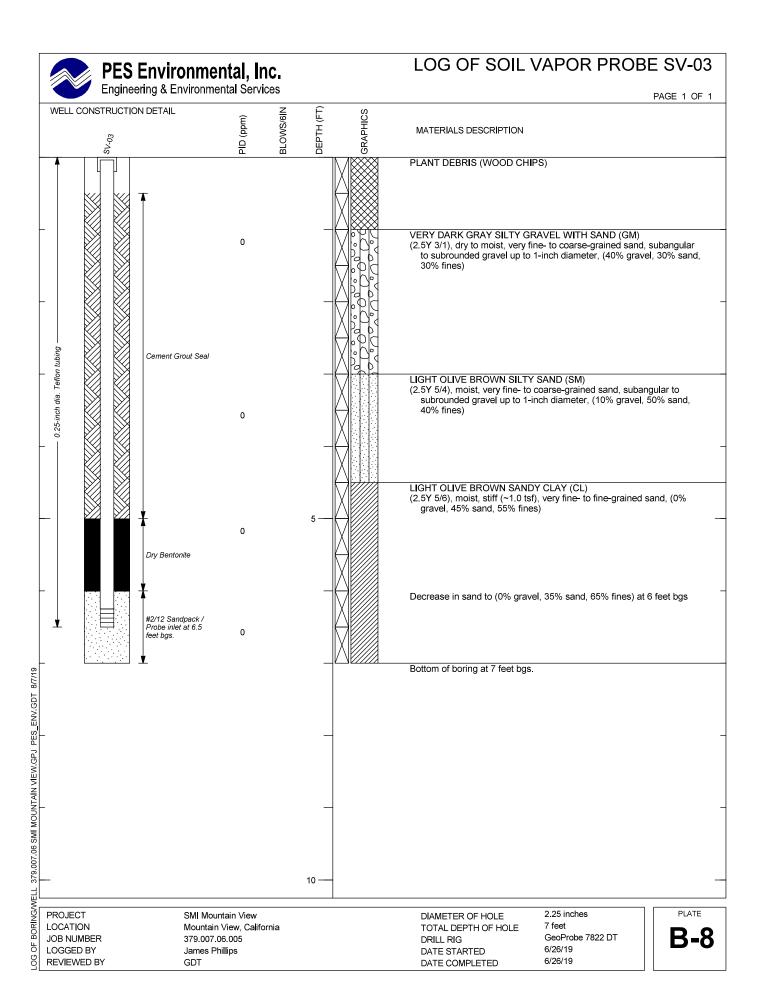


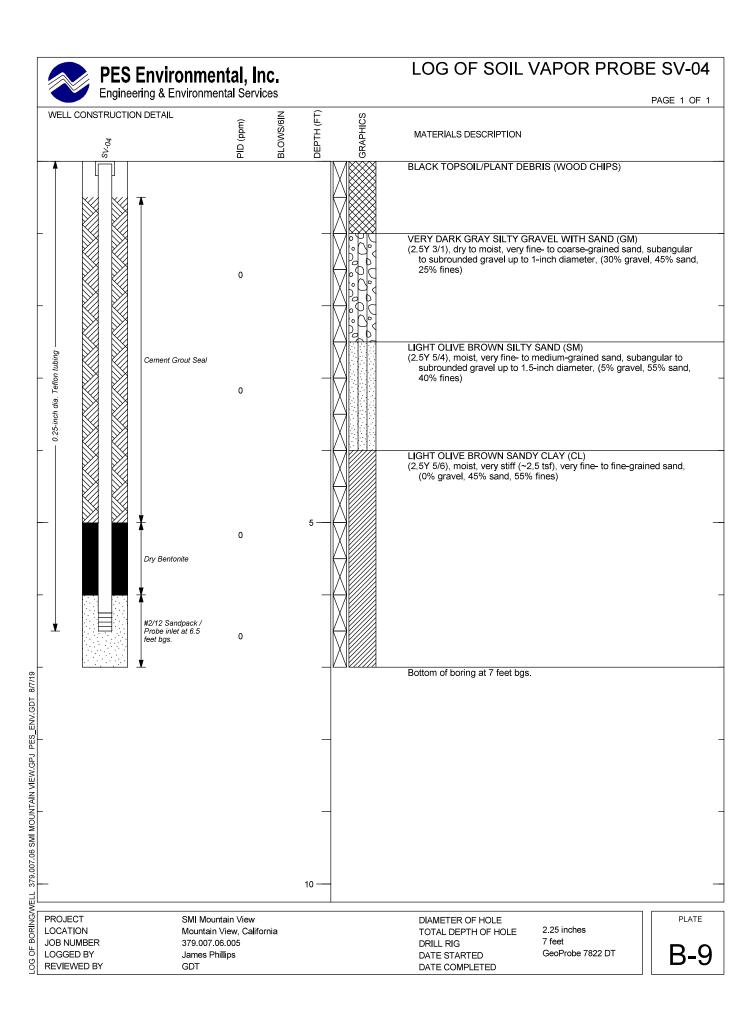












APPENDIX C

MONITORING WELL DEVELOPMENT LOGS



Page: of Z	
Date/Time: 7/3/19	
Project Name: Sm (m V	
Job No.: 379,007,06	
Recorded By:	
Sampled By:	

Well No.:	l No.: Well Type:		Monitoring		Extraction		Other	
5m-01	Well Mat	erial:	D PVC		Stainless Stee		Other	
			WELL PURG	ING				
PURGE VOLUME					PURGING M	ETHOD		
Casing Diameter (I) in inches		Bailer-Type:					
2-inch 4-inch	6-inch	Other	Submersible	Centrifu	uga[Bladder			
Total Depth of Cas					Other-Type_	75000000	- 10 MI	
Water-Level Depth	12000		00273309	77.0	PUMP INTAK	E SETTIN	IG	
12:50 Bail -	6 gal				Near Bottom	☐ Near To	op Other	
1255 Surge	المما				Depth in feet	(BTOC):		
1815 Surge	, Ja				3.5		BTOC) from to	
PURGE VOLUME	CALCULAT	IONS:			(T.T.) T.T.(1.)	71 11 15 T		
to FIELD PARAMETE	R MEASUF	Well Diamet		X 10 casii	ng volumes X		93.3 94. gallons Purge Volume	
	ne 13:4							
Minutes		Construction	T	Total	000/10		Observations (color,	
Since Gallons Pumping Remove	S SEMINORY	Conductivity (µS/cm)	Temperature (°C)	(NTUs)	ORP (mV)	Other: _	well condition, odor, cloudiness, etc.)	
17:42	6.54	1858	21.0	+was	237	1315		
13:45	6.72	1601	19.4	4,000	217	1120		
13:47	6.84	1391	19.2	\$100D	208	966	5	
13:51	7.67	1577	19.6	+1000	90	1103	66	
3.53	7.11	1519	19.4	+1000	97	1060		
13:55	7.09	1387	19.4	343	-71	961.		
13:57	7.08	1361	19:3	343	99	947		
13:59	7.08	1353	19.3	215		944.	4	
14.01	7.07	13291	19.2	104	75	922		
(4.03	12.18	1322	19.3	69.6	170	920		
14:05	3:11	1313	19.1	34.4	41	911.5	2	
14:07	7.04	1799	19.2	25.8	102	906	3	
4:11	12:11	100	19.2	213	95	997		
14:13	13.13	1288	19.0	134	113	895	31	
Wis	2.05	1288	19.1	27	95	888		
14117	702	1281	190	2.1.6	96	887	0	
4.19	6.98	1192	101.0	20.8	84	883.	7	
4:21	7.03	.2 60	19.0	8.28	89	879.	2	
4:22	7.06	1287	19.0	6.07	103		v l	
4:15	7.09	1266	19.0	4.73	101	879.	7	
4.35	-5.08	1250	101	4.65	07	0.31	7	
1435	7.63	1787	19.0	3.10	873	869-5		
→ Developr	ment Compl	etion Time			Total Gallons			



Page: 2 of 2	
Date/Time:	
Project Name:	
Job No.:	
Recorded By:	
Sampled By:	

Well No.:	-3	Well Ty		Monitoring		Extraction		Other
SYh	-01	Well Ma	iterial:	☐ PVC		Stainless Stee	el 🗌	Other Other
				WELL PURG	NG			
PURGE V	OLUME					PURGING M	ETHOD	
Casing Di	ameter (Di	n inches)			☐ Bailer-Type:		
2-inch	4-inch	6-inch	Other			Submersible	Centrifu	ga[Bladder
Total Dep	th of Casin	g (TD in f	feet below top	of casing):		Other-Type_		
Water-Lev	vel Depth (\	WL in fee	t below top of	casing):		PUMP INTAK	KE SETTIN	<u>G</u>
						Near Bottom	Near To	Other
						Depth in feet	(BTOC):	
						Screen Interv	al in feet (E	BTOC) fromto
PURGE V	OLUME CA	ALCULAT	FIONS:					
,		,						
()×	2	X 10 casir	ng volumes X	0.0408 = _	gallons
Well Dep	oth Depth to	water	Well Diame	ter			Calculated F	urge Volume
	RAMETER	MEASU	REMENT					
	Start Time			6 4				
Minutes	0.11	1544		_				Observations (color
Since	Gallons Removed	pH (SU)	Conductivity (µS/cm)	Temperature (°C)	(NTUs)	ORP (mV)	Other: 1	well condition, odor, cloudiness, etc.)
14:39	100	7.00	1247	19	3.54	28	868.0)
	1						000	
					-			*
				4				
				43				



Page: 1 of 3	
Page: of 3 Date/Time: 7 /3/19	
Project Name:s m i mv	
Job No.: 379. 607.00	
Recorded By: AA	
Sampled By:	

Well No.:	2.00	Well Typ		Monitoring		Extraction		Other	
Sm-C	52	Well Ma	terial:	∠ PVC		Stainless Stee	el [Other	
				WELL PURG	NG				
PURGE \	/OLUME					PURGING M	ETHOD		
Casing Di	ameter (D	in inches))			☐ Bailer-Type:			
2-inch	4-inch	6-inch	Other			Submersible	Centrifu	ga[] Bla	dder
Total Dep	th of Casin	g (TD in f	eet below top	of casing): 29	.50	Other-Type_	peripu	mp/a	recourse
				casing):_\3.3		PUMP INTA			a selle Chare
						Near Bottom			ner
						Depth in feet	(BTOC):		
l)							0 55	STOC) f	rom 15 to 30
PURGE V	OLUME C	ALCULAT	IONS:					- , , .	
(29.9	50 - 1	7.39	×	42	Y 10 casi	ng volumes X	0.0408 -	70 1	≤ gallons
Well Dep		water	Well Diame		X TO Cash	ig volumes A	Calculated F	0.000	
	to						Odiobiated i	dige von	ame
FIELD PA	RAMETER	R MEASUR	REMENT						
	Start Time	9							
Minutes	ł.						T		Observations (color,
Since	Gallons	pН	Conductivity	Temperature	Turbidity	ORP (mV)	Other:		well condition, odor,
Pumping	Removed	-	(µS/cm)	(°C)	(NTUs)	100000000000000000000000000000000000000	***************************************		cloudiness, etc.)
1019		Bail-	1 7	-					
1013	4.5 9	allon s	bailed						
631		- Surg	el sures	-					
1032		Bai	SUFEE					-	
1047	9 6		pai(ed				DTW-2	8.23	
1648		- Sura	le -				DTW-		
1108	9 93	Mons	bailed				DTW=	21.0	P
h 13		- 5	sail -				-	18.5	-
1322	165			Δ			DTW:	70	(-
1200	pun	32 110	on pails	_			01-0-	17.	6
in line: ye	- Arrive	Y	0.1				pumpi	75-	
1206		7.14	1755	20.6	1009	1427	@ 0.5		n
1212		7.12	1715	20.1	800	147.1		/	
1214		7.12	1672	50-1	222	147.7			
1216		7.08	1619	20.	440	148.8	DTW	19.5	5
1218		7.02	ISSE	20.1	354	153			
1222	-	-6.89	1502	20.0	336	141.77			
1224									
1226	-					a	DTW=	19 25	some bubbles
1228	7	6.88	1503	20.0	317	164.2		1100	300
	Developme		letion Time			Total Gallons	Pomound		
	Dorolopine	on Compi	CHOIL THINE			i Jiai Gallons	removed_		



Page: Z of 3	
Date/Time:	
Project Name:	
Job No.:	
Recorded By:	
Sampled By:	

Well No.:		Well Typ		Monitoring		Extraction	Other	
5m-	02	Well Mat	terial:	∠ PVC		Stainless Stee	Other	
				WELL PURGI	NG			
PURGE V	OLUME					PURGING M	ETHOD	
Casing Dia	ameter (D i	n inches)				Bailer-Type:		
			Other				Centrifuga Bla	ndder
- 3/	The same of the same of	Tond some some	eet below top					
	100 100 m 100 100 100 100 100 100 100 10		교이 원생이 있는 학생이 어려면 하셨다.					
vater-Lev	ei Depin (1	VL in ree	below top of	casing):	-	PUMP INTAK	The second of the second	
							Near Top Ot	
							(BTOC):	
						Screen Interv	al in feet (BTOC)	fromto
URGE V	OLUME CA	ALCULAT	IONS:					
			X	2	X 10 casir	na volumes X	0.0408 =	gallons
Well Dep	th Depth	water	Well Diamet	lor	7 TO Casii	ig volumos X	Calculated Purge Vol	
	o Deptil	Water	Well Diamet	ici			Calculated Fulge vol	idine
IELD PA	RAMETER	MEASUF	REMENT					
→	Start Time			30.	W 90	30	J	
Minutes								Observations (color
Since	Gallons	pН	Conductivity	Temperature	CASSOCIATION AND AND AND AND AND AND AND AND AND AN	ORP (mV)	Other:	well condition, odor
umping	Removed	(SU)	(µS/cm)	(°C)	(NTUs)			cloudiness, etc.)
1536		6.86	1500	20.0	244	132 (0		
20						173.6	1.2.1.2.10.11	
238		C. 83	1496	20.0	273	175-4	DTW = 19.19	\$
248								
248		C. 83	1496	20.0	273	175-4	00.5 L/5050	
238		6.83	1496	20.0	273 179	184.4	@ 0.5 L/50se	
238 248 258		6.75	1496	20.0	273	175-4		
238		6.83	1496	19.8	273	175.4	@ 0.5 L/50se	
238 248 258 1310 1312 1314		6.73 6.72 6.71 6.70 6.70	14 89 14 89 14 89 14 87 14 38	19.8	273 179 81.6 41.09 55 5 46.6	193.8 194.4 194.4 195.2 195.4	@ 0.5 L/50se	
238 248 258 1308 1310 1312 1314 1316		6.72 6.72 6.70 6.70 6.70	1496 1489 1489 1460 1457 1438 1434 1432	19.8	273 179 81.6 61.09 55 5 46.6 52.01	175.4 184.4 193.8 194.4 145.2 195.4 195.7	@ 0.5 L/50se	
238 248 258 1310 1312 1314 1316		6.72 6.72 6.70 6.70 6.70	1496 1489 1487 1437 1438 1434 1432	19.8 19.8 19.8 19.8 19.8	273 179 81.6 61.09 55 5 46.6 52.01 68.7	175.4 184.4 193.8 194.4 195.2 195.4 195.7	@ 0.5 L/50se	
238 248 258 1308 1310 1312 1314 1316 1318		6.72 6.72 6.70 6.70 6.70 6.69	1496 1489 1487 1437 1438 1432 1432 1434	19.8 19.8 19.8 19.8 19.8 19.8	273 179 81.6 41.09 55 5 46.6 52.01 68.7 53.03	175.4 184.4 193.8 194.4 145.2 195.4 195.7 196.1	@ 0.5 L/50se	
238 248 258 1306 1310 1312 1314 1316 1316 1320 1320		6.72 6.72 6.70 6.70 6.70 6.69	1496 1489 1487 1487 1438 1432 1432 1434 1434 1433	19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8	273 179 81.6 61.09 55 5 46.6 52.01 68.7 53.03 48.87	175.4 184.4 193.8 194.4 145.2 195.4 195.7 196.1	@ 0.5 L/50se	
238 248 258 130 1312 1314 1316 1320 1322 1324		6.72 6.72 6.70 6.70 6.70 6.69 6.69 6.69	14 96 14 89 14 89 14 57 1438 1437 1437 1434 1433 1435	19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8	273 179 81.6 61.09 55 5 46.6 52.01 68.7 53.03 48.87 42.3	193.8 194.4 195.2 195.4 195.7 195.7 196.1 196.3	@0.5 L/50se	
238 248 258 130 1312 1314 1316 1320 1320 1322 1324 1324		6.72 6.72 6.70 6.70 6.69 6.69 6.69	14 96 14 89 14 89 14 57 14 38 14 32 14 32 14 34 14 35 14 35 14 35	19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8	81.6 41.09 55 5 46.6 52.01 68.7 53.03 48.87 42.9 444.4	193.8- 194.4 195.2 195.4 195.7 195.7 196.3 196.3	@0.5 L/50se	
238 248 258 1310 1312 1314 1316 1320 1322 1324 (328		6.72 6.72 6.70 6.70 6.70 6.69 6.69 6.69	14 96 14 89 14 89 14 57 1438 1437 1437 1434 1433 1435	19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8	273 179 81.6 41.09 55 5 46.6 52.01 68.7 53.03 48.87 42.9 441.4 44.4 49.40	193.8 194.4 195.2 195.4 195.7 195.7 196.1 196.3	@0.5 L/50se	
238 248 258 1310 1312 1314 1316 1320 1322 1324 1328 1328 1328 1328 1328 1328 1328		6.42 6.42 6.42 6.40 6.40 6.40 6.40 6.40 6.40 6.40 6.40	1496 1489 1489 1487 1438 1438 1438 1439 1439 1439 1435 1435 1435	19.8 19.8 19.8 19.8 19.8 19.8 19.9 19.8 19.8	273 179 81.6 41.09 55 5 46.6 52.01 68.7 53.03 48.87 42.9 44.4 44.4 49.40 38.93	175.4 184.4 193.8 194.4 145.2 195.7 195.7 196.3 196.3 196.5 196.5 196.6 196.6	@0.5 L/50se	
238 248 258 1310 1312 1314 1316 1318 1320 1322 1324 1328 1328 1330 332 332		6.73	1496 1489 1489 1487 1438 1438 1438 1439 1434 1438 1438 1438 1438	19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8	273 179 81.6 61.09 55 5 46.6 52.01 68.7 53.03 48.87 42.9 441.4 49.40 38.93 49.40	193.8 194.4 195.2 195.4 195.7 195.7 196.3 196.3 196.5 196.6 196.6	@0.5 L/50sed	20.61/m
238 248 258 1306 1310 1312 1314 1316 1320 1322 1324 1328 1328 1328 1328 1328 1328 1328 1328 1328 1328 1332 133		6.73 6.72 6.72 6.70 6.70 6.70 6.69	14 96 14 89 14 89 14 87 14 37 14 37 14 37 14 37 14 35 14 35 14 35 14 36 14 38 14 38 14 38	19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8	273 179 81.6 61.09 55 5 46.6 52.01 68.7 53.03 48.87 42.9 441.4 49.40 38.93 49.40 67.00	193.8 194.4 195.2 195.7 195.7 196.3 196.3 196.5 196.5 196.6 196.6 196.6	@0.5 L/50se	20.61/m
238 248 258 1306 1310 1312 1314 1316 1320 1322 1324 1328 132		6.73 6.72 6.72 6.72 6.72 6.72 6.72 6.72 6.72 6.72 6.69	1496 1489 1489 1487 1437 1437 1437 1438 1435 1435 1438 1438 1438 1438	19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8	273 179 81.6 61.09 55 5 46.6 52.01 68.7 53.03 48.87 42.9 441.4 44.40 38.93 49.40 67.00 40.00	193.8 194.4 195.2 194.4 195.7 195.7 196.3 196.3 196.5 196.6 196.6 196.6	@0.5 L/50sed	20.61/m
238 248 258 1310 1312 1314 1316 1320 1322 1324 (324 (328 330 332		6.73 6.72 6.72 6.72 6.72 6.72 6.72 6.72 6.72 6.72 6.69	14 96 14 89 14 89 14 87 14 37 14 37 14 37 14 35 14 35 14 35 14 35 14 36 14 38 14 38 14 38 14 38 14 38 14 38 14 38 14 38 14 38	19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8	273 179 81.6 61.09 55 5 46.6 52.01 68.7 53.03 48.87 42.9 441.4 49.40 38.93 49.40 67.00	193.8 194.4 195.2 194.4 195.7 195.7 196.3 196.3 196.5 196.6 196.6 196.6	@0.5 L/50sed	20.61/m



Page: 3 of 3	
Date/Time:	
Project Name:	
Job No.:	
Recorded By:	
Sampled By:	

Well No.:		Well Typ	pe:	Monitoring		Extraction	Other	-
5m-1	20	Well Ma		☐ PVC		Stainless Stee	el Other	
				WELL PURG	ING			
PURGE V	OLUME					PURGING M	ETHOD	
Casing Di	ameter (D	in inches)			Bailer-Type:	0	
2-inch	4-inch	6-inch	Other				Centrifuga Bl	adder
Total Dep	th of Casin	g (TD in f	eet below top	of casing):		Other-Type_	製 数	
Water-Lev	el Depth (\	VL in fee	t below top of	casing):		PUMP INTAK	KE SETTING	
				orcereso s.		☐ Near Bottom	Near Top Ot	ther
						Depth in feet	(BTOC):	
							ral in feet (BTOC)	39
PURGE V	OLUME C	ALCULAT	TIONS:					
,			N. S.					
()×	2	X 10 casi	ng volumes X	0.0408 =	gallons
Well Dep		water	Well Diamet	ter			Calculated Purge Vo	lume
and the same of th	o RAMETER	MEASIII	REMENT					
ILLUIA	IXMINE I EIX	IVILAGUI	KLIVILIAI					
\longrightarrow	Start Time							
Minutes	No. of							Observations (color,
Since	Gallons	pН	Conductivity	Temperature	0.5000000000000000000000000000000000000	ORP (mV)	Other:	well condition, odor,
Pumping	Removed	(SU)	(µS/cm)	(°C)	(NTUs)	10.2		cloudiness, etc.)
1404		6.69	1434	19.7	35.00	197.8		-
1406		6.69	1432	19.6	23.66	198.1		
1432		6.60	1421	19.5	12.25	197.7		
1438		6.69	1418	19.4	12.53	197.7		
1440		6.69	1417	19.5	10.10	197.6		
1456		6.69	1419	19.4	A SALE OF STREET	197.8		
524		6.69	1418	19 4	12,44	196.5	DTW= 18.8	
	- 0		10 0	N		10 10 10 10 10 10	100000000000000000000000000000000000000	
								1
Ÿ								
							-10	
	Dovolones	ont Cama	letion Time			Tatal Callana	Danish	
	Perciohille	an Comp	regon time	38		Total Gallons	r.emoved	



Page: 1 of Z	
Date/Time: 07-01-19 / 0800	
Project Name: 5 M j mV	
Job No.: 379.007.06	
Recorded By: AA-	
Sampled By:	

Well No.	02	Well Ty		Monitoring		Extraction		Other	
SM-	03	Well Ma	iterial:	X PVC		Stainless Ste	el	Other	
				WELL PURG	ING				
PURGE '	VOLUME					PURGING M	IETHOD		
Casing D	iameter (D	in inches)			Bailer-Type:			
2-inch	X 4-inch	6-inch	Other	Pro	to to	1000		fuga Bladder	
Total Dep	oth of Casin	g (TD in f	feet below top	of casing): 23	5 (30)	Other-Type	TO THE RESERVE OF THE PARTY OF	roga[blocker	
Water-Le	vel Depth (WL in fee	t below top of	casing): 133		PUMP INTAI	In a Hillage	NG	
				3/1/4/	777			Top Other	
						Depth in feet			
								CONTRACTOR NO.	20
PURGE \	OLUME C	ALCULAT	TIONS-					(BTOC) from 15 to	30
After sunget			10110.			15gal/m			
A CONTRACTOR OF THE PARTY OF TH	0 - 1	2 2	lv .	4 2				V. n	
- 1. Table 1	1100		^	30	X 10 casir	ng volumes X	0.0408 =	gallons	3
Well De	oth Depth to	water	Well Diame	ter			Calculated	Purge Volume	
FIELD PA	RAMETER	MEASU	REMENT						
	Start Time								
Minutes	~ "	200244			68000 100 100 100 100	490770000000 10700	70003	Observation	s (color,
Since umping	Gallons Removed	pH	Conductivity	Temperature	20000000000 M	ORP (mV)	Other: _	well conditio	
0906	Kemoved	(SU)	(µS/cm)	(°C)	(NTUs)		_	cloudiness,	etc.)
919	16 93		bailed				-		
920	-	Sura	e-	-					
937		-en	l surge —						
938	100	-Bai							
944	10.5 9	Mon s	bailed						
000			surge -						
1004		_Bai	1 Je	_					
1010	18 92	Load	bailed	111					
2201		- Pu	7.15.51	n					
1024		7.00	1450		2171	241.3			
1026		6.99	1358	19.3	3395	241.6			
1038		7.12	1460	19-3	3159	235.5			
1030		7.03	1420	19.3	2606	222.5			
1032		6.94	1221	19.2	96.6	214.4			
034		6.91	1209	19.3	61.6	264.7	X		
036		6.91	1210	(9.3	35.18	1983			
10 40		6.90	1208	19.3	24.81	191.3			
10 42		6.90	1202	193	15.58	186.1			
10 44		6.90	1199	19.3	12.82	181.5	-		
10 7									
1046	pur	P 0.	etion Time		12.00	114.1			



Page: 2 of 2	
Date/Time:	
Project Name:	
Job No.:	
Recorded By:	
Sampled By:	

Well No.:	121	Well Typ		Monitoring		Extraction		Other
SM	-03	Well Ma	terial:	PVC		Stainless Stee		Other
				WELL PURG	ING			
PURGE V	OLUME					PURGING M	ETHOD	
Casing Dia	ameter (D	in inches))			☐ Bailer-Type:		
2-inch	4-inch	6-inch	Other			Submersible	Centrifu	uga[Bladder
Total Dept	h of Casin	g (TD in f	eet below top	of casing):		Other-Type_	127.700	- C
Water-Lev	el Depth (WL in fee	t below top of	casing):		PUMP INTAK	E SETTIN	1G
						Near Bottom	Near To	op Other
						Depth in feet	(BTOC):_	
						Screen Interv	al in feet (BTOC) fromto
PURGE V	OLUME C	ALCULAT	TIONS:					
		-						
(x	2	X 10 casi	ng volumes X	0.0408 =	gallons
Well Dept	th Depth	water	Well Diame	ter				Purge Volume
EIELD DAI	7	MEAGLI	DEMENT					
FIELD PAI	KAIVIETER	MEASU	KEWENT					
	Start Time)						
Minutes								Observations (color
Since	Gallons	pН	Conductivity	Temperature	POLICE TO A THE POST OF THE PARTY OF THE PAR	ORP (mV)	Other: _	well condition, odor,
The same of the sa	Removed	-	(µS/cm)	(°C)	(NTUs)			cloudiness, etc.)
1055	- pur	750	1197	19.2	50.50	161 2		
1058		696	1192	19.2	51.10	181.4		
1160		694	1190	19.2	166.6	173.1		
1105		697	1248	192	126.6	175.6		
1104		C-93	1182	19.2	27.04			
1108		6.92	1174	19.2	24.4	162.6		
1110		6.92	1170	19.2	17.64	155.1		
1112		6.91	1167	19.1	13.92			
1114		6.91	1165	19.1	11.96	150.5		
1118		6.91	1165	p 066	0.21	149.0		
4120	110		- Carri	D 000	-111			
						ti:		
			- 4			595		
		. 3						
							n e	
				William				
→ [Developme	ent Compl	letion Time	2.18 hrs		Total Gallons	Removed	110



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Date/Time: 7/1/19	
Project Name: 5m i mV	
Job No.: 379.007.06	
Recorded By: AA-	
Sampled By:	

Well No.:	11.	Well Typ		Monitoring		Extraction		Other
sm-c)4	Well Ma	terial:	X PVC		Stainless Stee		Other
				WELL PURG	NG			
PURGE V	OLUME		710			PURGING M	ETHOD	
Casing Dia	meter (D	in inches)				Bailer-Type:		
2-inch	Acres de la constante de la co	(S				Submersible		ina Rladder
	The state of the s			of casing):30	20	Other-Type	canana	gat blocks
				casing): 13	10000	PUMP INTAK	CE SETTIN	IG.
Trutor Lov	or Dopuit (VVE III IOO	t below top of	casing).	10	Near Bottom		90 C
						Depth in feet		p C one
								DT00\6
PURGE V	OLUME C	ALCULAT	IONS:		(rate 1.5	gal /v	BTOC) from 15 to 30
1 30 -	2 . 1	3.1	x 4	2	V 10 opei	ng volumes X	0.0409 =	III (a college
Well Dept			Well Diamel	tor	A TO Casil	ig volumes X		gallons Purge Volume
to)			(6)			Calculated	rurge volume
FIELD PAF	RAMETER	MEASUR	REMENT					
	Start Time)						
Minutes Since Pumping	Gallons Removed	pH (SU)	Conductivity	Temperature (°C)	Turbidity (NTUs)	ORP (mV)	Other: _	Observations (color, well condition, odor, cloudiness, etc.)
1145		Bail	-	_				
1148	4.5	gallo	ons bail	ecl.				
1149		Surga		-				
1205		end Usi	arge.					
1215	12 0 1		a led					
1216	-13	urge						
1230	No F	Par 10-						
1332	y g	allons						
1720		7.40	Pon -	19.7	2500	128.9		
1334		7.19	1083	19.6	1987			
336		7.11	1057	19.6	1048	65.9		
1338		7.05	1040	19.5	695	59.0		
1340		7.01	1629	19.4	428	56.0		
342		7.00	1025	19.5	377	54.2		
344		6.99	1614	19.5	461	57.2		
348		6.97	1010	19.5	198	67.8		
350		6.96	1003	19.4	126	77.7		
352		6.95	996	195	100	84.1		
354		6.95	994	19.5	57	85.3		
1356		6.95	989	19.5	38.04	86.4		
	Developme		etion Time			Total Gallons	Removed_	



Page: 2 of 2—	
Date/Time:	
Project Name:	
Job No.:	
Recorded By:	
Sampled By:	

Well No.:	- 2.2	Well Typ		Monitoring		Extraction		Other	
SM-C	4	Well Mat	terial:	X PVC	Stainless Stee	1	Other		
			10	WELL PURGI	NG				
PURGE V	OLUME					PURGING M	ETHOD	2	
Casing Dia	ameter (D i	n inches)				Bailer-Type:			
2-inch 4-inch 6-inch Other						X Submersible	☐ Cent	rifuga[] Bl	adder
				of casing):		Other-Type			
The state of the s		0.00		casing):		PUMP INTAK	E SETT	ING	
vvaler-Lev	ei Deptii (i	VL III ICC	t below top of	odding)		Near Bottom			ther
						Walls			
						Depth in feet			
						Screen Interv	al in fee	t (BTOC)	fromto
PURGE V	OLUME CA	ALCULAT	IONS:						
		132							
(-		×	2	X 10 casir	ng volumes X	0.0408 =		gallons
Well Dep	th Depth	water	Well Diamet					ed Purge Vo	
	0						SOUR CONTRACTOR		W. 1991
FIELD PA	RAMETER	MEASU	REMENT						
NO 100									
	Start Time		· · · · · ·	X-1					
Minutes									Observations (color,
Since	Gallons	pH	Conductivity	Temperature		ORP (mV)	Other:		well condition, odor, cloudiness, etc.)
	Removed	-	(µS/cm)	(°C)	(NTUs) 29, 10	87.3			cioudiness, etc.)
1400		6.94	938	19.5	24.72	87.8	_		
1402		6.94	985	194	19.73		1		
1404		6.94	984	194	14.75	87.8			
1404		6.94	983	19.4	12.39	88.1			
1408	0	6.93	982	194	10.57	88.5			
1410		6.013	982	19.5	5.14	88 Ce			
1412		6.94	286	19.5	6.96	88.7			
1414	- 4	6.93	980	19.4	6.80	88.7	-		
1418 1416		6.93	981	19.5	5.25	87.4	-		
1420 1418		6.93	978	19.4	4.31	87.5			
1424-1422		6.93	978	19.4	3.68	89.3			
1426 1424		6.94	987	19.4	3.30	89.1			
1428 1426		6.93	939	(9.4	2.88	89.5			
1428		6.94	977	19.4	2.85	88.3			
1430		6.93	976	19.4	2.58	88 4	-		
1432		4.98	974	19.4	2.37	88.8	-		
1434	-	6.93	975	19.4	2.30	90.1	1		
1438 -		DAY - NOW THE BUT	976	1.	2.16	70.1			
13-		1	mb C	00					
90	, D		TO AT DISCOUNT			Tatal O. II	Dem	ad State	~120
	Developm	ent Comp	oletion Time			Total Gallons	Remov	ed	



Page: I of H	======================================
Date/Time: 7 /1 /19	
Project Name: Smi MV	
Job No.: 379 007 06	
Recorded By: 👭	
Sampled By:	

Well No.:	-	Well Typ		Monitoring		Extraction		Other
sm-c	15	Well Ma	terial:	PVC		Stainless Stee	el [Other Other
				WELL PURG	NG			
PURGE V	OLUME					PURGING M	ETHOD	
Casing Di	ameter (D	in inches)				Bailer-Type:		
2-inch	4-inch	6-inch	Other			Submersible	Centrife	uga[Bladder
Total Dep	th of Casin	g (TD in f	eet below top	of casing): 36	12	Other-Type_		
Water-Lev	vel Depth (\	VL in fee	t below top of	casing):_ /マ/	20	PUMP INTAK	KE SETTIN	<u>NG</u>
						Near Bottom	Near To	op Other
						Depth in feet	(BTOC):_	
						Screen Interv	al in feet (BTOC) from 15 to 50
PURGE V	OLUME CA	ALCULAT	TONS:					
30.1	1 - 17	2,20	x4	2	X 10 casir	ng volumes X	0.0408 =	1169 gallons
Well Dep	th Depth	water	Well Diamel	er			Calculated	Purge Volume
	RAMETER	MEASILE	DEMENIT					
TELD PA	KAWETER	WEASU	KEIVIEIVI					
→	Start Time	8	59					
Minutes	106-8,060	156.53	25 225 100					Observations (color,
Since	Gallons	pН	Conductivity	Temperature	2000 (100/100) (100/10)	ORP (mV)	Other: _	well condition, odor,
Pumping 513	Removed	(SU)	(µS/cm)	(°C)	(NTUs)			cloudiness, etc.)
1520 -	-12 6	Bail-	bailed					
1520		surae		_				
534		3:12						
544	15 091		sailed					
1600	12 4	Surg	bailed					
1612	pur	A LOUIS OF THE PARTY OF THE PAR	on					
	Series Series	7.44	1125	20.3	1902	124.3		
1614		7.27	1106	19.7	1985	97.3	Pump	oing rate 0.5gal/m
616		7.23	1091	19.8	2083	98.6		
		7.20	1075	19.8	2050	57.3		
620		7.18	1075	19.9	2218	25.1		
	- 3							
1624		7.16	1071	19.9	2035	48.6		
627 1624		7.16	1071	19.9	1946	44.0		
1627 1624 1628		7.14	1071	19.9	1818	44.0		
1627 1624 1628 1628		7.16	1071	19.9	1946	44.0 40.0 34.7 30.7		
1627 1624 1628 1628 1630 1632		7.14 7.14 7.17 7.12 7.13	1071 1061 1053 1046 1043	19.9	1946 1818 1911 1548 1247	44.0 40.0 34.7 30.7 35.2		
1620 1627 1624 1626 1628 1628 1630 1632		7.14 7.14 7.17 7.17 7.18	1071 1061 1053 1046 1043	19.9	1946 1818 1911 1548 1247 1087	44.0 40.0 34.7 30.7 35.2 39.7		
1627 1624 1628 1628 1630 1632		7.14 7.14 7.17 7.12 7.13	1071 1061 1053 1046 1043	19.9	1946 1818 1911 1548 1247	44.0 40.0 34.7 30.7 35.2		



Page: 2 of 4	
Page: 2_ of 4 Date/Time:	
Project Name:	
Job No.:	
Recorded By:	
Sampled By:	

Well No.:	05	Well Typ		Monitoring		Extraction	-	ther
ZM-	Vo	Well Ma	terial:	☐ PVC		Stainless Stee	0	ther
				WELL PURGI	NG			
PURGE V	OLUME					PURGING M	ETHOD	
Casing Dia	ameter (D i	n inches)	g.			Bailer-Type:		
2-inch	4-inch	6-inch	Other				Centrifuga(Bladder
		- 37		of casing):		Other-Type	A STATE OF THE STA	V-0.0
		7.03		casing):		PUMP INTAK		
	or Dopart (11 11 100	t below top of	odding)		Contract of the Contract of th	Near Top	Other
							19 11 1	ALTERNATION AND ADDRESS OF THE PARTY OF THE
						Depth in feet	t	Company of the Compan
DUDGEV	OLUME C	ALCIU AT	COMO			Screen Interv	al in feet (B10	OC) fromto
PURGE V	OLUME CA	ALCULAT	IONS:					
1				- 2				
(x	2	X 10 casir	ng volumes X	0.0408 =	gallons
Well Dep	500 To 100 To 10	water	Well Diame	ter			Calculated Purg	ge Volume
t D DAI		MEAGUE	DEMENT					S
FIELD PAI	RAMETER	WEASU	KEMENT					
→	Start Time							
Minutes								Observations (color,
Since	Gallons	pН	Conductivity	Temperature	Turbidity	ORP (mV)	Other:	well condition, odor,
THE RESERVE AND ADDRESS OF THE PARTY OF THE	Removed	(SU)	(µS/cm)	(°C)	(NTUs)			cloudiness, etc.)
1642		7.14	1118	19.8	1037	43,4		
1644		7.13	1114	19.8	1040	43.1		
1646	- 333	7.14	1104	19.9	957	41.4		
1648		7.12	1101	19.8	952	39.3		
1652		7.12	1088	19.8	930	74.7		
1654		2.12	1116	19.9	780	34.4		
						597		
1636		7.15	1045	19.8	185	18.2		
1658		7.15	1050	198.	770			
1700		7.15	1050	19.8	770 585	18.2		
1700		7.15 7.14 7.15	1050	19.8 19.7	770 585 570	18.2 14.1 8.4 7.4		
1700 1702 1704		7.15	1080	19.8 19.3 19.3	7 70 5 85 5 70 4 9 8	18.2		
1700 1702 1702 1704		7.15	1050	19.8 19.8 19.7 19.7	770 585 570 498 486	18. Z 14.1 8. 4 7. 4 4. Z 5.0		
1700 1702 1702 1704 1706 1708		7.15	1045 1045 1040 1059	19. 8 19. 7 19. 7 19. 7 19. 7	770 585 570 498 486 428	18.2		
1700 1702 1702 1704		7.15	1045 1045 1045 1040 1059 1053 1050	19.8 19.8 19.7 19.7	770 585 570 498 486	18. 7 14.1 8. 4 7. 4 4. 2 5.0 3.1 2. 2		
1700 1702 1702 1704 1706 1708 1710 1712		7.15 7.15 7.15 7.16 7.16 7.16 7.16 7.16 7.16	1050 1041 1045 1040 1053 1053 1050 1043	198. 19. 8 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7	770 585 570 498 486 428 354 270 298	18. 7 14.1 8. 4 7. 4 4. 2 5.0 3.1 2. 2 0. 2 -3. 5		
1700 1702 1702 1704 1706 1708 1710 1712 1714 1716		1.15 2.15 2.15 2.16 2.16 2.16 2.16 2.16 2.16	1050 1041 1045 1040 1053 1050 1047 1043	198. 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7	770 585 570 498 486 428 354 270 298 242	18. 7 14.1 8. 4 7. 4 4. 2 5.0 3.1 2. 2 -3. 5 -6.1		
1700 1702 1704 1206 1708 1710 1712 1714 1716		1.15 1.15 1.15 1.15 1.15 1.15 1.15 1.15 1.15 1.15	1050 1041 1045 1040 1059 1053 1050 1047 1043 1042	198 · 19 · 10 · 10 · 10 · 10 · 10 · 10 · 10	770 585 570 498 486 428 354 270 298 242 241	18. 7 14.1 8. 4 7. 4 4. 2 5.0 3.1 7. 2 0. 2 -3. 5 -6. 1		
1705 1705 1702 1704 1706 1708 1710 1710 1710 1716 1716 1718		1.12 1.15	1040 1045 1040 1059 1053 1050 1043 1043 1042 1026	19. 8 19. 4 19. 4	770 585 570 498 486 428 394 270 298 242 241 229	18. 7 14.1 8. 4 7. 4 4. 2 5.0 3.1 2. 2 0. 2 -3. 5 -6.1 -9.6		
1705 1705 1702 1704 1206 1708 1710 1716 1718 1718 1720 1722		4.17 4.17 4.15 4.15 4.15 4.15 4.16 4.17 4.17 4.17	1050 1041 1045 1040 1059 1053 1050 1047 1043 1042 1026	19. 8 19. 8 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7	770 585 570 498 486 428 394 270 298 242 241 229 235	18. 7 14.1 8. 4 7. 4 4. 2 5.0 3.1 2. 2 -3. 5 -6.1 -9.6 -9.6		
1706 1702 1702 1704 1706 1710 1710 1710 1716 1718 1720 1722 1721		1.12 2.13 2.15 2.15 2.15 2.15 2.15 2.16 2.17 2.17 2.17 2.17 2.17 2.17 2.17 2.17	1050 1041 1045 1040 1059 1053 1050 1047 1073 1072 1072 1072	19. 8 19. 8 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 9 19. 9	770 585 570 498 486 428 394 270 298 242 241 229 235 133	18. 7 14.1 8. 4 7. 4 7. 2 5.0 3.1 2. 2 -3. 5 -6.8 -9.6 -9.6 -9.6	e To be	, resumed Wed 7/3
(658 1700 1702 1704 1708 1708 1710 1710 1710 1710 1710 1710 1720 1720 1720 1720 1720 1720 1720		1.12 2.13 1.12 1.12 1.12 1.12 1.12 1.12	1045 1045 1040 1059 1053 1050 1047 1043 1042 1026 1028 1024	19. 8 19. 8 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7 19. 7	770 585 570 498 486 428 394 270 298 242 241 229 235	18. 7 14.1 8. 4 7. 4 4. 2 5.0 3.1 2. 2 -3. 5 -6.1 -9.6 -9.6	C.To be	, resumed wheat Ha



Page: 3 of 14	
Date/Time: 7 13 / 19	
Project Name: 5 m mV	
Job No .: 374, 607,06	
Recorded By: AA-	
Sampled By:	

Well No.:		Well Typ		Monitoring		Extraction	Other	
Sm-	-05	Well Ma	terial:	PVC PVC		Stainless Stee	el Other	
				WELL PURG	ING			
PURGE V	OLUME					PURGING M	ETHOD	
Casing Di	ameter (D	in inches)				☐ Bailer-Type:		
0.026	333		Other				☐ Centrifuga ☐ B	ladder
				of casing):		Other-Type		
		Device in the second		casing): 12-		PUMP INTAK	CE SETTING	
vvator-co	vei Deptii (VVL III IGG	t below top of	casing).			Near Top O	thou
						77-11-2		uier
						Depth in feet		
			ECC TOTAL			Screen Interv	al in feet (BTOC)	fromto
PURGE V	OLUME CA	ALCULAT	IONS:					
,								
(x	2	X 10 casi	ng volumes X	0.0408 =	gallons
Well Dep	th Depth	water	Well Diamel	ter			Calculated Purge Vo	
	to							
FIELD PA	RAMETER	MEASUR	REMENT					
	Start Time							727
Minute's Since	Callana	-50	0	T	T trans	000	Cutoso	Observations (colo
Since	Gallons	pН	Conductivity	Temperature		ORP (mV)	Other:	well condition, odo
Dumning	Ramovad	(211)	(IIIS/onn)				1	elevidinese etc.)
Pumping	Removed		(µS/cm)	(°C)	(NTUs)	1625	(05)4m + (cloudiness, etc.)
Pumping 7765	Removed	7.01	(µS/cm)	19.1	225 (NIUS)	167.5	resume p	cloudiness, etc.)
7765	Removed		1084	The state of the s			resume p	
2765 2756 6758	Removed	7.01		19.1	522	145.8		umping-
7765 9756 0758 0800	Removed	7.01 6.92 6.85 6.82	1025	19.1	225 731 774 685	145.8 128.6 122,3		umping-
2755 2756 0758 0800	Removed	7.01 6.92 6.85 6.82 6.78	1025	19.1 19.2 19.2 19.2	731 774 685 419	145.8 128.6 122.3 115.6		
2755 2756 0758 0800 0800 0802	Removed	7.01 6.92 6.85 6.82 6.78 6.72	1084 1025 1621 1019 1013 1001	19.1 19.2 19.2 19.2 19.2	331 331 334 485 411 395	145.8 128.6 122.3 115.6 112.5		umping-
7765 0756 0758 0800 0802 0802 0806	Removed	7.01 6.92 6.85 6.82 6.78 6.78 6.78	1084 1025 1621 1019 1013 1001	19.1 19.2 19.2 19.2 19.2 19.2	731 774 685 411 395 369	145.8 128.6 122.3 115.6 112.5		hmping
7765 2756 2758 2800 2802 2802 2806 2806	Removed	7.01 6.92 6.85 6.78 6.78 6.72 6.65 0.62	1084 1025 1621 1019 1013 1001 993 988	19.1 19.2 19.2 19.2 19.2 19.2	731 774 685 411 395 369 297	145.8 128.6 122.3 115.6 112.5 111.2		umping-
0755 0756 0758 0800 0802 0806 0806 0806	Removed	7.01 6.92 6.85 6.82 6.78 6.65 6.65 6.65 6.62	1084 1025 1621 1019 1013 1001 993 988 987	19.1 19.2 19.2 19.2 19.2 19.2	225 731 774 685 411 395 369 297 262	145.8 128.6 122.3 115.6 112.5 111.2 111.6		hmping
2765 2756 2758 2802 2802 2802 2806 6806 6812	Removed	7.01 6.92 6.85 6.82 6.78 6.65 6.65 6.69	1084 1025 1621 1019 1013 1001 993 988	19.1 19.2 19.2 19.2 19.2 19.2 19.3	225 731 774 685 411 395 369 297 262 187	145.8 128.6 122.3 115.6 112.5 111.2 111.6 112.1		umping-
2765 2756 2758 2802 2802 2808 2808 1810 6812 2814	Removed	7.01 6.92 6.85 6.82 6.78 6.72 6.65 6.62 6.64 6.64 6.45	1084 1025 1621 1019 1013 1001 993 988 988 988 988 988 988 988	19.1 19.2 19.2 19.2 19.2 19.2	225 731 774 685 411 395 369 297 262	145.8 128.6 122.3 115.6 112.5 111.2 111.6		hmping
7765 2756 2756 2700 2702	Removed	7.01 6.92 6.85 6.82 6.78 6.72 6.65 6.62 6.64 6.64 6.65 6.64 6.65 6.64 6.65	1084 1025 1621 1019 1013 1001 993 987 987 987 983 983 983	19.1 19.2 19.2 19.2 19.2 19.2 19.3 19.3 19.3	731 731 774 085 419 395 369 297 262 187 211 235 159	145.8 128.6 122.3 115.6 112.5 111.2 111.2 111.6 112.1 110.9 116.1 110.6		umping-
7765 2756 2758 2800 2801 2800 2810 2816 2816 2816 2816	Removed	7.01 6.92 6.85 6.82 6.78 6.72 6.65 6.67 6.69 6.69 6.69 6.69 6.69	1084 1025 1621 1019 1013 1001 993 987 987 987 983 982 981	19.1 19.2 19.2 19.2 19.2 19.3 19.3 19.3 19.3	731 731 774 085 419 395 369 297 262 187 211 235 159 216	145.8 128.6 122.3 115.6 112.5 111.2 111.2 111.6 112.1 110.9 116.1 110.6 109.7		umping-
7765 2756 2758 2800 2801 2800 2800 2810 2816 2816 2816 2816 2816 2816 2816 2816 2816 2816 2816 2816 2816 2816 2816 2816 2816 2817 2818	Removed	7.01 6.92 6.85 6.82 6.78 6.65 6.65 6.69 6.69 6.69 6.69 6.69	1084 1025 1621 1019 1013 1001 993 987 987 987 988 988 981 981	19.1 19.2 19.2 19.2 19.2 19.3 19.3 19.3 19.3 19.3	225 731 774 685 419 395 369 297 262 187 211 235 159 216 234	145.8 128.6 122.3 115.6 112.5 111.2 111.2 111.6 112.1 110.9 110.1 110.9 110.9 110.9	pumpinga	2 0.5gal/min
7765 2756 2756 2800 2802 2806 6807 1810 6812 2816	Removed	7.01 6.92 6.85 6.82 6.78 6.67 6.67 6.64 6.64 6.64 6.67	1084 1025 1621 1019 1013 1001 993 987 987 987 981 981 981	19.1 19.2 19.2 19.2 19.2 19.3 19.3 19.3 19.3 19.2 19.3	225 731 774 085 411 395 369 297 262 187 211 235 159 216 234 36.02	145.8 128.6 122.3 115.6 112.5 111.2 111.6 112.1 110.9 116.7 116.1 110.6 109.7 109.7	pumpinga	umping-
2755 2756 2756 2700 2702	Removed	7.01 6.92 6.85 6.82 6.78 6.65 6.67 6.69 6.69 6.67 6.73	1084 1025 1621 1019 1013 1001 993 987 987 987 983 988 988 981 981 981 981	19.1 19.2 19.2 19.2 19.2 19.3 19.3 19.3 19.2 19.3 19.2 19.2	225 731 774 685 419 395 369 297 262 187 211 235 159 216 234 36.02 28.03	145.8 128.6 122.3 115.6 112.5 111.2 111.6 112.1 110.9 116.7 116.1 110.6 109.7 109.5 109.1 109.6	pumpinga	2 0.5gal/min
2755 2756 2756 2757 2702		7.01 6.92 6.85 6.82 6.78 6.95 6.97 6.97 6.99 6.95 6.97 6.99 6.97	1084 1025 1621 1019 1013 1001 993 987 987 987 983 987 981 981 981 981 981	19.1 19.2 19.2 19.2 19.2 19.3 19.3 19.3 19.3 19.2 19.2 19.2 19.2 19.2	225 731 774 685 419 395 369 297 262 187 211 235 159 216 234 36.02 28.03 15.54	145.8 128.6 122.3 115.6 112.5 111.2 111.6 112.1 110.9 116.1 110.9 109.7 109.5 109.1 109.6 114.8	pumpinga	2 0.5gal/min
2765 2756 2756 2802 2802 2804 2806 4810 6812 2814 2816 2816 2816 2817 2826 2828 2828		7.01 6.92 6.85 6.82 6.72 6.65 6.67 6.69 6.67 6.77	1084 1025 1621 1019 1013 1001 993 987 987 987 987 987 981 981 981 981 981 981 981	19.1 19.2 19.2 19.2 19.2 19.3 19.3 19.3 19.3 19.2 19.2 19.2 19.2 19.2	225 731 774 685 419 395 369 297 262 187 211 235 159 216 234 36.02 28.03 15.54 9.44	145.8 128.6 122.3 115.6 112.5 111.2 111.6 112.1 110.9 116.1 110.6 109.7 109.5 109.1 109.6 114.8 118.1	pump ra	2 0.5gal/min
0755 0756 0758 0800 0802 6804 0806		7.01 6.92 6.85 6.82 6.78 6.95 6.97 6.97 6.99 6.95 6.97 6.99 6.97	1084 1025 1621 1019 1013 1001 993 987 987 987 983 987 981 981 981 981 981	19.1 19.2 19.2 19.2 19.2 19.3 19.3 19.3 19.3 19.2 19.2 19.2 19.2 19.2	225 731 774 685 419 395 369 297 262 187 211 235 159 216 234 36.02 28.03 15.54	145.8 128.6 122.3 115.6 112.5 111.2 111.6 112.1 110.9 116.1 110.9 109.7 109.5 109.1 109.6 114.8	pumpinga	2 0.5gal/min

PES Environmental, Inc.
Engineering & Environmental Services

Page: 4 of 1	
Date/Time:	
Project Name:	
Job No.:	
Recorded By:	
Sampled By:	

	-	Well Typ		× Monitoring		Extraction		Other
sm-	05	Well Material: PVC				Stainless Stee	1	Other
				WELL PURG	ING			
PURGE V	OLUME					PURGING M	ETHOD	
Casing Dia	meter (D	in inches)			Bailer-Type:			
2-inch	4-inch	6-inch	Other_			Submersible	Centrif	fuga(Bladder
	9/		eet below top	of casing):		Other-Type_	Charles and the second	
10.		Train and the		casing):		PUMP INTAK	(E SETTII	NG
	(·		. selon top er	odomig).				op Other
						Depth in feet		op [] out
								(DTOO) 6
DUDGE W	OLUME C	ALCUL AT	TONG:			Screen Interv	ai in feet	(BTOC) fromto
PURGE V	JEOINE C	ALCOLAT	IONS.					
1			No.	2				
(x		X 10 casin	ng volumes X	0.0408 =	gallons
Well Dept		water	Well Diame	ter			Calculated	Purge Volume
to FIELD PAF	The same of the sa	MEACH	DEMENT					
FIELD PAR	VAIVIETER	WEASU	KEIVIEINI					
\longrightarrow	Start Time	100						
Minutes	Otdit Hillio	i —		Г			Ť	Observations (color
Since	Gallons	pН	Conductivity	Temperature	Turbidity	ORP (mV)	Other:	그리다 하는 사람들은 사람이 아니라
24930 5000000000	Removed	(SU)	(µS/cm)	(°C)	(NTUs)	Ora (mv)	Outor	cloudiness, etc.)
6838		C.68	982	19.2	10,47	120.5		
0846		6.68	980	19.2	9.81	120.9		
2842		6.67	9.80	19.2	9.48	120.8		
5844		6.68	979	19.2	8.26	121.1	-	
2848								
150								
3052		6.70	980	192	7.61	121.7		
659		6.70	980	192	7.02	121.9		
1856		6.70	979	19.2	1.11	122.1		
858		6.71	980	19.2	6.71	122.2		
900		6.70	979	19.2	6.40	122.4		
7902		6.71	979	19.2	6.51	122.6		
906	- 0	6.25	980	19.2	6.71	122.7		
2968	- 10	6.35	983	19.2	6.34	122.7		
910		6.72	983	19.2	6,72	123.1	5.85	
912		4.72	981	19.2	5.76	123,0		
919		6.72	981	19.3	5.45	123.4		
9/16	- 4	6.72	977		A.M.		pump	dropped/pull back up
915		6.81	974	19.3	28.51	100.3	•	
		6.80	9 14	19.3	49.00	98.3		
922 922	77	6 77	973	19.3	54.00	100,2		

728 6.77 4.

169.8 pump of @ 0928

WELL DEVELOPMENT DATA SHEET

Project #: 190628-PA	Client: PES
Developer: PA	Date Developed: 6/28/19
Well I.D. R - 20 A	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth:	Depth to Water:
Before 79.90 After 30.30	Before 9.72 After 9.80
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor	(VCF):	•	We	ill dia.		VCE	dia 1 Ph
$\{12 \times (d^2/4) \times \pi\} /23$			-	رية	===	0.16	20.10
where				3"	==	0.37	
12 = in / foot		2		4"	=	0.65	
d = diameter (in.)	4	1		6"	=	1.47	
$\pi = 3.1416$				10"	=	4.08	
231 = in 3/gal			80	12"	=	6.87	
-	- 40		25				

		851				- 1
3.7	X	*4	03 1U		32	
1 Case Volume		\overline{S}	pecified Volumes	=	gallons	

Purging Device:

Bailer

☐ Electric Submersible

☐ Suction Pump

🗷 Positive Air Displacement

Type of Installed Pump
Other equipment used

		24,5%;	Cond.		7707 777 677	
	(D)	77	(mS or (úS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
TIME -	TEMP (F)	pН	(III) OI (LIS)	(IVI Os)	REMOVED.	
0810	- Be	1=12	urgiva	* well	w/ 2"	surge black-
0823		nished	surgi	N	11 -	O
0023	66.2	7.55	840	2000	3.5	*Beyon Purge @ 0827
0835	66.1	7.57	902	21000	7.0	
0846	66.0	7.19	854	757	10.2	* hard bottom acidened'
0853	65.9	7.37	856	276	13.7	,
0900	66.1	7.29	844	71000	17.2	
0105	- Pulle	el PAD	pump		76 P	*surge well 0900-0902
013-0	-cemp	resso V	, ,	ple rig	went down	15 witch to hand bail-
6956	66.2	7.23	057	21000	20.7	
1009	66.4	7.24	843	71000	73.9	
1021	66.2	7.26	845	00015	27.1	
103)	60.1	7.25	838	51000	30:3	
Did Well Dew	ater? NO	If yes, note abov	e. —	Gallons Actually	Evacuated:	80.2

WELL DEVELOPMENT DATA SHEET

Well I.D.	R-20K	PAGE 2 OF 2	. /*
Project #:	190628-PA1	Client: PES	

<u> </u>		7	Cond.	1	<u> </u>	T
TIME	TEMP (F)	pН	(mS or AS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1041	66.1	7.31	851	71000	33.5	
1055	- Bego	n resu	ging	nell a	1 2" 50	inge block
1110	7	p Surg	on a			
1120	- Ba	isel Pi	gallor	s via	bailer)	Total volume removed (38.560
1131	Begar	pura	wi	AD-		
1142	· · · · · ·	7.66	837	71000.	41.7	
1149	67.9	7.51	839	>1000	45.2	j.
1157	67.1	7.48	845	358	48.7	
1204	67.2	7.45	851	F81	52. 2	
1212	- 67.1	7.43	850	100	55.7	
1215	- re	surages	. Lell		54.2	
1226	67.1	7.47	886	71000	39.2	
1233	67.0	7.40	860	71000	627	
1241	67.1	7.37	867	501	66.2	
1249	67.0	7.36	872	126	69.7	
1256	67.1	7.36	B75	62	73.2	
1303	67.1	7,35	890	36	76.7	
1310	67.0	7.35	892	26	80-2	
		Develop	ment	comi	lete =	
			£ /-			
·				,		

WELL DEVELOPMENT DATA SHEET

Project #: 190703 -	-WW]				Client	: PES	<u> </u>				
Developer: TS, WW						Date Developed: 7-3-19					
Well I.D. C-3.					Well I	Diamete	er: (c	ircle	e one) ወ 3	4 6	
Total Well Depth:					Depth	to Wat	er:				
Before 32-51 Af	ter 33	79			Before	10,8	2	Aft	er 10.73	•	
Reason not developed:	•				If Free	Produ	ct, th	ickr	ness:		L.
Additional Notations:	Swab	We	Ц	15	Min	Prior				*	
Volume Conversion Factor (VCF): $\{12 \times (\frac{d^2}{4}) \times \pi\} / 231$ where $12 = \text{in / foot}$ $d = \text{diameter (in.)}$ $\pi = 3.1416$ $231 = \text{in 3/gal}$	<u>, </u>	Well dia. 2" 3" 4" 6" 10" 12"		VCF 0.16 0.37 0.65 1.47 4.08 6.87				*	-	š.	
1 Case Volume	X	S) (peci) fied	Volume	 es	=		35 gallons		
Purging Device:		Baile: Suction		ump					Electric Subme Positive Air Di		nt

Type of Installed Pump

Other equipment used

Middle berg

L" swab

	°C	1 (9	Cond.	TURBIDITY	VOLUME	
TIME	TEMP (F)	pН	(mS or μ S))	(NTUs)	REMOVED:	NOTATIONS:
0207	19.7	5.80	1066	>1000	3.5	brown, mars bottom
0811	19,7	5.91	1062	>1000	7	.9 .6
0816	19.4	6.31	1074	71000	10.5	7, 4
0814	19.9	6.52	1076	71000	14.0	Milky brown Hard bottom
0823	19,9	6.69	1074	>1000	17.5	or U
0827	14,9	G-80.	1075	71000	21.0	
083.1	19.8	6.88	1077	>6000	24.5	1 W
0835	19.7	6,97	1075	7.000	28.0	CLOUDY BROWN HARD BOTTOM
0838	19-3	6.80	1076	>1000	31.5	1
0841	19.9	6.80	(083	71000	35.0	cloudy from, hard bottom
& MINS	reswa B	BEO WEU	- HRASS	2 Pump	TO 13	PRA CLIENT
0922	22.1	6.58	1064	>1000	38-5	"WL: 10 91 Brown Hard bostom
0929	21.5	7.13	1084	71000	42	WI. 11. 67
Did Well Dewa	ater?	If yes, note abov	e. (Gallons Actually	Evacuated:	

WELL DEVELOPMENT DATA SLEET

 Well I.D. C-3
 PAGE 2 OF 2

 Project #: 1907 03 - wwl
 Client: PES

TIM	E TEMP (F) pH	Cond. (mS or \(\mu \) S	TURBIDIT	Y VOLUME REMOVED	
0934	22.3		1074	>1000	45.5	MINNY Brown WLI 11.00
0939	21.6	7.50	1083	71000	49.0	WL: 10-94
094~	1 22.5	7.03	1073	494	52-5	We lo al closer
0452	21-4	7.03	1885	1511	56	WE. 10 -94/ Cloudy Brown
04 54	21.7	7.34	1083	490	59.5	W; 10.94 / 2/
1004	21.5	7-19	1084	348	63.0	WC, 10.92 / 10
101	21:4	7-35	1083	285	ê6 5	WL: 10.90/ 11
1015	21-2	6.96	1040	207	70.0	Whi 10.81 11
1028	21.0	7.26	1085	195	73.5	WL: 10.83 CLOVDY
1020		17-18	1084	269	77.0	W1: 10.85 / crowdy
1033	261	6-94	.6090	317	80.5	WL:10.87 1
1041	21.1	6-93	1089	281	84.0	W-, 10.81
1048	2(.3	7-04	1091	216	010	WL; 10.81
1056	22.7	7.52	1075	200	9/10	nv. 10 ad
1102	21.9	7-75	1077	140	V / J	10.93
1/08	215	1-11		101	48.0 B	WU 10.83 SUGUTLY
. 1114	21.0	7.05	1088	74.5	101.5	WL 10.81
1(20		7.17			100.0	WL's lo. 99
1123	20.5	7.07	1091	44	108.5	WI 11.07 CLEAR
						i i
						7
<u> </u>						

APPENDIX D

MONITORING WELL AND SOIL VAPOR PROBE SURVEY REPORT



CSS ENVIRONMENTAL SERVICES INC.

Managing Cost, Scope and Schedule
100 Galli Drive, Suite 1
Novato, CA 94949
Telephone: (415) 883-5203
Facsimile: (415) 883-6204

Site Positions

433. 462	<i>ئىلىدادە</i> ئىسىپالىكىلىدا	bullasi		i cirin kozin	Mounte	okom Vok e v paništi
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Linear Units of M		Int. Feet	Long tied	monitoring we	11 SO3-F	and AMERA
Site ID	Site Descripto			Position	95% Error	Fix Status
1 1872	Kambroni AA167	Elv.	37° 24 121° 54	60.50	0.000	FIXED
2 1873	HOVUNDATE (V.187	Lat. Lon. Elv.	37° 23° 121° 59	20.17305° N 11.89487° W 25.90	0.000	FIXED
3 0H-01	10 F4	Lat. Lon. Elv.	37' 23' 122' 03'	42-24-39 W 19-16136 W 64-91	0.002 0.002	
4 886-03	M - 20	Sly.	37^ 23	64.56 41.33465" N	0.567	
	11 Tol	E1.	122 03	65.30	0.525	
S 88-03	TER-H ON N RI	Elv.	37° 23° 122° 03°	44.04232° N 18.17475° N 61.11	0.166 0.220	
6 834-04	THM-A ON HOLD	Lat.	37° 23 122° 03°	44.55395" N 18.14440" N	0.044	
	111/2101	Elv.		60 . 62 60 . 55	أغر	STORM SOLD
7 SM 05	M BTS	Lat. Lon. Elv.	37° 23'	45.05948" N 17.77918" W 59.92	0.0	COSABAA E
	10.0	el v		59.32	-	Francis S



Managing Cost, Scope and Schedule 100 Galli Drive, Suite 1 Novato, CA 94949 Telephone: (415) 883-6203 Facsimile: (415) 883-6204

				0.2140
0 00-01	Lo	n. 122 03	18.91419 W	0.121
	E1.		62 56	
9 59-02	H RIM La	37 23	94.42435****	0.222
	E1	n. 122 1031	62.41	0.149
	£1	v .	02.41	
10 sv-03	N RIM La	t. 37" 23'	44.65177" N	0.185
	H0	122" 03"	61 79	0.151
	4.2			
11 SV-04	N RIM La	t. 37° 23'	43.86744" N	0.216
	E1	V .	61.87	0.116
	~~			
				3 10
				AND THUMPS
				STATE OF M. STATE OF THE STATE
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11.

APPENDIX E

REGENESIS APPLICATION SUMMARY REPORT



Global Headquarters 1011 Calle Sombra San Clemente, CA 92673

Ph: (949) 366-8000 Fax: (949) 366-8090

September 9, 2019

REGENESIS Proposal No. ChL63500

Susan Gahry PES Environmental 7655 Redwood Blvd, Suite 200 Novato, CA 94945

SUBJECT:

Application Summary Report for Remedial Services at the SMI Holdings Mountain View Site

Dear Ms. Susan Gahry,

REGENESIS Remediation Services (RRS) has recently completed an in-situ injection application of S-MicroZVI™, AquaZVI™, and Chemical Reducing Solution® at the SMI Holdings Mountain View site located at 455 East Middlefield Road, Mountain View, CA 94043. The goal of the remedial application was to reduce the levels of chlorinated solvent concentrations within the defined treatment areas to the upgradient concentration of approximately 20 µg/L. RRS employed in-situ chemical reduction technologies to meet remediation goals.

RRS mobilized product, support pickup truck, injection trailer, and personnel to the site to begin work over eighteen (18) days on July 1 - 26, 2019. RRS staffed this project with an experienced Project Supervisor who ensured a safe, successful injection application. The scope of work included a total of 132 direct push injection locations over a 29,000 ft² area.

Please review the attached application summary page, injection log, and photo log for more detail on the application.

RRS appreciates the opportunity to work at this site with PES Environmental. RRS will be available to interpret the field data as it is collected or answer any questions. If you need additional information regarding the application process or attached field notes, please contact Andrea Maben at 949.899.0729 or Dan Nunez at 949.910.1977.

Sincerely,

Andrea Maben

West Region Project Manager REGENESIS Remediation Services Dan Nunez

Southwest District Manager REGENESIS Remediation Solutions



Global Headquarters

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Application Summary Page







1. Overview

Client: PES Environmental

Client Project Manager: Susan Gahry Project Name: SMI Holdings Mountain View

RRS Project Manager: Andrea Maben Site Address: 455 E Middlefield Rd, Mountain View, CA

RRS Project Supervisor: Brian Henderson **Project Dates:** 7/1/19 to 7/26/19

2. Treatment Technology

RRS applied S-MicroZVI™, AquaZVI™, and Chemical Reducing Solution® (CRS) at the SMI Holdings Mountain View Site (Site) to remediate the two targeted treatment areas. Application of this product is designed to remediate chlorinated solvents from the soil and groundwater. This report summarizes the work that was completed over four weeks in one single mobilization.

S-MicroZVI™ and AquaZVI are colloidal, sulfidated zero-valent iron (ZVI) products in which ZVI particles are coated with iron sulfide (FeS) proven to accomplish *In-Situ* Chemical Reduction (ISCR) of contaminants within the subsurface environment. Additionally, the iron sulfide surface enhances the rate of reduction of common groundwater contaminants such as trichloroethene (TCE) and cis-1,2-dichlorotheylene (cis-1,2-DCE). S-MicroZVI is delivered as a colloidal suspension 40% ZVI by weight in glycerol with a particle size of less than 5 microns. AquaZVI uses water in the suspension instead of glycerol. S-MicroZVI and AquaZVI are manufactured using a state-of-the-art sulfidation process resulting in a particle coating which increases activation toward specific contaminants and extends performance longevity. S-MicroZVI and Aqua ZVI destroy contaminants abiotically and are applied to stimulate ISCR-enhanced bioremediation.

CRS® (Chemical Reducing Solution) is an iron-based reagent that facilitates biogeochemical in-situ chemical reduction (ISCR) of halogenated contaminants such as chlorinated ethenes and ethanes. CRS is a pH neutral, liquid ferrous iron (Fe²⁺) solution. CRS provides a soluble, food-grade source of Fe²⁺, designed to precipitate as reduced iron sulfides, oxides, and/or hydroxides. These Fe²⁺ minerals are capable of destroying chlorinated solvents via chemical reduction pathways, thus improving the efficiency of the overall reductive dechlorination process by providing multiple pathways for contaminant degradation in groundwater.



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3. Injection Plan

A. Design Summary

Two areas were treated at this site, the source area and the downgradient plume. The Source Grid area measures 10,000 sq. ft; and the Barriers 19,000 sq. ft, consisting of four independent barriers with approximately 50 ft. between barriers. The target treatment zone for both areas was from 15 to 30 ft bgs. During application, the amount of water used was reduced to allow the injections to be completed in the time frame allowed by the property owner. Additionally, to ensure coverage in the Barriers, two points were moved from the Source Grid to the Barriers.

The injection points in the Source Grid were spaced 15 feet on center and injection points in the Barriers were spaced 8 feet on center. Product amounts, number of injection points, treatment volumes, and application volumes are listed below in Table 1 and 2.

Table 1: Application design summary for Source Grid area.

	Original Design	Actual Application
No. of DPT injection points	83	81
S-MZVI applied (lbs)	27,000	26,350
AquaZVI applied (lbs)	-	-
CRS applied (lbs)	4,400	4,294
Total volume (gals)	68,972	50,327
Volume per vertical ft (gals/ft)	55	36.67
Treatment interval ft bgs	15-30	15-30

<u>Table 2</u>: Application design summary for Barriers.

	Original Design	Actual Application
No. of DPT injection points	49	51
S-MicroZVI applied (lbs)	3,000	3,650
AquaZVI applied (lbs)	36,000	36,000
CRS applied (lbs)	5,200	5,306
Total volume (gals)	44,691	38,250
Volume per vertical ft (gals/ft)	60	50
Treatment interval ft bgs	15-30	15-30



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4. Application

A. Job Site Inspection

REGENESIS Remediation Services (RRS), PES, and Penecore Drilling staff arrived on-site on July 1st, 2019. A health and safety tailgate meeting was performed with all field staff present. RRS performed site reconnaissance, becoming familiar with the project site, storage area, water source, and completed a jobsite safety inspection. Notable site hazards included: vehicle traffic through exclusion zones, close proximity of injection locations to storm drains and other on-site underground utilities, routing of fire hose from hydrant to injection trailer, and lack of shade during the middle of the day. Once completed, the injection trailer was staged and prepared for product transfer and mixing.

B. Product Delivery

PES personnel accepted the first delivery of 30,000 pounds of S-MicroZVI™ and 9,600 pounds of CRS® on June 28th, 2019. A second shipment of 36,000 pounds of AquaZVI™ was delivered to site while injections were underway on July 16th, 2019. REGENESIS arranged delivery and return to exchange two older units of AquaZVI (4,000 lb total) for new units on July 24th, 2019. All product totes and pallets were stored in the parking lot within the exclusion zone and easily accessible to RRS personnel for the duration of the project.

Product Delivery Schedule:

June 28th, 2019:

- 30,000 lbs. S-MicroZVI™
- 9,600 lbs. CRS®

July 16th, 2019:

36,000 lbs, AquaZVI™

July 24th, 2019:

• 4,000 lbs AquaZVI™ returned and exchanged 4,000 lbs of old product for new product.

C. Injection Sequence

PES marked out and pre-cleared all the injection points to ensure the injection points did not interfere with existing underground utilities using air-knifing. A few locations within landscaped areas which were not accessible by the air-knifing rig were hand augured to a depth of 5 feet bgs prior to injecting. RRS applied the REGENESIS technologies by mixing the products in the RRS injection trailer and injecting through temporary Direct Push Technology (DPT) injection points. The injection trailer is fully enclosed and contains mixing tanks, pumps, and delivery system equipped for direct connection to the injection points.

The application pump is a multiple diaphragm positive displacement pump designed to prevent pulsation of the remediation chemistry while being applied. Safety bypass mechanisms are also installed to release back pressure buildup in the event injection pressures exceed commonly accepted application ranges. We delivered the remediation chemistry at up to four (4) separate delivery lines simultaneously, each having the capability of monitoring injection pressures and injection flowrates/totals at any given time.



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The remediation chemistry solutions were prepared in two (2) 350-gallon conical tanks that are configured with chemically resistant materials. A propeller mixer mounted to the mixing tanks was used to homogenously mix the solutions. Mixing water was provided by an on-site fire hydrant (under a City permit obtained by PES) and conveyed to the injection trailer via a fire hose directly from the injection trailer.

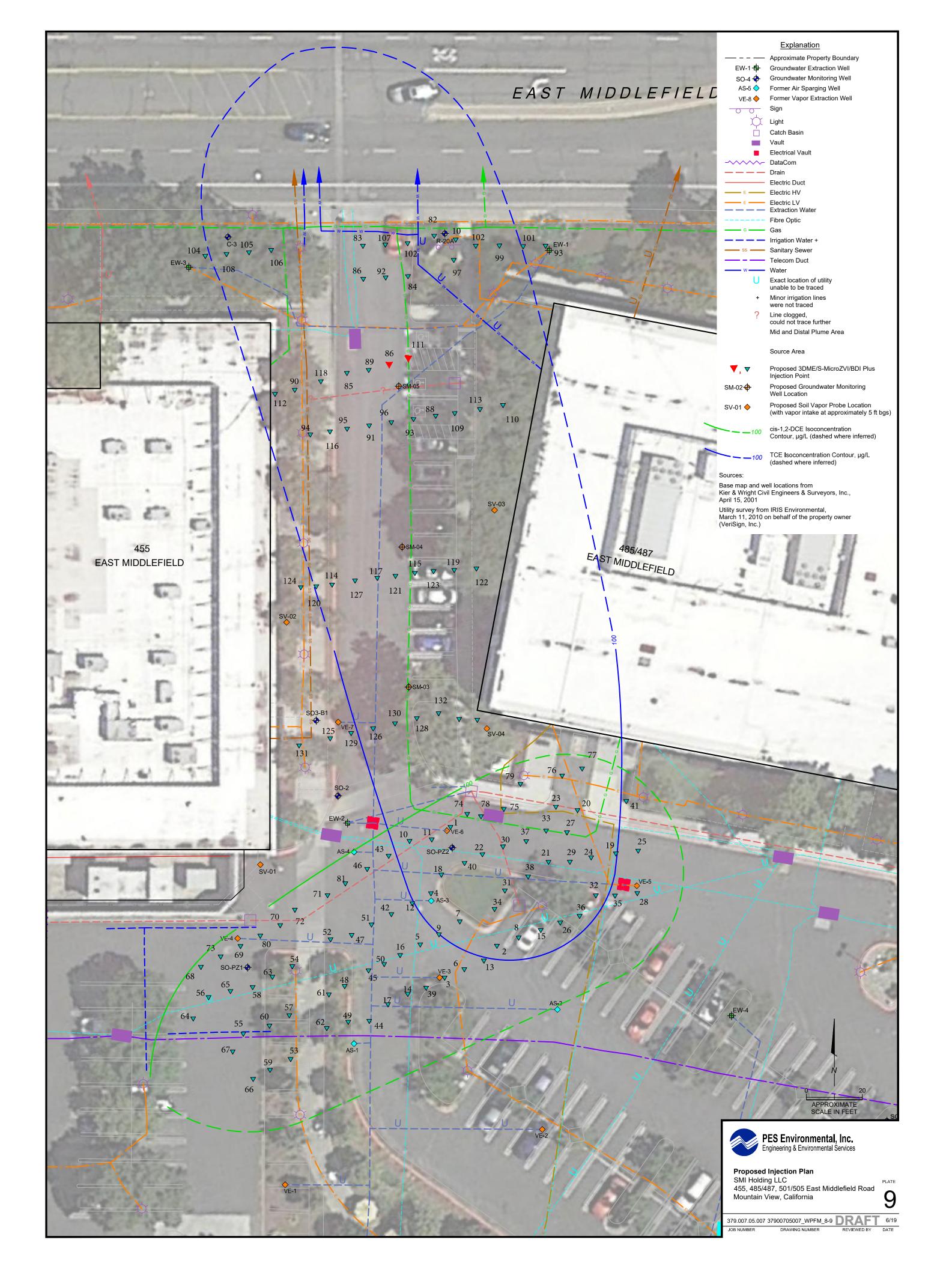
D: Deviations from Design and Work Plan

After proper injection distribution was confirmed via groundwater parameter changes in nearby monitoring wells, the volume of water injected was reduced in order to meet the tight application schedule which increased product concentration; however, the amount of product per location remained as prescribed. The reduction in volume in the Source Grid area occurred while injections were underway. See Table 1- Source Grid area Injection Log for specifics on when the change occurred. Design modifications to reduce overall volume in the Barriers occurred before injections began in the treatment area.

Two locations from the Source Grid area were moved to the Barriers to ensure adequate coverage. To compensate for variance in volume and concentration, RRS distributed the product over all barrier locations and kept the volume per vertical foot consistent with the barrier design.

Project Ir	formation		S-MZVI* & CRS Application Design Summary							
	MI		Barr	Barrier Application Revised 7/18/19						
Mounta	inview, CA		Disablyed Plume	CONTRACTOR OF THE	The second second					
Dissolv	ed Plume		Treatment Type	Berrier	Field Mixing Ratios					
Free	red For:		Average Length Perpendicular to Flow	102	5-M2Ni Concentrate per Pt (Ibo)					
	MES .		Spacing Within Rows (11)		777					
Target Treatment Zone (TTZ) info	Unit	Value	Number of Rows	The state of the s						
Sarrier Length	h:	103	GPT Injection Points	51	687					
Top Treat Depth	fi fi	35.0	Top Application Depth (ft light)	15	5-MOVE & CRS No. Volume per Pt (gels)					
Sot Treat Depth	8	30.0	Bottom Application Depth (H bgs)	90	750					
Vertical Treatment Interval	ft.	15.0	5-MZVI to be Applied (lbs)	39,650	Estimated Injection Radius (flowy)					
Treatment Jone Volume	R°	296,820	S-MINI to be Applied (gale)	3,626	4.6					
Treatment Zone Volume	EV.	18,993	S-MZVI Mis/N	6.9730%	Volume per Vertical Ft (gals/R)					
soll Type	100	sand	Volume Water (gas)	35,031	50.00					
Porcelly	ow ³ /ion ⁴	8.33	Tetal 5 M2VI & CRS Min Vetures (gals)	38,251	The second of the second of					
Hective Porcetty	ent fent	8.32	CRS to be Applied 3hri	5,200	CRS Concentrate per Pt (Bx)					
Treatment Zone Pore Volume	pis	732,721	CRS to be Applied Igani.	534	102.0					
Treatment Zone Effective. Pore Volume.	285	488,481	S SUMMON SOURCE	1000	110					
Iracies Organic Carbon (foc)	6/8	0.002								
lai Density lai Density	g/cm² b/m²	1.7	600 lbs has been shaled to the barrier plus 2 additional injection points bringing the total to \$1.95							
Sall Weight	104	3.26+07								
Hydraulic Conductivity	17/339	125.0								
Hydraulic Conductivity	en/sec	4.416-62		hels Lee-Winst Design Se	reces					
Hydraulic Gradient	tt/b	10000		/18/2019	The same of the sa					
GW Velocity	fl/day	1.70		echnical Notes/Discus	SER					
On Velocity Contaminant Demand and Desire	N/yr Unit	Udas Value								
Dissolved Phase Contaminant Mass	ibs	- Andrews								
Sorbed Phase Contaminant Mass	flat			mamptions/Qualificat	Sone					
Oxygen and Nitrate Mass	lbs.	63		and the same of th	- Contract of the Contract of					
Total Mass Contributing to ZVI Demand	lbs.	78	In generating this preliminary estimate. Regenesis:							
Mass Flux and S-MIZVI Demand	THE REAL PROPERTY.	Value	citizes. Using this information so input, we perfore							
Groundwater Many Rus	Utiny	36,247	grow attended in extinate of the reast of product and o	dourters stacement requi	ed to affect remediation of the obs.					
Stoch S-MEV Demend	124	1,501								
Total Mass Rus S-MZVI Requirement	the	6,340	became on assembler and works or secur is secure; when the rate and business will secure business at time areas.							
Total S-MIVI Demand	The Control	7,850		remetrial site assessment(c). The fees and sharges associated with the Soupe of Work were generaled through printers formulas and thus may not confirm to billing guidelines, constraints or other limits on fees. #500/#55						
	ion Dosing	6,890	consists and seek reinforcement directly from any government agency or any governmental reinforcement fund (the "Government in any circumstance where MSDMSD may serve as a supplier or subcontractor is an entity which sets or directly server from it							
		24.000								
S-MZVI to be Applied	bs	39,650	Covernment for all or part of the services performe	ed or products provided by	ACCEPATORS, It is the sole responsibility of the entity					
CRS to be Applied	lbs	5,200	socking ministrumement to ensure the Scope of Wo Conservment prior to submission. When serving as Conservment, RESENTE's does not bravelingly prese	a supplier or submontrario	to an entity who have a reimbursement from the					

Figure 1: Revised Barrier Design. 7.18.2019





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5. On-Site Work Summary

Injections were performed in one mobilization from July 1st to July 26th, 2019, on a Monday through Friday schedule. Each workday began with a safety tailgate meeting where safety topics were discussed including but not limited to: stop work authority, personal protective equipment (PPE), chemical handling, inclement weather, near misses, and the plan for the day's tasks. Drilling services were provided by Penecore Drilling of Woodland, California.

A. Treatment Area: Source Grid Area

A total solution of 50,327 gallons containing 26,350 pounds of S-MicroZVI and 4,294 pounds of CRS® was injected into 81 injection point locations in the Source Grid area using bottom-up injection methodology and an injection depth interval of three feet. The total injection interval was from 15-30 ft bgs. Flow rates were observed between 1 to 6.7 gallons per minute (GPM) and injection pressures ranged from 2 to 80 pounds per square inch (PSI). Source Grid area is shown in Figure 1. See Appendix A for detailed injection logs of the Source Grid Area.

B. Treatment Area: Barriers

A total solution of 38,250 gallons of remedial solution containing 36,000 pounds of AquaZVI, 3,650 pounds of S-MicroZVI, and 5,306 lb of CRS, was injected into 51 injection point locations in the Barrier using bottom-up injection methodology and an injection depth interval of three feet. The total injection interval in this area was 15-30 ft bgs. Flow rates were observed between 1 to 6.5 gallons per minute (GPM), and injection pressure observed were between 5 to 75 pounds per square inch (PSI). To reach beneath sidewalks, some angled boreholes were used for injection as noted on the injection logs in Appendix B.



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C. Injection Point Locations

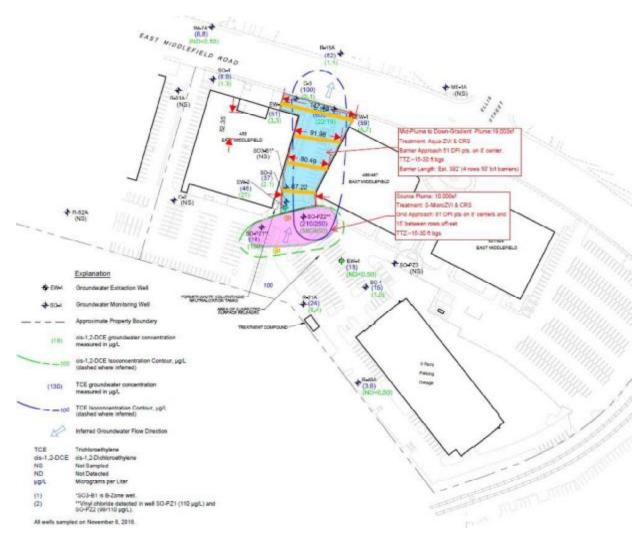


Figure 2: Map of treatment areas.

D. Conclusion

A total of 30,000 lbs. of S-MicroZVI, 36,000 lbs. of AquaZVI, and 9,600 lbs. of CRS were mixed, with total volume of 88,577 gallons (including 82,998 gallons of water) and applied at 132 injection point locations over two treatment areas. Injections took place over 18 working days between July $1^{\rm st}$ and $26^{\rm th}$, 2019.

APPENDIX A: Source Grid Area Injection Logs









					Volume of Solution Injected						
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Adjusted Total	Comments
		11:03	27-30	18	1.94	0.00	20.00	20.00			ROI Testing location. Original design. Start at 10:55
	Ì	11:26	27-30	16	2.55	20.00	90.00	70.00			About 2' of rise in nearby well since starting.
		11:45	27-30	15	2.05	90.00	112.00	22.00			
	7/1/2019*	12:01	27-30	15	1.02	112.00	165.00	53.00			1 gpm at request of PES. Stop at 12:39
I1		13:37	24-27	22	3.98	165.00	330.00	165.00	830	652	Approval for 4 gpm flow rate. Start @ 13:30. Stop @ 14:24
		14:32	21-24	58	1.50	330.00	495.00	165.00			14:29-15:48
		16:15	18-21	45	3.66	495.00	563.00	68.00			15:50-16:31
	7/2/2019*	8:17	18-21	55	3.64	0.00	97.00	97.00			8:11-8:50
	11212019	8:50	15-18	30	5.21	97.00	267.00	170.00			8:50-10:04
	7/1/2019*	14:40	27-30	35	2.36	0.00	165.00	165.00			Original design. 14:36-15:30
	77172019	15:36	24-27	40	3.98	165.00	323.00	158.00			15:32-16:31
12		8:17	24-27	25	3.59	0.00	7.00	7.00	830	657	8:11-8:15
12	7/2/2019*	8:21	21-24	50	4.16	7.00	172.00	165.00	000	001	8:20-9:07
	11212019	9:25	18-21	10	5.74	172.00	337.00	165.00			9:07-10:03
		10:09	15-18	10	5.83	337.00	507.00	170.00			10:10-10:50
	7/1/2019*	15:03	27-30	24	2.98	0.00	165.00	165.00			Original design. 14:55-15:38
	77172013	16:18	24-27	45	4.32	165.00	261.00	96.00			15:39-16:31
13		8:17	24-27	35	5.04	0.00	69.00	69.00	830	659	8:11-8:30
	7/2/2019*	8:55	21-24	60	2.76	69.00	234.00	165.00	000	000	8:30-9:38
	11212010	9:39	18-21	60	2.92	234.00	399.00	165.00			9:41-13:09
		13:15	15-18	15	5.76	399.00	569.00	170.00			13:00-13:48
	7/1/2019*	15:28	27-30	18	4.06	0.00	165.00	165.00			Original design. 15:13-16:04
	77172019	17:56	24-27	25	4.56	165.00	203.00	38.00			16:05-16:31
14		8:17	24-27	25	4.66	0.00	127.00	127.00	830	660	8:11-8:46
14	7/2/2019*	8:46	21-24	42	4.04	127.00	292.00	165.00	000	000	8:46-9:38
	11212019	10:04	18-21	35	5.13	292.00	458.00	166.00			9:38-10:22
		10:39	15-18	15	5.41	458.00	627.00	169.00			10:25-11:20
		10:30	27-30	40	5.14	0.00	165.00	165.00			Original design. 10:27-11:05
		12:55	24-27	15	5.18	165.00	330.00	165.00			11:07-13:13
15	7/2/2019*	13:28	21-24	55	3.44	330.00	495.00	165.00	830	664	13:16-14:29
		14:41	18-21	10	4.82	495.00	660.00	165.00			14:30-15:15
		15:18	15-18	5	5.02	660.00	830.00	170.00			15:17-16:18
		11:08	27-30	45	5.60	0.00	165.00	165.00			Original design. 11:02-13:05
		13:14	24-27	60	3.14	165.00	330.00	165.00			13:07-14:18
16	7/2/2019*	14:42	21-24	58	2.38	330.00	495.00	165.00	830	731	14:30-15:56
		8:18	18-21	55	2.90	0.00	165.00	165.00			8:15-9:16
		10:28	15-18	58	1.57	165.00	335.00	170.00			9:18-11:04. *396 gallons is the adjusted volume from 7/2
	ļ	11:29	27-30	10	5.89	0.00	165.00	165.00			Original design. 11:23-13:10
		13:14	24-27	10	6.04	165.00	330.00	165.00			13:10-13:44
17	7/2/2019*	14:05	21-24	55	5.18	330.00	495.00	165.00	830	664	13:44-14:28
]	14:42	18-21	25	3.88	495.00	660.00	165.00			14:30-15:28
		15:43	15-18	5	5.71	660.00	830.00	170.00			15:28-16:24
		14:50	27-30	35	5.18	0.00	165.00	165.00			Original design. 14:30-15:06
	7/2/2019*	15:43	24-27	15	4.66	165.00	330.00	165.00			15:06-15:46
18		16:08	21-24	25	4.98	330.00	375.00	45.00	830	755	15:46-16:24. *300 gallons is the adjusted volume from 7/2
	7/0/0040	9:00	21-24	45	4.37	0.00	120.00	120.00			8:15-8:53
	7/3/2019	9:08	18-21	35	4.37	120.00	285.00	165.00			8:54-9:58
		10:01	15-18	50	4.31	285.00	455.00	170.00			9:58-11:13
	ļ	8:21	27-30	20	4.43	0.00	165.00	165.00			Original design. 8:08-9:01
10	7/0/0040	9:07	24-27	25	4.07	165.00	330.00	165.00	200		9:01-9:47
19	7/3/2019	10:01	21-24	10	4.48	330.00	495.00	165.00	830	-	9:47-10:23
		10:50	18-21	30	5.26	495.00	660.00	165.00			10:23-10:56
		11:21	5-18	15	5.86	660.00	830.00	170.00			10:56-11:28

^{*}Noted as read off totalizer. Actual volume adjusted at end of day based off total tank volume pumped. Adjusted volume listed calculated on % difference. Totalizer field calibration performed to adjust for remainder of application.







Page Class Page Page Page Page Class		Table 1										
Processor Proc							Volu	ne of Solution Inj	ected			
19	Injection Point	Date	Time								Adjusted Total	Comments
100 77/2019 201 24.27 20 0.31 180.00 380.00 160.00 160.00 17/2019 10.30 16.71 15.00 16.00 160.00			8:21	27-30	15	5.52	0.00	165.00	165.00			Original design, 8:14-8:57
19												
10.032	I10	7/3/2019	9:21	21-24	18	5.04	330.00	495.00	165.00	830	_	9:29-10:13
10.59												
111 112 113												
111			13:02	27-30	20	4.67	0.00	207.50	207.50			Original design. Close to extraction well. Omitting 15-18' interval, volume
1518		7/3/2019	13:56	24-27	10	2.44	207.50	415.00	207.50			
110 110	I11		15:18	21-24	25	3.59	415.00	501.00	86.00	831	-	15:05-15:46
15 15 15 15 15 15 15 15	ľ	7/0/2040	8:30	21-24		4.42	0.00	121.50	121.50			8:11-9:10
132 134 2427 15 5.27 16500 33000 16500		7/8/2019	9:15	18-21	15	3.94	121.50	330.00	208.50			9:10-10:10
192 193 194 194 195 197 196 197 198 197 198 197 198			13:01	27-30	35	4.96	0.00	165.00	165.00			Original design. 12:56-13:43
112												
15:17 18-21 5		7/3/2019										
TREADING 8.30 18-21 5	112									831	-	
180 9 902 15-18 5 4.00 60.00 231.00 171.00 8271.009 131.00 27-30 45 4.35 0.00 165.00 1												
13-10		7/8/2019										
113 13.99 24.27 50 3.29 16.00 33.00 165.00 165.00 14.00												
113 14.93 21.24 60 1.57 330.00 44.00 116.00 831 14.40-15.46 14.4		7/3/2019										
113												
14 16 16 17 17 18 18 18 18 18 18	I13									831	-	
114 114 114 114 115		7/8/2019										
114 1330 27.30 40 4.96 0.00 165.00												
114												
114		7/3/2019										
115	114									831	_	
115	11.7									001		
115		7/8/2019										
11:0												
115												
14:19	115	7/8/2010								024		
1526	113	77072013								651	-	
11:04 27:30 30 4.38 0.00 165:00 165:00 165:00 165:00 165:00 12:58 24:27 65 1.39 165:00 332:00 167:00 12:58 24:27 65 1.39 165:00 332:00 167:00 15:00 12:42:40.4												
116					_							
116												
15:41	116	7/9/2010								004		
15:56	110	77072019								031	-	
11:16												
117												
117 7/8/2019 14:08 21-24 25 4.41 332.00 499.00 167.00 831 14:05-15:01 15:09 18:21 20 3.52 499.00 665.00 166.00 15:01-15:41 15:41-15:21 15:41-15:41 15:41-15:21 15:41-1												
188 18-21 20 3.52 499.00 665.00 166.00 1501-15.41 15.14 16.27 15.56 15-18 5 4.77 665.00 831.00 166.00 166.00 15.14-16.27 17.4	117	7/8/2010								024		
15:56 15-18 5 4.77 665.00 831.00 166.00 15:41-16:27 15	117	11012019								831	-	
11:31 27:30 55 3.76 0.00 200.50 20												
13:40												
14:39												
15:56 18-21 35 2.87 602.00 733.00 131.00 909 Continued reduced flow rate to mitigate well rise. 15:44-16:30 Switch to revised design. 8:20-8:38 Switch to revised		7/8/2019										
15:56 18-21 35 2.87 602.00 733.00 131.00 Continued reduced flow rate to mitigate well rise. 15:44-16:30 Switch to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to revised design. 8:20-8:38 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to reduce nearby well rise. 8:38-9:27 Silvent to reduce ne	I18									909	-	,
7/9/2019 8.35 15-18 5 2.91 45.50 176.00 130.50 Slow to reduce nearby well rise. 8:38-9:27 7:59 27:30 35 4.96 0.00 110.00 110.00 8.42 24-27 40 4.16 110.00 220.00 110.00 8:37-9:05 3-7:99:05 9:25 21:24 110 50.7 220.00 330.00 110.00 550 - 9:05-9:40 9:40-11:32												
8.35 15-18 5 2.91 45.50 176.00 130.50 Slow to reduce nearby well rise. 8:38-9:27 7:59 27-30 35 4.96 0.00 110.00 110.00 8:42 24-27 40 4.16 110.00 220.00 110.00 9:25 21-24 10 5.07 220.00 330.00 110.00 10:14 18-21 55 2.23 330.00 440.00 110.00 9:40-11:32		7/9/2019										
119												
119]										
10:14 18-21 55 2.23 330.00 440.00 110.00 9:40-11:32												
	I19	119 7/9/2019								550	-	
		ļ										
11:37 15-18 5 4.17 440.00 550.00 110.00 11:32-13:10		11:37	15-18	5	4.17	440.00	550.00	110.00			11:32-13:10	







Injection Point Date Time Injection Depth Injection Pressure (psi) Plow Rate (gam) Regissing Flow Meter (gai) Per Interval Per Invalor Pressure (psi) Profit Rate (gam) Per Interval Per Inte	Table 1								
Pressure (psi) Pressure (psi) (pm) Pegining Flow Meter (gai) Meter (gai) Perinterval Location Perinterval Perinterval Location Perinterval Perinterval Location Perinterval P									
120 18.44 24-27 35 3.80 110.00 220.00 110.00 550 210.00 210.00 110.	Comments								
120 18.44 24-27 35 3.80 110.00 220.00 110.00 550 210.00 210.00 110.									
120									
10.09									
10:13	al 9:43-10:10								
121 122 123 124 124 124 124 125 124 130 120	a. 3.40-10.10								
121 7/9/2019 8:45 24-27 20									
121 7/9/2019 9:24 21-24 60 2.15 220.00 330.00 11									
10.21 18-21 60 1.86 330.00 440.00 110.00 110.00 110.01 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 1132-12.09 110.00 110.00 110.00 110.00 110.00 110.01 1021-12.09 112.09 1331-13-12 112.09 1331-13-12 112.09 1331-13-12 112.09 1331-13-12 112.09 1331-13-12 112.09 1331-13-12 112.09 1331-13-12 112.09 1331-13-12 112.09 1331-13-12 112.09 1									
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10.27 24-27 20 2.20 110.00 220.00 110.00 110.00 10.21-12:09 10.21-12:09 13:41 21:24 30 4.89 220.00 330.00 110.00 110.00 13:54 18-21 32 2.55 330.00 440.00 110.00 110.00 14:12-14:53 14:29 15-18 12 4.35 440.00 550.00 110.00 110.00 13:54 24-27 20 4.80 110.00 220.00 110.00 110.00 13:54 24-27 20 4.80 110.00 220.00 110.00 10.00 13:41-14:12 15:6 18-21 15 4.36 330.00 440.00 110.00 15:0-15:43 15:0									
10.27 24-27 20 2.20 110.00 220.00 110.00 110.00 10.21-12:09 10.21-12:09 13:41 21:24 30 4.89 220.00 330.00 110.00 110.00 13:54 18-21 32 2.55 330.00 440.00 110.00 110.00 14:12-14:53 14:29 15-18 12 4.35 440.00 550.00 110.00 110.00 13:54 24-27 20 4.80 110.00 220.00 110.00 110.00 13:54 24-27 20 4.80 110.00 220.00 110.00 10.00 13:41-14:12 15:6 18-21 15 4.36 330.00 440.00 110.00 15:0-15:43 15:0									
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123 7/9/2019 14:30 21-24 55 2.77 220.00 330.00 110.00 110.00 15:0-15:43 15:1									
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124 7/9/2019 14:31 21-24 10 5.22 220.00 330.00 110.00 550 - 14:30-15:12 15:26 18-21 15 5.42 330.00 440.00 110.00 550 15:24.54.4 15:24 15:24.54.4 15:44 15:48 10 3.25 440.00 550.00 110.00 15:44-16:22 15:24-16:42 15:44-16:22 15:44-16:22 15:44-16:22 15:44-16:49 16:44-16:22 15:44-16:22 15:44-16:22 15:44-16:22 15:44-16:22 15:44-16:22 15:44-16:22 15:44-16:22 15:44-16:22 15:44-16:22 15:44-16:47									
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15:44 15-18 10 3.25 440.00 550.00 110.00 15:44-16:22 13:54 27:30 30 4.69 0.00 110.00 110.00 100.00 Revised design. 13:40-14:18 14:31 24-27 25 5.05 110.00 220.00 110.00 110.00 110.00 11:8-14:47 15:5 3.30 220.00 330.00 110.00 550 - 14:47-15:25 15:32 18-21 55 2.43 330.00 440.00 110.00 550 - 15:25-16:30									
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14:31 24-27 25 5.05 110.00 220.00 110.00 7/9/2019 15:14 21-24 55 3.30 220.00 330.00 110.00 15:32 18-21 55 2.43 330.00 440.00 110.00 15:50 14:18-14:47 15:25 15:25-16:30									
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1 10.30 10-10 0 0.00 440.00 017.00 17.00 10.30-10.30									
7/10/2019 8:48 15-18 15 3.86 0.00 33.00 33.00 s s 8:45-8:57									
7(0)040 15:24 27:30 38 4.20 0.00 110.00 110.00 Revised design. 15:23-15:27									
7/9/2019 15.2-4 27-30 30 4.36 110.00 207.00 97.00 15527-15.56									
126 8:48 24-27 35 2.48 0.00 13.00 13.00 550 - 8:45-8:54									
7/10/2019 9:08 21-24 40 3.08 13.00 123.00 110.00									
10:14 18-21 35 3.90 123.00 233.00 110.00 9:47-10:55									
11:02 15-18 5 3.88 233.00 343.00 110.00 10:55-11:40									
8:52 27-30 25 5.06 0.00 110.00 110.00 Revised design. 8:45-9:20									
9:28 24-27 15 4.84 110.00 220.00 110.00 9:20-9:41									
127 7/10/2019 10:14 21-24 10 3.41 220.00 330.00 110.00 550 - 9:41-10:29									
10:40 18-21 15 4.42 330.00 440.00 110.00 10:29-10:55									
11:01 15-18 2 5.47 440.00 550.00 110.00 10:55-11:20									
0.92 27-30 30 4.41 0.00 137.00 redistributed evenly across 18-30	on well. Omitting 15-18' interval, volume 0' interval. 8:45-9:25								
128 7/10/2019 9:34 24-27 30 4.49 137.00 275.00 138.00 550 - 9:25-10:32									
10:51 21-24 55 3.53 275.00 412.00 137.00 10:32-11:41									
11:26 18-21 15 4.79 412.00 550.00 138.00 11:41-13:04									
9:28 27-30 40 3.78 0.00 110.00 110.00 Revised design location. 9:25-10:	20								
10:21 24-27 35 3.72 110.00 220.00 110.00 10:20-10:54									
129									
13:45 18-21 55 2.37 330.00 440.00 110.00 11:40-13:41									
13:57 15-18 5 4.85 440.00 550.00 110.00 13:41-14:17									
12:55 27-30 5 5.32 0.00 110.00 110.00 Revised design. 11:54-13:25									
13:45 24-27 8 4.14 110.00 220.00 110.00 13:25-13:58									
130 7/10/2019 14:05 21-24 40 3.96 220.00 330.00 110.00 550 - <u>13:58-14:28</u>									
14:30 18-21 30 5.34 330.00 440.00 110.00 14:28-14:52									
15:10 15-18 10 5.18 440.00 550.00 110.00 14:52-15:17									







						Volume of Solution Injected					
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Adjusted Total	Comments
		13:15	27-30	45	4.26	0.00	110.00	110.00			Revised design. 13:10-13:42
		13:45	24-27	26	4.26	110.00	220.00	110.00			13:42-14:12
I31	7/10/2019	14:27	21-24	25	4.85	220.00	330.00	110.00	550	-	14:12-14:40
		15:17	18-21	15	4.10	330.00	440.00	110.00			14:40-15:14
		15:41	15-18	5	5.71	440.00	550.00	110.00			15:14-16:00
		13:33	27-30	20	5.20	0.00	110.00	110.00			Revised design. 13:29-13:54
		13:56	24-27	30	3.72	110.00	220.00	110.00			13:54-14:27
132	7/10/2019	14:29	21-24	40	4.88	220.00	330.00	110.00	550	-	14:27-15:19
		15:34	18-21	25	5.71	330.00	440.00	110.00			15:19-15:47
		15:46	15-18	5	4.83	440.00	550.00	110.00			15:47-16:23
		14:41	27-30	40	4.93	0.00	110.00	110.00			Revised design. Start 14:29-14:57
		15:34	24-27	35	4.39	110.00	220.00	110.00			14:57-15:34
	7/10/2019	16:12	21-24	65	0.87	220.00	246.00	26.00			No flow. Moving to next interval. 15:34-15:58 (84 gallons short)
133		16:13	18-21	75	0.00	246.00	253.00	7.00	363	-	No flow. Moving to next interval. 15:58-16:10 (103 gallons short)
		16:19	15-18	70	1.39	253.00	281.00	28.00			16:10-16:29
f	7/11/2019	7:44	15-18	55	2.11	0.00	82.00	82.00			7:37-8:33 Putting omitted volume into locations I37 and I38.
		15:39	27-30	10	5.38	0.00	132.00	132.00			Make-up volume for I2, 113 extra gallons. Revised design. 15:36-15:57
	7/10/2019	16:17	24-27	25	5.41	132.00	260.00	128.00			15:57-16:18
		16:46	21-24	10	6.49	260.00	263.00	3.00			16:18-16:30
134		7:45	21-24	22	5.40	0.00	134.50	134.50	663	-	7:37-8:12
	7/11/2019	8:30	18-21	10	4.11	134.50	266.00	131.50			8:12-8:50
	771172013	9:15	15-18	15	4.11	266.00	400.00	134.00			8:50-9:15
		7:51	27-30	40	5.78	0.00	110.00	110.00			Revised design. 7:50-8:21
		8:29	24-27	45	2.81	110.00	220.00	110.00			Revised design. 7:50-8:21 8:21-8:55
135	7/11/2019	9:05		45	2.68	220.00	330.00	110.00	550	_	
133	7/11/2019	9:49	21-24	20		330.00	440.00	110.00	330	-	8:55-9:41 9:41-10:18
		10:22	18-21 15-18	10	4.70 5.33	440.00	550.00	110.00			9:41-10:18 10:18-10:44
											Make-up volume for I8, 50 extra gallons. Revised design. 8:01-8:25
		8:25	27-30	35	4.39	0.00	120.00	120.00			
100	7/44/0040	8:29	24-27	40	5.22	120.00	240.00	120.00	000		8:25-8:54
136	7/11/2019	9:05	21-24	25	4.90	240.00	360.00	120.00	600	-	8:54-9:26
		9:48	18-21	20	4.69	360.00	480.00	120.00			9:26-9:53
		10:01	15-18	5	5.12	480.00	600.00	120.00			9:53-10:29
		8:55	27-30	30	5.32	0.00	110.00	110.00			Revised design. 8:51-9:15
		9:58	24-27	25	4.83	110.00	220.00	110.00			9:15-9:53
137	7/11/2019	10:02	21-24	55	2.25	220.00	372.00	152.00	644	-	9:53-10:42. 42 extra gal from I33
		10:56	18-21	30	5.23	372.00	534.00	162.00			10:42-11:38. 52 extra gal from I33
		13:03	15-18	35	4.17	534.00	644.00	110.00			11:38-13:10
		9:57	27-30	35	4.35	0.00	110.00	110.00			Revised design. 9:56-10:26
		10:29	24-27	45	3.41	110.00	220.00	110.00			10:26-10:57
138	7/11/2019	10:56	21-24	70	0.71	220.00	252.00	32.00	644	-	10:57-11:30. Flow completely stopped.
		11:55	18-21	30	5.34	252.00	534.00	282.00			1:30-13:41. Extra volume from I33.
		14:21	15-18	25	5.19	534.00	644.00	110.00			13:41-14:12
139	7/44/0040	10:54	27-30	15	6.10	0.00	182.00	182.00	707		Revised design. Close to extraction well. Omitting 15-18' interval, volume redistributed evenly across 18'-30' interval. Make-up volume for I3 and I6, 177 extra gallons. 10:56-11:24
139	7/11/2019	11:37	24-27	30	4.02	182.00	364.00	182.00	727	-	11:24-13:18
	ſ	13:34	21-24	0	5.44	364.00	546.00	182.00			13:18-13:51
		15:05	18-21	5	6.18	546.00	727.00	181.00			13:51-14:55
		11:27	27-30	40	4.28	0.00	132.00	132.00			Make-up volume for I7, 109 extra gallons. Revised design. 11:32-12:02
	7/11/2019	13:09	24-27	15	4.42	132.00	264.00	132.00			12:02-13:35
140	//11/2019	13:59	21-24	55	2.18	264.00	396.00	132.00	040		13:35-15:16
140		16:24	18-21	60	0.75	396.00	461.00	65.00	00 649	49 -	15:16-16:28
		8:05	18-21	70	0.44	0.00	10.32	10.32			No flow. 7:55-8:05
	7/12/2019										







								Table 1			recombingly based solutions for the chieforment
						Volu	me of Solution Inj	ected			
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Adjusted Total	Comments
		13:52	27-30	40	5.88	0.00	110.00	110.00			Revised design. 13:48-14:11
		14:34	24-27	20	6.01	110.00	220.00	110.00			14:11-14:34
141	7/11/2019	14:34	21-24	55	4.90	220.00	330.00	110.00	550	-	14:34-14:55
		15:11	18-21	35	4.48	330.00	440.00	110.00			14:55-15:20
		15:23	15-18	15	5.22	440.00	550.00	110.00			15:20-15:55
		15:13	27-30	38	4.41	0.00	132.00	132.00			Make-up volume for I5, 109 extra gallons. Revised design. 15:12-15:55
	7/11/2019	15:55	24-27	42	4.94	132.00	264.00	132.00			15:55-16:22
142	77112013	16:22	21-24	55	4.71	264.00	282.00	18.00	659		Surfacing up borehole. Cannot stop flow. Abandoning, filling with bentonite, will return with clean tooling down same hole tomorrow. 16:22-16:25
		8:52	21-24	50	2.38	0.00	114.00	114.00			7:49-8:52
	7/12/2019	9:07	18-21	45	3.02	114.00	246.00	132.00			8:52-9:46
		9:58	15-18	30	5.16	246.00	377.00	131.00			9:46-10:18
		15:51	27-30	40	5.33	0.00	110.00	110.00			Revised design. 15:51-16:15
		16:22	24-27	20	6.41	110.00	220.00	110.00			16:15-16:37
143	7/11/2019	16:41	21-24	25	5.83	220.00	330.00	110.00	550	_	16:37-16:56
110		17:00	18-21	20	7.49	330.00	440.00	110.00	000		16:56-17:08
ļ		17:08	15-18	15	6.21	440.00	460.00	20.00			17:08-17:13
	7/12/2019	8:08	15-18	10	5.53	0.00	90.00	90.00			7:49-8:22
		8:16	27-30	25	4.49	0.00	110.00	110.00			Revised design. 8:05-8:38
		8:54	24-27	40	5.51	110.00	220.00	110.00			8:38-9:06
144	7/12/2019	9:09	21-24	55	2.09	220.00	330.00	110.00	550	-	9:06-9:49
		9:57	18-21	2	5.40	330.00	440.00	110.00			9:49-10:12
		10:27	15-18	2	4.94	440.00	550.00	110.00			10:12-10:35
		8:34	27-30	15	4.98	0.00	110.00	110.00			Revised design. 8:26-8:51
145	7/12/2019	9:07	24-27	15	5.02	110.00	220.00	110.00	550	=0	8:51-9:14
145	7/12/2019	9:16	21-24	45	3.94	220.00	330.00	110.00	550 -	-	9:14-9:47
		9:57 10:27	18-21 15-18	50 2	4.31 5.44	330.00 440.00	440.00 550.00	110.00 110.00			9:47-10:18 10:18-10:50
		9:02	27-30	35	4.74	0.00	110.00	110.00			
		9:26	24-27	40	5.25	110.00	220.00	110.00			Revised design. 8:55-9:23 9:23-9:45
146	7/12/2019	9:57	21-24	50	3.22	220.00	330.00	110.00	550	_	9:45-10:15
140	1712/2013	10:27	18-21	40	5.12	330.00	440.00	110.00	550		10:15-10:15
		11:11	15-18	15	4.87	440.00	550.00	110.00			10:51-11:04
		10:37	27-30	38	4.93	0.00	110.00	110.00			Revised design. 10:35-11:04
		11:10	24-27	45	3.96	110.00	220.00	110.00			11:04-11:32
147	7/12/2019	11:31	21-24	35	4.59	220.00	330.00	110.00	550	-	11:32-11:59
		13:34	18-21	15	4.29	330.00	440.00	110.00			12:51-13:35
		13:39	15-18	20	4.18	440.00	550.00	110.00			13:35-14:03
		11:04	27-30	22	5.44	0.00	110.00	110.00			Revised design. 11:04-11:31
		11:49	24-27	35	3.97	110.00	220.00	110.00			11:31-11:57
148	7/12/2019	11:57	21-24	2	6.60	220.00	330.00	110.00	550	-	12:49-13:10
		13:33	18-21	2	5.71	330.00	440.00	110.00			13:10-13:33
		13:41	15-18	5	5.12	440.00	550.00	110.00			13:33-13:54
		11:34	27-30	35	4.23	0.00	110.00	110.00			Revised design. 11:29-12:01
		13:08	24-27	20	3.90	110.00	220.00	110.00			12:55-13:29
149	7/12/2019	13:41	21-24	5	4.13	220.00	330.00	110.00	550	-	13:29-13:57
		14:17	18-21	50	3.84	330.00	440.00	110.00			13:57-14:22
		14:43	15-18	45	3.76	440.00	550.00	110.00			14:22-15:20
		11:46	27-30	30	5.56	0.00	110.00	110.00			Revised design. 11:43-13:10
		13:35	24-27	45	3.15	110.00	220.00	110.00			13:10-13:57
150	150 7/12/2019	14:03	21-24	65	1.08	220.00	246.00	26.00	00 550 00	-	Stalled out. Pulling to next interval. 13:57-14:14
		14:17	18-21	35	3.94	246.00	440.00	194.00			14:14-15:15. Extra volume from previous interval.
		15:39	15-18	5	5.03	440.00	550.00	110.00			15:15-15:41







	Table 1										
						Volu	me of Solution Inj	ected			
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Adjusted Total	Comments
		13:58	27-30	20	5.74	0.00	110.00	110.00			Revised design. 13:54-14:24
		14:28	24-27	20	5.92	110.00	220.00	110.00			14:24-14:48
	7/12/2019	14:53	21-24	45	3.85	220.00	330.00	110.00			14:48-15:12
151		15:47	18-21	15	5.32	330.00	391.00	61.00	550	-	15:12-15:50
		8:14	18-21	10	3.92	0.00	49.00	49.00			8:01-8:40
	7/15/2019	8:56	15-18	5	4.17	49.00	159.00	110.00			8:40-9:12
		14:17	27-30	35	5.52	0.00	110.00	110.00			Revised design. 14:11-14:38
		14:43	24-27	62	2.92	110.00	220.00	110.00			14:38-15:16
	7/12/2019	15:38	21-24	45	4.38	220.00	330.00	110.00			15:16-15:45
152		15:48	18-21	40	4.85	330.00	392.00	62.00	550	-	15:45-15:50
		8:14	18-21	55	2.46	0.00	47.00	47.00			8:01-8:53
	7/15/2019	9:06	15-18	20	3.40	47.00	158.00	111.00			8:53-9:29
		8:35	27-30	25	4.32	0.00	110.00	110.00			Revised design. 8:22-8:56
		9:12	24-27	60	2.58	110.00	158.00	48.00			No flow. Pulling to next interval. 8:56-9:38
153	7/15/2019		1		2.50	1		1	158	-	Still no flow. 9:38-9:59. Pulling tooling to inspect screen. Screen clear. Assuming
		10:11	21-24	80	-	158.00	158.00	0.00			formation too tight. Redistributing flow to nearby locations.
		9:07	27-30	65	1.22	0.00	110.00	110.00			Revised design. 8:49-9:50
		9:55	24-27	60	1.01	110.00	147.00	37.00			Completely stalled out. Pulling to next interval. 9:50-10:36
154	7/15/2019	10:42	21-24	70	1.97	147.00	238.00	91.00	550	_	Stalled out. Pulling to next interval. 10:36-11:28
		11:35	18-21	75	1.02	238.00	244.00	6.00			No good flow. Pulled up. 11:28-11:37
		11:39	15-18	80	2.02	244.00	550.00	306.00			11:37-14:29. Screen broken upon removal. Pressure due to tool failure.
		9:49	27-30	30	3.95	0.00	110.00	110.00			Revised design. 9:33-10:04
		10:30	24-27	70	2.37	110.00	220.00	110.00			10:04-10:56
155	7/15/2019	11:20	21-24	65	2.92	220.00	330.00	110.00	550	_	10:56-11:31
		11:35	18-21	70	3.05	330.00	440.00	110.00			11:31-13:01
		13:22	15-18	10	4.96	440.00	550.00	110.00			13:01-13:27
		10:12	27-30	15	4.99	0.00	110.00	110.00			Revised design. 10:07-10:31
		10:42	24-27	15	4.38	110.00	220.00	110.00			10:31-11:10
156	7/15/2019	11:18	21-24	5	3.63	220.00	330.00	110.00	550	-	11:10-11:41
		11:46	18-21	15	5.39	330.00	440.00	110.00			11:41-12:46
		12:50	15-18	2	4.62	440.00	550.00	110.00			12:46-13:14
		10:41	27-30	32	4.74	0.00	110.00	110.00			Revised design. 10:32-11:00
		11:13	24-27	75	2.81	110.00	220.00	110.00			11:00-11:44
157	7/15/2019	11:47	21-24	50	3.66	220.00	330.00	110.00	550	_	11:44-13:26
		13:47	18-21	10	5.71	330.00	440.00	110.00			13:26-13:51
		14:01	15-18	18	5.00	440.00	550.00	110.00			13:51-14:14
		13:17	27-30	20	6.14	0.00	110.00	110.00			Revised design. 13:14-13:36
		13:47	24-27	15	4.16	110.00	220.00	110.00			13:36-14:09
158	7/15/2019	14:22	21-24	18	4.62	220.00	330.00	110.00	550	_	14:09-14:43
		14:45	18-21	5	6.60	330.00	440.00	110.00			14:43-15:12
		15:18	15-18	2	5.80	440.00	550.00	110.00			15:12-15:28
		13:46	27-30	40	5.54	0.00	110.00	110.00			Make-up volume from I53. Revised design. 13:35-13:59
		14:12	24-27	30	3.96	110.00	268.00	158.00			48 extra gal. 13:59-14:37
	7/15/2019	14:45	21-24	45	3.14	268.00	488.00	220.00			110 extra gal. 14:37-15:40
159		16:04	18-21	20	6.56	488.00	708.00	220.00	928	-	110 extra gal. 15:40-16:10
		16:20	15-18	10	6.32	708.00	798.00	90.00			110 extra gal. 16:10-16:24
	7/16/2019	7:46	15-18	5	6.76	0.00	130.00	130.00			7:44-8:02
	.,	14:06	27-30	40	5.32	0.00	110.00	110.00			Revised design. 13:51-14:25
		14:46	24-27	35	3.73	110.00	220.00	110.00			14:25-15:15
	7/15/2019	15:18	21-24	55	2.78	220.00	330.00	110.00			15:15-15:42
160		16:04	18-21	35	3.51	330.00	355.00	25.00	550	550 -	15:42-16:24
		7:47	18-21	2	3.52	0.00	85.00	85.00			7:44-8:14
	7/16/2019	8:19	15-18	2	5.82	85.00	195.00	110.00			8:14-8:35
		0.10	10-10		0.02	03.00	190.00	110.00			0.14-0.00







		Table 1									
			Inication Double	toto otto o	Flam Data	Volu	me of Solution Inj	ected	T-t-I O-II D		
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Adjusted Total	Comments
						Weter (gar)	weter (gar)	rei iiitei vai			
		14:44	27-30	40	5.02	0.00	110.00	110.00			Revised design. 14:33-15:04
	7/15/2019	15:12	24-27	50	3.46	110.00	220.00	110.00			15:04-15:40
I61		16:03	21-24	45	3.40	220.00	246.00	26.00	550		15:40-16:24
101		7:47	21-24	20	3.32	0.00	84.00	84.00	550	-	7:44-8:13
	7/16/2019	8:19	18-21	40	3.93	84.00	194.00	110.00			8:13-8:50
		9:02	15-18	10	5.24	194.00	304.00	110.00			8:50-9:14
	7/45/0040	15:43	27-30	5	4.46	0.00	110.00	110.00			Revised design. 15:29-15:53
	7/15/2019	16:03	24-27	50	2.19	110.00	176.00	66.00			15:53-16:24
		7:47	24-27	38	2.85	0.00	44.00	44.00			7:44-8:01
162		8:13	21-24	60	3.42	44.00	154.00	110.00	550	-	8:01-8:54
	7/16/2019	9:03	18-21	35	5.71	154.00	264.00	110.00			8:54-9:22
		9:37	15-18	12	5.20	264.00	374.00	110.00			9:22-9:45
		8:08	27-30	10	6.63	0.00	110.00	110.00			Revised design. 8:07-8:38
		9:02	24-27	60	2.13	110.00	220.00	110.00			8:38-9:36
163	7/16/2019	11:08	21-24	80	0.50	220.00	260.00	40.00	550		Stalled out. Pulling to next interval. 9:36-10:55
100	1710/2013	11:47	18-21	20	6.13	260.00	440.00	180.00	550	_	10:55-11:48. Extra volume from previous interval.
		11:47	15-18	10	5.58	440.00	550.00	110.00			11:48-12:09
		8:41	27-30	45	4.95	0.00	110.00	110.00			
		9:22	27-30	30	4.95	110.00	220.00	110.00			Revised design. 8:39-9:03
164	7/40/0040								550		9:03-9:47
104	7/16/2019	9:59	21-24	10	6.56	220.00	330.00	110.00	550	-	9:47-10:19
		10:30	18-21	25	5.93	330.00	440.00	110.00			10:19-10:42
		10:44	15-18	10	6.72	440.00	550.00	110.00			10:42-11:01
		9:23	27-30	42	5.10	0.00	110.00	110.00			Revised design. 9:18-9:55
		10:00	24-27	50	4.32	110.00	220.00	110.00			9:55-10:24
165	7/16/2019	10:31	21-24	65	0.87	220.00	224.00	4.00	550	-	No flow. Pulling to next interval. 10:24-10:35
		11:11	18-21	25	4.18	224.00	440.00	216.00			10:35-11:50. Extra volume from previous interval.
		11:57	15-18	15	4.97	440.00	550.00	110.00			11:50-12:11
		10:00	27-30	45	3.79	0.00	110.00	110.00			Revised design. 9:46-10:28
		10:59	24-27	55	2.95	110.00	220.00	110.00			10:28-10:50
166	7/16/2019	11:11	21-24	65	2.22	220.00	330.00	110.00	550	-	10:50-11:52
		13:29	18-21	20	6.01	330.00	440.00	110.00			11:52-13:29
		13:34	15-18	15	4.48	440.00	550.00	110.00			13:29-13:52
		11:11	27-30	25	5.45	0.00	110.00	110.00			Revised design. 11:03-11:21
		12:02	24-27	45	3.74	110.00	220.00	110.00			11:21-11:58
167	7/16/2019	12:07	21-24	15	4.39	220.00	330.00	110.00	550	-	11:58-13:24
		13:34	18-21	20	3.60	330.00	440.00	110.00			13:24-14:15
		14:26	15-18	5	6.30	440.00	550.00	110.00			14:15-14:34
		13:26	27-30	45	5.87	0.00	110.00	110.00			Revised design. 13:09-13:43
		13:51	24-27	70	2.34	110.00	188.00	78.00			Stalled out. Pulling to next interval. 13:43-14:50
168	7/16/2019	15:12	21-24	15	4.39	188.00	330.00	142.00	550	-	14:50-15:38
		15:42	18-21	10	5.39	330.00	440.00	110.00			15:38-16:02
		16:17	15-18	35	5.57	440.00	550.00	110.00			16:02-16:23
		13:27	27-30	25	6.48	0.00	110.00	110.00			Revised design. 13:22-13:41
		13:52	24-27	15	4.52	110.00	220.00	110.00			13:41-14:21
169	7/16/2019	15:06	21-24	25	5.36	220.00	330.00	110.00	550	-	14:21-15:06
		15:11	18-21	15	5.38	330.00	440.00	110.00			15:06-15:32
		15:39	15-18	2	5.65	440.00	550.00	110.00			15:32-15:54
		14:17	27-30	45	4.10	0.00	110.00	110.00			Revised design. 13:59-14:44
		14:54	24-27	85	0.42	110.00	126.00	16.00			No flow at all. Pulling to next interval. 14:44-14:55
170	7/16/2019	15:13	21-24	48	3.52	126.00	330.00	204.00	550		14:55-15:58
170		16:05	18-21	20	6.39	330.00	440.00	110.00	550	-	15:58-16:17
		16:30	15-18	15	4.97	440.00	456.00	16.00			16:17-16:31
	7/17/2019	8:00	15-18	5	4.45	0.00	94.00	94.00			7:49-8:09







	Table 1										
						Volu	ne of Solution Inj	ected			
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Adjusted Total	Comments
		14:44	27-30	50	2.91	0.00	110.00	110.00			Revised design. 14:36-15:09
	7/16/2019	15:13	24-27	45	4.92	110.00	220.00	110.00			15:09-15:33
171		15:34	21-24	75	1.47	220.00	261.00	41.00	550		15:33-16:31
1/1		8:00	21-24	75	2.13	0.00	69.00	69.00	550	-	7:49-8:10
	7/17/2019	8:16	18-21	40	3.68	69.00	179.00	110.00			8:10-8:42
		8:45	15-18	35	4.61	179.00	289.00	110.00			8:42-9:07
	7/16/2019	16:03	27-30	20	5.44	0.00	110.00	110.00			Revised design. 15:55-16:17
	7710/2013	16:19	24-27	25	5.32	110.00	130.00	20.00			16:17-16:31
172		8:00	24-27	20	5.02	0.00	94.00	94.00	550		7:49-8:04
172	7/17/2019	8:17	21-24	24	4.74	94.00	204.00	110.00	330		8:04-8:43
	7/17/2019	8:47	18-21	20	5.26	204.00	314.00	110.00			8:43-8:59
		9:02	15-18	22	5.98	314.00	420.00	106.00			8:59-9:13
		8:01	27-30	40	4.68	0.00	110.00	110.00			Revised design. 7:58-8:22
		8:25	24-27	60	1.73	110.00	220.00	110.00			8:22-9:28
173	7/17/2019	9:47	21-24	62	2.23	220.00	330.00	110.00	550	-	9:28-10:13
		10:15	18-21	25	5.98	330.00	440.00	110.00			10:13-10:34
		10:43	15-18	30	6.06	440.00	550.00	110.00			10:34-10:53
		8:30	27-30	25	5.38	0.00	133.00	133.00			Make up volume for I1, 116 extra gallons. Revised design. 8:13-8:36
		9:02	24-27	40	4.10	133.00	266.00	133.00			8:36-9:10
174	7/17/2019	9:10	21-24	20	5.58	266.00	399.00	133.00	666	-	9:10-9:39
		9:47	18-21	35	5.27	399.00	533.00	134.00			9:39-10:04
		10:08	15-18	0	6.44	533.00	666.00	133.00			10:04-10:32
		9:21	27-30	35	4.34	0.00	110.00	110.00			Revised design. 9:09-9:38
		9:47	24-27	30	4.77	110.00	220.00	110.00			9:38-10:02
175	7/17/2019	10:04	21-24	45	4.16	220.00	330.00	110.00	550	-	10:02-10:48
		10:54	18-21	40	5.22	330.00	440.00	110.00			10:48-11:11
		11:19	15-18	2	4.50	440.00	550.00	110.00			11:11-11:31
		9:27	27-30	34	5.27	0.00	110.00	110.00			Revised design. 9:25-9:46
		9:48	24-27	28	4.62	110.00	220.00	110.00			9:46-10:10
176	7/17/2019	10:17	21-24	30	3.98	220.00	330.00	110.00	550	-	10:10-10:46
		10:55	18-21	35	4.42	330.00	440.00	110.00			10:46-11:10
		11:19	15-18	10	6.04	440.00	550.00	110.00			11:10-11:35
		10:34	27-30	20	4.96	0.00	110.00	110.00			Revised design. 10:33-10:54
		10:55	24-27	60	3.02	110.00	220.00	110.00			10:54-11:33
177	7/47/0040	11:44	21-24	55	3.04	220.00	330.00	110.00	550		11:33-13:01
177	7/17/2019	13:09	18-21	5	4.31	330.00	382.00	52.00	550	-	13:01-13:14. Incomplete. Will return to later today. Starting last location of source so we don't end up with only one location at the end of the day.
		14:43	18-21	25	5.24	0.00	58.00	58.00			14:43-15:17
		15:18	15-18	10	4.22	58.00	168.00	110.00			15:17-15:50
		11:10	27-30	30	3.68	0.00	110.00	110.00			Revised design. 10:57-11:34
		11:44	24-27	30	3.93	110.00	220.00	110.00			11:34-11:59
178	7/17/2019	13:10	21-24	60	1.60	220.00	330.00	110.00	550	-	11:59-13:58
		14:04	18-21	52	4.12	330.00	440.00	110.00			13:58-14:26
		15:18	15-18	5	4.15	440.00	550.00	110.00			14:25-15:31
		11:44	27-30	35	5.83	0.00	110.00	110.00			Revised design. 11:32-11:53
		13:09	24-27	30	4.38	110.00	220.00	110.00			11:53-13:23
179	7/17/2019	13:25	21-24	35	5.38	220.00	330.00	110.00	0 550 0	-	13:23-13:57
		14:04	18-21	25	5.70	330.00	440.00	110.00			13:57-14:16
		14:27	15-18	10	580.00	440.00	550.00	110.00			14:16-14:43









	Injection Point Date Tim		Inite skipes Doorth			Volu	me of Solution Inje	ected			
Injection Point		Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Adjusted Total	Comments
		13:08	27-30	28	4.41	0.00	110.00	110.00			Revised design. 11:55-13:18
		13:23	24-27	60	3.70	110.00	220.00	110.00			13:18-13:50
180	7/17/2019	13:51	21-24	40	5.69	220.00	330.00	110.00	550	-	13:50-14:29
		14:44	18-21	15	5.81	330.00	440.00	110.00			14:29-15:01
		15:18	15-18	2	4.06	440.00	550.00	110.00			15:01-15:47
		13:19	27-30	25	6.25	0.00	110.00	110.00			Revised design. 13:15-13:35
		13:39	24-27	40	6.14	110.00	220.00	110.00			13:35-14:02
181	7/17/2019	14:05	21-24	52	2.45	220.00	330.00	110.00	550	-	14:02-14:30
		14:44	18-21	10	5.79	330.00	440.00	110.00			14:30-14:59
		15:18	15-18	2	4.38	440.00	550.00	110.00			14:59-15:45

Total Gallons:

50,327

APPENDIX B: Barrier	s Injection Logs	







	l able 2								- S-ECHTHOLOGICAL CONTROL THE SHOCK CONTROL CO	
						Volur	me of Solution Inj	ected		
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Comments
		9:45	27-30	25	4.52	0.00	150.00	150.00		Starting with S-MicroZVI. 9:31-10:23
		10:34	24-27	28	4.71	150.00	300.00	150.00		10:23-11:01
182	7/18/2019	11:06	21-24	40	5.62	300.00	450.00	150.00	750	11:01-11:38
	•	11:52	18-21	55	3.62	450.00	600.00	150.00		11:38-13:40
	•	13:42	15-18	25	6.37	600.00	750.00	150.00		13:40-14:04
		9:55	27-30	25	4.59	0.00	150.00	150.00		Starting with S-MicroZVI. 9:52-10:21
		10:34	24-27	24	4.74	150.00	300.00	150.00		10:21-11:06
183	7/18/2019	11:07	21-24	45	3.22	300.00	450.00	150.00	750	11:06-13:34
		13:36	18-21	50	3.41	450.00	600.00	150.00		13:34-14:22
		14:29	15-18	5	4.92	600.00	750.00	150.00		14:22-15:13
		10:12	27-30	28	4.70	0.00	150.00	150.00		Starting with S-MicroZVI. 10:06-10:59
	•	11:08	24-27	25	3.96	150.00	300.00	150.00		10:59-11:38
184	7/18/2019	11:54	21-24	15	4.86	300.00	450.00	150.00	750	11:38-13:53
		13:35	18-21	40	3.52	450.00	600.00	150.00		13:53-14:16
	•	14:23	15-18	30	4.76	600.00	750.00	150.00		14:16-14:55
		10:33	27-30	30	4.02	0.00	150.00	150.00		Starting with S-MicroZVI. 10:16-11:02
		11:08	24-27	45	2.35	150.00	300.00	150.00		11:02-11:50
185	7/18/2019	11:53	21-24	55	4.80	300.00	450.00	150.00	750	11:50-13:59
		14:32	18-21	26	5.09	450.00	600.00	150.00		13:59-14:37
		14:40	15-18	10	4.38	600.00	750.00	150.00		14:37-15:16
		14:28	27-30	25	5.39	0.00	150.00	150.00		Starting with S-MicroZVI. 14:20-15:02
	7/19/2010	15:30	24-27	30	6.28	150.00	300.00	150.00		15:02-15:43
	7/18/2019	15:53	21-24	50	2.64	300.00	450.00	150.00		Switch to AquaZVI at 403 gal. 15:43-16:25
186	•	16:28	18-21	10	4.31	450.00	468.00	18.00	750	16:25-16:47
		7:52	18-21	10	4.34	0.00	132.00	132.00		7:48-8:26
	7/19/2019	8:42	15-18	5	5.01	132.00	282.00	150.00		8:26-9:05
		15:14	27-30	35	5.42	0.00	150.00	150.00		Starting with S-MicroZVI. 15:01-15:32
	7/18/2019	15:53	24-27	22	5.29	150.00	300.00	150.00		Switch to AguaZVI at 250 gal. 15:32-16:14
		16:27	21-24	65	2.70	300.00	367.00	67.00		16:14-16:47
187		7:53	21-24	18	4.73	0.00	83.00	83.00	663	7:48-8:34
	7/19/2019	8:40	18-21	58	2.46	83.00	233.00	150.00		8:34-9:42
		9:56	15-18	30	6.32	233.00	296.00	63.00		Surfacing up borehole. Couldn't stop. Omitted volume injected in I92. 9:42-10:07
		15:29	27-30	35	5.34	0.00	150.00	150.00		Starting with S-MicroZVI. 15:22-15:50
	7/18/2019	15:56	24-27	35	5.24	150.00	300.00	150.00		Switch to AquaZVI at 170 gal. 15:50-16:29
100	•	16:29	21-24	65	2.60	300.00	320.00	20.00	750	16:29-16:47
188		7:53	21-24	65	1.98	0.00	130.00	130.00	750	7:48-8:37
	7/19/2019	8:41	18-21	65	2.15	130.00	280.00	150.00		8:37-9:29
	•	9:39	15-18	35	3.64	280.00	430.00	150.00		9:29-10:14
	7/18/2019	15:54	27-30	30	6.33	0.00	150.00	150.00		AquaZVI from beginning (Same for all subsequent locations). 15:31-16:09
	// 10/2019	16:16	24-27	28	4.70	150.00	195.00	45.00		16:09-16:47
189		7:53	24-27	40	4.76	0.00	105.00	105.00	750	7:48-8:24
109	7/19/2019	8:41	21-24	60	4.20	105.00	255.00	150.00	750	8:24-9:07
	1/ 19/2019	9:52	18-21	20	5.63	255.00	405.00	150.00		9:07-9:48
		9:53	15-18	10	5.05	405.00	555.00	150.00		9:48-10:20
		9:06	27-30	60	3.28	0.00	150.00	150.00		9:06-9:35
	•	9:41	24-27	50	3.83	150.00	300.00	150.00		9:35-10:50
190	7/19/2019	10:55	21-24	35	4.86	300.00	450.00	150.00	750	10:50-11:43
190		12:44	18-21	5	4.44	450.00	600.00	150.00		11:43-13:18
	-									







Pubble P		Table 2									- Security Commence of the Com
Processor Poster Communication Communi							Volum	me of Solution Inj	ected		
1119	Injection Point	Date	Time								Comments
191			10:28	27-30	32	5.61	0.00	150.00	150.00		10:09-10:58
13:17 19:21 30											
1444 15-18 10 5-39 00.000 730.00 150.00 1	I91	7/19/2019				2.09	300.00	450.00		750	
192 7/19/2019 11/10 24/27 23			13:17	18-21	30	4.71	450.00	600.00	150.00		13:15-13:58
Page			14:44	15-18	10	5.39	600.00	750.00	150.00		13:58-14:42
192 7190219 1244 21-24 40 3.29 500.00 440.00 150			10:28	27-30	40	5.32	0.00	150.00	150.00		10:21-11:01
192 7190019 12.44 21.24 40 3.29 300.00 450.00 150.00 13			11:10	24-27	30	4.27	150.00	300.00	150.00	837	11:01-11:38
194 15-14 15-18 10 4.87 600.00 637.00 150.00 150.00 100	192	7/19/2019		21-24	40	3.29	300.00	450.00			11:38-13:02
198 198			13:08	18-21	22	5.62	450.00	600.00	150.00		13:02-13:52
193 1246 2447 35 3.75 150,00 300,00 150,00 150,00 150,00 150,00 145,01 135,0			13:54	15-18	10	4.87	600.00	837.00	237.00		Extra volume from 87. 13:52-15-12
193			10:44	27-30	35	5.78	0.00	150.00	150.00		10:38-11:27
Heat			12:45	24-27	35	3.75	150.00	300.00	150.00		11:27-13:06
1539	193	7/19/2019	13:08	21-24	65	1.99	300.00	450.00	150.00	750	13:06-13:55
13.52 27.30 30				18-21		3.96	450.00	600.00	150.00		13:55-14:52
194 15:14 24:27 60 1.89 15:00 30:00 15:00			15:39	15-18	2	5.03	600.00	750.00	150.00		14:52-15:43
15.55 21.24 55			13:52	27-30	30	4.45	0.00	150.00	150.00		13:52-14:28
194		7/19/2019	15:14	24-27	60	1.89	150.00	300.00	150.00		14:28-15:52
185 18-21 15 15 10 12 15 15 10 10 10 10 10 10	10.4		15:55	21-24	55	4.01	300.00	330.00	30.00	750	15:52-16:05
1943	194		8:25	21-24	25	6.28	0.00	120.00	120.00	750	8:09-8:40
195		7/22/2019	9:18	18-21	15	5.70	120.00	270.00	150.00		8:40-9:37
196 18:00 24-27 45 4.18 15:00 287.00 137.00 13.00			9:43	15-18	5	5.66	270.00	420.00	150.00		9:37-10:09
16:00 24:27 45		7/40/0040	14:48	27-30	32	4.64	0.00	150.00	150.00		14:46-15:29
196		7/19/2019	16:00	24-27	45	4.18	150.00	287.00	137.00		15:29-16:05
196 1972/2019 8.26 21-24 22 5.32 13.00 163.00 150.00 150.00 16	105	7/22/2019	8:10	24-27	5	2.02	0.00	13.00	13.00	750	8:09-8:13
196 9.39 18-21 22 4.31 163.00 313.00 150.00 150.00 150.00 10.23 11.01 10.24 15.18 2 4.70 0.00 150.00 150.00 150.00 10.23 11.01 10.23 11.01 10.23 10.01 17.00 1	195		8:26	21-24	22	5.32	13.00	163.00	150.00	750	8:13-9:35
196			9:39	18-21	22	4.31	163.00	313.00	150.00		9:35-10:23
196			10:24	15-18	2	4.70	0.00	150.00	150.00		10:23-11:01
196		7/19/2019	15:14	27-30	25	4.28	0.00	133.00	133.00		15:12-16:05
96			8:10	27-30	30	2.31	0.00	17.00	17.00		8:09-8:16
197 198 198 199	106		8:26	24-27	25	4.68	17.00	167.00	150.00	750	8:16-9:29
11:42	190	7/22/2019	9:38	21-24	55	3.99	167.00	317.00	150.00	750	9:29-10:22
Part			10:33	18-21	60	1.64	317.00	467.00	150.00		10:22-11:40
197 197			11:42	15-18	40	4.38	467.00	617.00	150.00		11:40-13:02
197 7/22/2019 10:54 21-24 15 4.09 300.00 450.00 150.00 750 10:44-11:16 11:16 11:18 18-21 12 4.68 450.00 600.00 150.00 150.00 12:55-13:32 12:55-13:32 10:25 27-30 28 5.96 0.00 150.00 150.00 150.00 10:45-11:17 10:50 24-27 25 4.02 150.00 300.00 150.00 150.00 10:45-11:17 11:19 21-24 45 3.82 300.00 450.00 150.00 150.00 10:45-11:17 11:158 13:13 18-21 2 4.36 450.00 600.00 150.00 150.00 12:55-13:42 12:55-13:42 13:48 15-18 2 4.14 600.00 750.00 150.00 150.00 13:42-14:30 13:42-14:30 11:12 27-30 75 2.08 0.00 88.00 88.00 88.00 11:44 24-27 72 2.88 88.00 300.00 212.00 150.00 1			9:17	27-30	40	5.68	0.00	150.00	150.00		9:02-9:47
11:19			9:57	24-27	35	3.96	150.00	300.00	150.00		9:47-10:44
13:13	197	7/22/2019	10:54	21-24	15	4.09	300.00	450.00	150.00	750	10:44-11:16
10:25 27-30 28 5.96 0.00 150.00 150.00 10:4-10:45 10:4-10:45 10:50 24-27 25 4.02 150.00 300.00 150.00 150.00 10:45-11:17			11:19	18-21	12	4.68	450.00	600.00	150.00		11:16-11:58
10:50 24-27 25 4.02 150.00 300.00 150.00 10:45-11:17 10:45-11:17 10:45-11:18 11:19 21-24 45 3.82 300.00 450.00 150.00 150.00 12:55-13:42 13:13 18-21 2 4.36 450.00 600.00 150.00 150.00 12:55-13:42 13:48 15-18 2 4.14 600.00 750.00 150.00 150.00 13:42 13:43 13:42 27-30 75 2.08 0.00 88.00 88.00 88.00 88.00 11:14 24-27 72 2.88 88.00 300.00 212.00 13:42-14:12 13:84-14:1			13:13	15-18	18	4.34	600.00	750.00	150.00		12:55-13:32
198 7/22/2019 11:19 21-24 45 3.82 300.00 450.00 150.00 750 11:17-11:58 13:13 18-21 2 4.36 450.00 600.00 150.00 150.00 12:55-13:42 12:55-13:42 13:48 15-18 2 4.14 600.00 750.00 150.00 150.00 13:42-14:30 13:42-14:30 11:12 27-30 75 2.08 0.00 88.00 88.00 88.00 88.00 11:44 24-27 72 2.88 88.00 300.00 212.00 13:42-14:12 13:81-14:12 13:81-14:12 15:10 18-21 72 3.05 450.00 600.00 150.00 150.00 150.00 150.00 150.01 15:04-16:01 15:			10:25	27-30	28	5.96	0.00	150.00	150.00		10:14-10:45
13:13 18-21 2 4.36 450.00 600.00 150.00 12:55-13:42 12:43:48 15-18 2 4.14 600.00 750.00 150.00 13:42-14:30 13:48 15-18 2 4.14 600.00 750.00 150.00 13:42-14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:30 13:42 14:			10:50	24-27	25	4.02	150.00	300.00	150.00		10:45-11:17
13:48 15-18 2 4.14 600.00 750.00 150.00 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 13:42-14:30 14:14 24-27 72 2.88 88.00 300.00 212:00 11:38-14:12 15:10 18-21 72 3.05 450.00 600.00 150.00 750 14:12-15:04 15:04-16:01	198	7/22/2019	11:19	21-24	45	3.82	300.00	450.00	150.00	750	11:17-11:58
11:12 27-30 75 2.08 0.00 88.00 88.00 88.00					2						
199 7/22/2019 14:16 21-24 70 2.61 300.00 450.00 150.00 750 14:12-15:04 15:10 18-21 72 3.05 450.00 600.00 150.00 150.00 15:00-15:00 15:04-16:01			13:48	15-18	2	4.14	600.00	750.00	150.00		13:42-14:30
199 7/22/2019 14:16 21-24 70 2.61 300.00 450.00 150.00 750 14:12-15:04 15:10 18-21 72 3.05 450.00 600.00 15:0.00 15:04-16:01			11:12	27-30	75	2.08	0.00	88.00	88.00		Stalled out. Pulling to next interval. 11:05-11:38
15:10 18-21 72 3.05 450.00 600.00 150.00 15:04-16:01			11:44	24-27	72	2.88	88.00	300.00	212.00		11:38-14:12
	199	7/22/2019	14:16	21-24	70	2.61	300.00	450.00	150.00	750	14:12-15:04
16:02 15-18 70 3.11 600.00 750.00 150.00 16:01-16:45			15:10	18-21	72	3.05	450.00	600.00	150.00		15:04-16:01
			16:02	15-18	70	3.11	600.00	750.00	150.00		16:01-16:45







	l able 2									
						Volu	me of Solution Inj	ected		
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Comments
		13:10	27-30	32	4.63	0.00	150.00	150.00		13:09-13:40
		13:47	24-27	15	4.40	150.00	300.00	150.00		13:40-14:32
I100	7/22/2019	14:34	21-24	20	4.38	300.00	450.00	150.00	750	14:32-15:01
		15:10	18-21	10	5.27	450.00	600.00	150.00		15:01-15:42
		15:53	15-18	25	6.05	600.00	750.00	150.00		15:42-16:01
		13:38	27-30	40	5.38	0.00	150.00	150.00		13:36-14:13
		14:31	24-27	26	4.27	150.00	300.00	150.00		14:13-14:47
I101	7/22/2019	14:47	21-24	42	3.76	300.00	450.00	150.00	750	14:47-15:43
		15:52	18-21	20	4.75	450.00	600.00	150.00		15:43-16:07
		16:16	15-18	15	5.03	600.00	750.00	150.00		16:07-16:50
		14:34	27-30	32	4.68	0.00	150.00	150.00		14:31-15:02
		15:10	24-27	25	5.64	150.00	300.00	150.00		15:02-15:46
1102	7/22/2019	15:52	21-24	22	4.98	300.00	450.00	150.00	750	15:46-16:08
		16:13	18-21	40	5.82	450.00	600.00	150.00		16:08-16:36
		16:40	15-18	35	6.15	600.00	600.00	0.00		16:36-16:51
	7/23/2019	7:55	15-18	5	4.35	0.00	150.00	150.00		7:50-8:24
	7/22/2019	16:02	27-30	30	4.91	0.00	150.00	150.00		16:03-16:32
		16:40	24-27	20	4.82	150.00	150.00	0.00		16:32-16:51
I103		7:56	24-27	15	4.01	0.00	150.00	150.00	750	7:50-8:44
	7/23/2019	9:02	21-24	50	3.00	150.00	300.00	150.00		8:44-9:28
		9:49	18-21	35	5.42	300.00	450.00	150.00		9:28-9:55
		10:06	15-18	2	6.20	450.00	600.00	150.00		9:55-10:21
		7:56 8:48	27-30 24-27	40 45	5.35 6.03	0.00 150.00	150.00 300.00	150.00 150.00		7:58-8:28 8:28-9:01
I104	7/23/2019	9:08	24-27	45 65	3.05	300.00	450.00	150.00	750	9:01-9:58
1104	1/23/2019	10:13	18-21	20	4.48	450.00	600.00	150.00	750	9:58-10:34
		10:13	15-18	16	4.68	600.00	750.00	150.00		10:34-11:04
		8:28	27-30	28	4.78	0.00	150.00	150.00		8:09-8:41
		8:48	24-27	46	2.29	150.00	300.00	150.00		8:41-9:18
1105	7/23/2019	9:28	21-24	65	2.68	300.00	450.00	150.00	750	9:18-10:16
		10:14	18-21	60	3.07	450.00	600.00	150.00		10:16-11:22
		11:27	15-18	25	6.54	600.00	750.00	150.00		11:22-11:49
		8:28	27-30	20	5.06	0.00	150.00	150.00		8:26-9:02
		9:08	24-27	10	5.51	150.00	300.00	150.00		9:02-9:59
	=10010040	10:14	21-24	70	1.08	300.00	345.00	45.00	750	Too tight. Pulled up 1' to achieve flow. 9:59-10:29
I106	7/23/2019	10:32	20-23	65	1.55	345.00	473.00	128.00	750	Very low flow. Pulling up to next regular interval. 10:29-11:59
		12:09	18-21	50	4.89	473.00	600.00	127.00		11:59-13:24
		13:30	15-18	5	4.34	600.00	750.00	150.00		13:24-14:05
		10:44	27-30	25	4.17	0.00	150.00	150.00		10:35-11:24
		11:31	24-27	14	4.18	150.00	300.00	150.00		11:24-12:06
I107	7/23/2019	12:09	21-24	30	5.27	300.00	450.00	150.00	750	12:06-13:32
		13:33	18-21	5	4.39	450.00	600.00	150.00		13:32-14:36
		14:42	15-18	4	4.27	600.00	750.00	150.00		14:36-15:00
		11:07	27-30	40	4.92	0.00	150.00	150.00		11:05-11:55
		12:08	24-27	74	1.65	150.00	236.00	86.00		Stalled out. Pulling to next interval. 11:55-13:30
I108	7/23/2019	13:32	21-24	75	2.36	236.00	401.00	165.00	750	Flow rate wandering up and down. Possibly gravels moving? 13:30-14:39
		14:37	18-21	55	4.18	401.00	600.00	199.00		14:39-15:19
		15:20	15-18	24	5.13	600.00	750.00	150.00		15:19-15:54







	Table 2									SANGERICA MARINE SECRETARIO MARINE MA
						Volu	me of Solution Inj	ected		
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Comments
		11:55	27-30	35	5.92	0.00	150.00	150.00		11:52-12:23
		13:30	24-27	28	4.54	0.00	150.00	150.00		13:04-13:41
I109	7/23/2019	13:48	21-24	40	4.13	150.00	300.00	150.00	750	13:41-14:37
		15:22	18-21	25	4.33	300.00	450.00	150.00		14:37-15:22
		15:24	15-18	18	5.50	450.00	600.00	150.00		15:22-16:10
		14:09	27-30	35	3.72	0.00	150.00	150.00		14:07-14:46
	7/00/0040	15:29	24-27	40	4.76	150.00	300.00	150.00		14:46-15:23
I110	7/23/2019	15:42	21-24	28	5.38	300.00	450.00	150.00	750	15:23-16:01
		16:44	18-21	20	5.49	450.00	600.00	150.00		16:01-16:44
	7/24/2019	7:49	15-18	6	5.63	0.00	150.00	150.00		7:47-8:25
		15:34	27-30	30	4.96	0.00	150.00	150.00		15:01-15:42
	7/23/2019	16:03	24-27	32	5.56	150.00	300.00	150.00		15:42-16:20
1444		16:44	21-24	25	5.43	300.00	405.00	105.00	750	16:20-16:44
l1111		7:50	21-24	25	3.46	0.00	45.00	45.00	750	7:47-8:04
	7/24/2019	8:44	18-21	55	3.62	45.00	195.00	150.00		8:04-8:48
		8:48	15-18	50	4.63	195.00	345.00	150.00		8:48-9:37
	7/00/00/0	16:01	27-30	40	5.43	0.00	150.00	150.00		15:58-16:22
	7/23/2019	16:43	24-27	65	2.32	150.00	225.00	75.00	1	16:22-16:44
I112		8:28	21-24	74	1.18	0.00	9.70	9.70	750	No flow. Pulling to next interval. 8:26-8:41
	7/24/2019	9:14	18-21	35	5.63	9.70	365.00	355.30		8:41-10:38
		10:50	15-18	30	4.13	365.00	525.00	160.00		10:38-11:29
	7/23/2019	16:15	27-30	32	5.59	0.00	120.00	120.00		16:14-16:44
		7:50	27-30	24	4.01	0.00	30.00	30.00		7:47-7:55
1440	7/24/2019	8:28	24-27	15	4.06	30.00	180.00	150.00	750	7:55-8:29
I113		9:14	21-24	28	4.26	180.00	330.00	150.00	750	8:29-9:23
		9:35	18-21	56	3.96	330.00	480.00	150.00		9:23-9:49
		9:58	15-18	45	3.87	480.00	630.00	150.00		9:49-10:17
		8:05	27-30	32	5.45	0.00	150.00	150.00		8:04-8:33
		8:49	24-27	60	3.79	150.00	300.00	150.00		8:33-9:15
I114	7/24/2019	10:07	21-24	55	4.32	300.00	450.00	150.00	750	9:15-10:01
		10:32	18-21	15	5.63	450.00	600.00	150.00		10:01-10:59
		11:06	15-18	15	6.14	600.00	750.00	150.00		10:50-11:29
		9:41	27-30	40	5.78	0.00	150.00	150.00		9:39-10:24
		10:28	24-27	22	4.34	150.00	300.00	150.00		10:24-10:57
I115	7/24/2019	11:06	21-24	60	3.29	300.00	450.00	150.00	750	10:57-11:55
		13:17	18-21	25	4.41	450.00	600.00	150.00		11:55-13:24
		13:32	15-18	10	4.33	600.00	750.00	150.00		13:24-14:10
		10:25	29.08-30	24	4.70	0.00	47.00	47.00		20° angled boring. 10:18-10:31
		10:39	26.28-29.08	28	4.59	47.00	188.00	141.00		10:31-11:02
1446	7/24/2019	11:19	23.46-26.28	48	3.44	188.00	328.00	140.00	750	11:02-11:57
I116	//24/2019	13:24	20.64-23.46	55	4.39	328.00	469.00	141.00	/50	11:57-13:24
		13:34	17.82-20.64	10	4.38	469.00	610.00	141.00		13:24-13:53
		14:09	15-17.82	2	4.57	610.00	750.00	140.00		13:53-14:35
		11:33	27-30	30	5.18	0.00	150.00	150.00		Water rising rapidly in nearby SM-04. At 3' dtw after 90 gallons. 11:31-13:30
		13:32	24-27	0	4.17	150.00	300.00	150.00		13:30-14:07
I117	7/24/2019	14:41	21-24	60	3.01	300.00	450.00	150.00	750	14:07-15:30
		15:47	18-21	30	5.54	450.00	600.00	150.00		15:30-16:07
		16:13	15-18	2	4.73	600.00	750.00	150.00		16:07-16:41







							I able 2				
						Volu	me of Solution Inj	ected			
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Comments	
		13:16	29.08-30	50	5.29	0.00	47.00	47.00		20° angled boring. 13:09-13:22	
		13:27	26.28-29.08	30	5.31	47.00	188.00	141.00		13:22-13:59	
1118	7/24/2019	14:46	23.46-26.28	55	3.76	188.00	328.00	140.00	750	13:59-14:49	
1110	7/24/2019	14:55	20.64-23.46	22	4.37	328.00	469.00	141.00	750	14:49-15:28	
		16:03	17.82-20.64	45	3.72	469.00	610.00	141.00		15:28-16:12	
		16:13	15-17.82	20	4.37	610.00	750.00	140.00		16:12-16:55	
		14:15	27-30	32	4.72	0.00	150.00	150.00		14:13-14:47	
		14:52	24-27	30	6.08	150.00	300.00	150.00		14:47-15:22	
I119	7/24/2019	15:31	21-24	64	3.52	300.00	450.00	150.00	750	15:22-16:28	
1113		16:35	18-21	65	2.69	450.00	600.00	150.00	750	16:28-17:15	
		17:19	15-18	15	6.31	600.00	623.00	23.00		17:15-17:21	
	7/25/2019	7:48	15-18	2	4.54	0.00	127.00	127.00		7:44-8:20	
		14:39	29.08-30	50	4.79	0.00	47.00	47.00		20° angled boring. 14:36-14:46	
		14:53	26.28-29.08	45	4.88	47.00	188.00	141.00		14:46-15:25	
	7/24/2019	15:30	23.46-26:28	50	3.34	188.00	328.00	140.00		15:25-16:02	
I120	172 1120 10	16:13	20.64-23.46	40	5.03	328.00	469.00	141.00	750	16:02-16:45	
		17:06	17.82-20.64	5	5.18	469.00	610.00	141.00		16:45-17:17	
		17:20	15-17.82	2	5.34	610.00	627.00	17.00		17:17-17:21	
	7/25/2019	7:48	15-17.82	0	4.38	0.00	123.00	123.00		7:44-8:24	
	7/24/2019	16:45	27-30	20	4.89	0.00	150.00	150.00		16:41-17:06	
		17:21	24-27	55	4.38	150.00	175.00	25.00		17:06-17:21	
I121	7/25/2019	7:47	24-27	22	4.21	0.00	125.00	125.00	750	7:44-8:11	
		8:39	21-24	60	2.60	125.00	275.00	150.00		8:11-9:28	
	7/25/2019	9:40	18-21	40	3.76	275.00	425.00	150.00		9:28-10:24	
		10:43	15-18	10	5.06	425.00	575.00	150.00		10:24-10:56	
	7/24/2019	16:59	27-30	34	4.22	0.00	75.00	75.00		16:58-17:21	
		7:48	27-30	35	4.56	0.00	75.00	75.00		7:44-8:06	
I122	7/05/0040	8:38	24-27	35	4.14	75.00	225.00	150.00	750	8:06-8:48	
	7/25/2019	9:40	21-24 18-21	60	3.96 4.26	225.00 375.00	375.00 525.00	150.00 150.00		8:48-10:18 10:18-11:03	
		10:24 11:13	15-18	46 15	4.26	525.00	675.00	150.00		11:03-11:46	
		8:22	27-30	30	6.23	0.00	150.00	150.00		8:22-8:46	
		9:26	24-27	35	4.96	150.00	300.00	150.00		8:46-9:24	
I123	7/25/2019	9:40	21-24	55	3.86	300.00	450.00	150.00	750	9:24-10:21	
1125	1123/2019	10:31	18-21	58	2.99	450.00	600.00	150.00	750	10:21-11:12	
		11:29	15-18	15	6.62	600.00	750.00	150.00		11:12-11:57	
		9:04	27-30	24	5.80	0.00	150.00	150.00		8:42-9:26	
		9:41	24-27	10	4.57	150.00	300.00	150.00		9:26-10:18	
1124	7/25/2019	10:18	21-24	20	5.07	300.00	450.00	150.00	750	10:18-11:01	
		11:28	18-21	10	5.62	450.00	600.00	150.00	1	11:01-11:43	
		11:44	15-18	6	5.02	600.00	750.00	150.00		11:43-13:00	
		10:59	27-30	38	5.12	0.00	150.00	150.00		10:57-11:26	
		11:28	24-27	25	5.44	150.00	300.00	150.00		11:26-13:04	
I125	7/25/2019	13:08	21-24	50	3.12	300.00	450.00	150.00	750	13:04-13:53	
		14:07	18-21	25	5.33	450.00	600.00	150.00		13:53-14:25	
		14:27	15-18	30	6.15	600.00	750.00	150.00		14:25-14:50	
		11:50	27-30	32	4.82	0.00	150.00	150.00		11:48-13:07	
		13:08	24-27	28	5.14	150.00	300.00	150.00	1	13:07-13:44	
I126	7/25/2019	14:31	21-24	62	2.86	300.00	450.00	150.00	750	13:44-14:35	
		14:36	18-21	58	2.96	450.00	600.00	150.00		14:35-15:19	
		15:43	15-18	20	6.57	600.00	750.00	150.00		15:19-15:53	

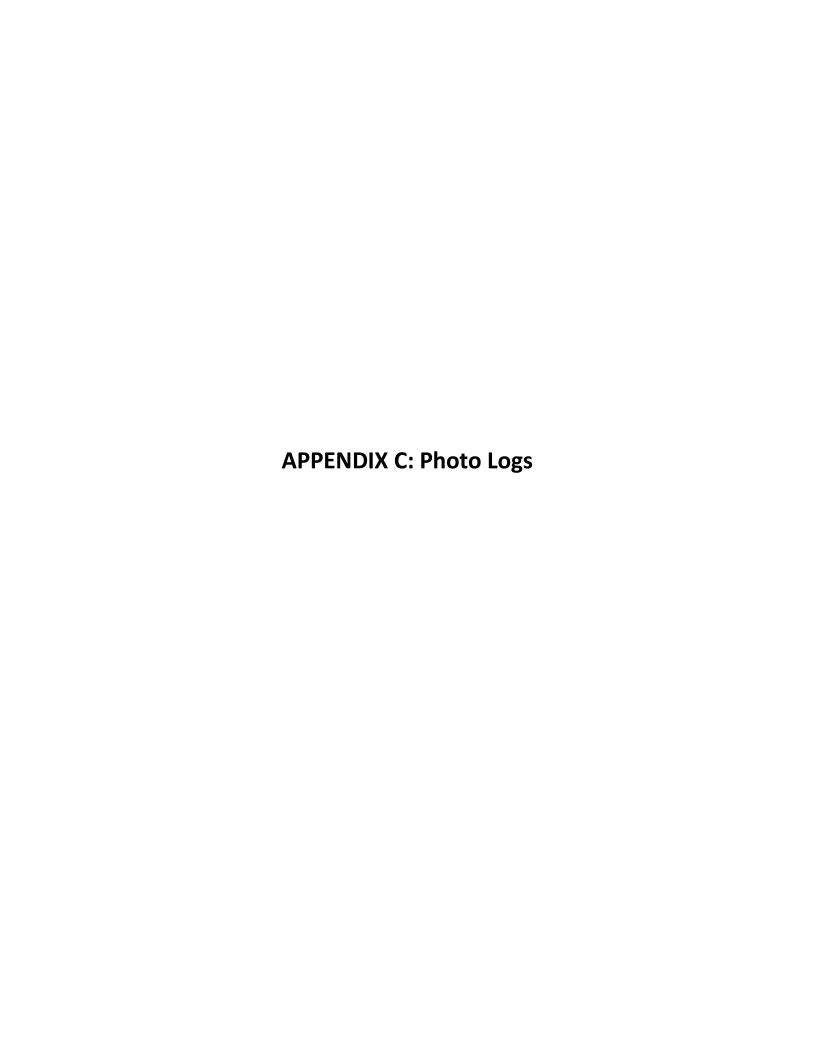






	133.5 2									
			to to off on Donath	Indeedfor	El Data	Volu	ne of Solution Inj	ected	Total Callers Day	
Injection Point	Date	Time	Injection Depth (feet)	Injection Pressure (psi)	Flow Rate (gpm)	Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval	Total Gallons Per Location	Comments
		12:45	27-30	30	4.40	0.00	150.00	150.00		12:39-13:24
		13:26	24-27	40	5.71	150.00	300.00	150.00		13:24-13:51
I127	7/25/2019	13:57	21-24	58	4.12	300.00	450.00	150.00	750	13:51-14:17
		14:22	18-21	55	3.91	450.00	600.00	150.00		14:17-15:06
		15:20	15-18	10	5.45	600.00	750.00	150.00		15:06-15:38
	7/05/00 10	13:04	27-30	15	1.78	0.00	128.00	128.00		Water rising rapidly in SM-03 at 40 gallons. Slowing down injection rate. Couldn't get full volume without immediate well rise to almost surface. Redistributing to next interval. 13:03-14:20
1400	7/25/2019	14:56	24-27	58	3.06	128.00	300.00	172.00	750	14:20-15:18
I128		15:28	21-24	60	2.84	300.00	450.00	150.00	750	15:18-16:34
		16:40	18-21	15	5.42	450.00	484.00	34.00		16:34-16:47
	7/26/2019	8:49	18-21	12	5.02	0.00	116.00	116.00		8:12-8:55
	7720/2019	8:53	15-18	10	4.38	116.00	266.00	150.00		8:55-9:32
		14:55	27-30	32	4.99	0.00	150.00	150.00		14:53-15:20
	7/25/2019	15:27	24-27	24	4.96	150.00	300.00	150.00		15:20-15:48
l129	1723/2013	15:52	21-24	55	3.24	300.00	450.00	150.00	750	15:48-16:24
1129		16:42	18-21	52	3.98	450.00	459.00	9.00	750	16:24-16:47
	7/26/2019	8:18	18-21	48	3.16	0.00	141.00	141.00		8:12-9:01
		9:01	15-18	30	5.11	141.00	291.00	150.00		9:01-9:33
	7/25/2019	15:52	27-30	30	5.09	0.00	150.00	150.00		Water rising in SM-03. 15:41-16:30
	1/23/2019	16:41	24-27	20	3.66	150.00	210.00	60.00		Still influencing SM-03. 16:30-16:47
1130		8:19	24-27	15	3.98	0.00	90.00	90.00	750	8:12-8:48
1130	7/26/2019	9:01	21-24	12	3.85	90.00	240.00	150.00	750	8:48-9:59
	7/26/2019	10:19	18-21	10	4.39	240.00	390.00	150.00		9:59-10:57
		11:40	15-18	2	4.89	390.00	540.00	150.00		10:57-12:47
	7/25/2019	16:35	27-30	34	5.31	0.00	150.00	150.00		16:02-16:32
	1123/2019	16:42	24-27	45	3.87	150.00	197.00	47.00		16:32-16:47
I131		8:19	24-27	35	3.44	0.00	103.00	103.00	750	8:12-8:50
1131	7/26/2019	10:12	21-14	60	2.36	103.00	253.00	150.00	750	8:50-10:14
	7/26/2019	10:19	18-21	24	3.98	253.00	403.00	150.00		10:14-11:01
		11:40	15-18	10	4.05	403.00	553.00	150.00		11:01-12:53
		9:41	27-30	40	6.39	0.00	150.00	150.00		9:35-9:56
		10:09	24-27	36	5.83	150.00	300.00	150.00		9:56-10:25
I132	7/26/2019	10:25	21-24	48	2.34	300.00	450.00	150.00	750	10:25-11:14
		11:40	18-21	50	3.01	450.00	600.00	150.00	1	11:14-13:19
		13:19	15-18	36	6.13	600.00	750.00	150.00		13:19-13:48

Total Gallons:



1011 Calle Sombra San Clemente, CA 92673 Ph: (949) 366-8000 Fax: (949) 366-8090

Photo Log – PES, SMI Holdings Mountain View Site



Photo 1: Regenesis staging trailer in work area.



Photo 3: Geoprobe making angled direct push injection point in Barriers.



Photo 5: Penecore refilling cored points.



Photo 2: Penecore Geoprobe drill rig in Grid Source area.



Photo 4: Injection hoses connected to angled injection points.



Photo 6: Drill rig operating maneuvering in tight area on edge of property.

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Photo Log – PES, SMI Holdings Mountain View Site



Photo 7: Injection point near monitoring well.



Photo 9: Product staged near Regenesis trailer for mixing and injection.



Photo 11: Empty product containers staged for collection at end of project.



Photo 8: Regenesis injecting on 4 points simultaneously.



Photo 10: Regenesis employee mixing and transferring products to trailer.

APPENDIX F

WASTE DISPOSAL DOCUMENTATION

-				St
A		Emergency Response Phone	4. Waste Tracking Numb	301
	WASTE MANIFEST Not Required 1	888-423-6060		194080
	Shill Holding LLC 170 Wood Avenue South, 6th Floor 48	nerator's Site Address (if difference of the control of the contro		
Ш	6. Transporter 1 Company Name		U.S. EPA D Number	20 20 20
Ш	American Integrated Services, Inc.		CAROOO	148338
Ш	7. Transporter 2 Company Name	- 10	U.S. EPA ID Number	
Ш			1	
z	8. Designated Facility Name and Site Address Crosby 6. Cventon, inc., 1630 W. 17th Street Long Basic, CA 90813		U.S. EPA ID Number	
Ш	Facility's Phone: 562 432-5445		CAD028	409019
П	Waste Shipping Name and Description	10. Containers	11. Total 12. Unit	
П	o. Hadd onlying taking and produption	No. Type	Quantity Wt./Vol.	
	¹ Non-Hazardous Waste Liquid (Wister)			STILL SERVICE STATE OF THE SER
B		Name .		
GENERATOR		3 DM	150 G	
E	2			
5	8 5. 原			
				File Ball III comme
	3.			
	4			
Ш				The state of the state of
Ш	13. Special Handling Instructions and Additional Information			
	AIS Job#79806-6-12 / Profile:27578 14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are to marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable	lly and accurately described at international and national government	pove by the proper shipping name, a	ind are classified, packaged
	Generator's/Offeror's Printed/Typed Name Signatu		- Tarital Taganaania	Month Day Year
¥	Chir P. H. PESON - + CATURE 11/10	for t	1 44 117	1 - 1 - 1 +
-	15. International Shipments	173 114	* 10 DI 101 111	17 13,2 119
INT	Import to U.S. Export from U.S.	Port of entry/exit:_		
-	Transporter Signature (for exports only):	Date leaving U.S.:		
TRANSPORTER	16. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Signature		_ ,	Ideath D. V
OH		Moros	///	Month Day Year
핳	Transporter 2 Printed/Typed Name Signati	MOLOG N	land	7 30 49
¥.	Transporter 2 Printed/Typed Name Signali	re	0	Month Day Year
F			-	
*	17. Discrepancy			
П	17a. Discrepancy Indication Space Quantity Type	Residue	Partial Rejection	Full Rejection
П			r araar riojoodori	r un riojection
	The state of the s	Manifest Reference Number:		
اح	17b. Atternate Facility (or Generator)		U.S. EPA ID Number	-
틹				
AC	Facility's Phone:		Ĭ	
0	17c. Signature of Alternate Facility (or Generator)			Month Day Year
ATE	1			l l l
Z S				
DESIGNATED FACILITY				
ā				
	18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as	noted in Item 17a		
	Printed/Typed Name Signate	re	7 7 7	Month Day Year
Y				

SCHUETZ Container Systems

BOL Number: 0151140012

Date: 7/29/2019

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

This form contains only the information necessary for the motor carrier to deliver, rate, and invoice the shipment described below. The shipper and/or the consignee are client(s) of C.H. Robinson Worldwide, Inc., (CHR) a third party logistics service and payer of the freight bill. All agreements between the carrier and CHR are contained in assigned contract agreement.

PES ENVIRONMENTAL INC

487 E Middlefield Rd

Mountain View, CA 94043

JAMIE PHILLIPS GARY THOMA

PH: (415) 250-2864

FAX:

Reference Number: 0151140012

Recon Services Inc 2255 Via Cerro

RIVERSIDE, CA 925092412

Andy Barajas

PH: (510) 772-6089 FAX: (951) 682-1411

Reference Number: 0151140427, 0151140012

Carrier: Ciriaco Valencia

Pro#:

Load#: 300246088 Ship ID#: 0151140012

All Freight charges PPD/3rd party bill to:

C.H. Robinson Worldwide, Inc.

Billing

P.O. Box 3470

Chicago, IL 60654

All containers must be steel tubular IBC's (not wire mesh) in reusable condition. All IBC's must be completely EMPTY — if the valve is opened, no product comes out. Units arriving that do not meet these conditions will be refused and all shipping costs, both from and back to shipper will be billed to shipper. Return freight and/or Disposal costs for non-empty/damaged containers is the shipper's responsibility. Shipper must provide to the carrier the proper Placards for the outside of the truck when shipping IBC's with hazardous materials (DOT reg. 49CFR 172,506)

Pickup Information: Phone:415-250-2864,Fax:,Hours:24/7, Bldg/Dock:PARKING LOT BEHIND BLDG, Gary: 415-899-1600 / 415-250-7217 EMAIL BOL TO BOTH: jphillips@pesenv.com; gthomas@pesenv.com *****415-250-7217 (cell phone) ****

All totes must be DOUBLE stacked and loaded sideways (nozzle to nozzle). Each IBC has a nominal weight of 150lbs. If the quantity of IBC's change, the weight will also change accordingly. For Clarification, have the Driver/Shipper call Schuetz at 888-724-8389 option 4, or CH Robinson for Schuetz Container Systems at 888-202-4052. Bill of Lading number must be on all

invoices for payment.

Item Description		IBC QTY	Weight	UOM
Intermediate Bulk Container: NMFC Item: 41024, Class: 200		15	2250	lbs
NON HAZARDOUS, Not Regulated				
Residue Last Contained: S-MICROZVI OR S-MZVI,				
Intermediate Bulk Container: NMFC Item: 41024, Class: 200		18	2700	lbs
NON HAZARDOUS, Not Regulated				
Residue Last Contained: AQUAZVI,				
	Totals:	33	4950	

Snipper must Provide Carrier with the Placards for Flazmat. Return Freight Cost for Non-Empty Containers is the Snipper's Responsibility. Shipper certifies that each container being offered is Empty.

			cribed, packaged, marked and labeled, and are in proper partment of Transportation."
Shipper Signature X		Date:	Trailer#
Consignee Signature X _		Date:	Seal#
Driver Signature X		Date:	Seal#
Permanent post-	office address of shipper.	* MARK WITH "X" TO DESIGNAT	TE MATERIAL AS DEFINED IN TITLE 49 OF FEDERAL REGULATIONS.
	Receiving Date	Quantity	Receiver Signature

SCHUETZ Container Systems

SCHUETZ Cont	tainer Systems	BOL Number: 0151140012
Scheutz		
Non-Scheutz		



BILL OF LADING

BDG 083377

		icket Number:
Generator	Material Description:	10N
Name: MI Street Address: Gity, Province or State: Postal or Zip: Phone No: Generator or Authorized Representative Certification: This is to certify that the above named materials are properly character.	Soil/Solids Water Both	Excavation Area Coordinates: Lat: Long: LSD (CN Optional):
Authorized Signature:	Print Name:	Date: Date Shipped
Transporter		
Name: Badger Daylighting Street Address: State: State: Badger Daylighting City, Province or State: Postal or Zip:	g Badger Area:	on Tose Cr
Phone No: (3) 34-467		
Authorized Signature:	Print Name: Name/C	ompany Name Date: Date Shipped
Disposition Facility	Quantity/Units - Daily Total	Disposition Area Coordinates
Name: Street Address: City, Province or State: Postal or Zip:	(Full Load Equivalents)	Lat: Long: LSD (CN Optional):
Phone No: 707) 432-4627		
Authorized Signature: Signature *Note: For unsupervised unloading areas write "N/A" in the signature s	Print Name: Name/Company Name/	Date: Date Shipped



BILL OF LADING

BDG 783376

0.			HCKEL MUIII	bei. Phul dou
Generator		aterial Description:		
Name: Day Street Address: 2/5. City, Province or State: Postal or Zip:			E	cavation Area Coordinates: Long:
Phone No:		Both	LSD (CN	Optional):
Generator or Authorized Repre This is to certify that the above named	sentative Certification: materials are properly characterized	and that the transporter is authorized to use the		
Authorized Signature: _	Signature	Print Name:	me/Company Name	Date;
Transporter				The same of the sa
Name: Street Address: City, Province or State: Postal or Zip:	Badger Daylighting	Badger Area:	NIGE	
Phone No:	/			
Authorized Signature: _	Signature	Print Name:	ame/Company Name	Date:Date Shipped
Name: Down Facility Name: Down Facility Street Address: City, Province or State: Postal or Zip:	and III 5 Potreru 1/11 Susun City.	Quantity/Units - Daily Tota	Lat:	Long:Optional):
Phone No: Authorized Signature: *Note: For unsupervised unloading are Safety Manual and Procedures	Signature	Print Name: Name/Comparing the disposition site authorized signer.	ang Name	Date:
Revised March 2018			<i>V</i> .	Appendix B SMS-007

DISTRIBUTION

THIRD QUARTER 2019 STATUS REPORT SULFIDATED ZERO VALENT IRON IN-SITU PILOT TEST

SMI HOLDING LLC 455 AND 485/487 EAST MIDDLEFIELD ROAD MOUNTAIN VIEW, CALIFORNIA

OCTOBER 16, 2019

Superfund Program SFD-7-3 Electronic, 1 Copy & 2 CD's

US EPA Region IX 75 Hawthorne Street San Francisco, California 94105

Attention: Alana Lee Lee.Alana@epa.gov

SMI Holding LLC Electronic Only

Susan O'Connor

sue.oconnor@siemens.com

SMI Holding LLC Electronic Only

Gary Jones

gary.a.jones@me.com

SMI Holding LLC Electronic Only

Thomas Kerl

kerl.thomas@siemens.com

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Peggy Song

Peggy Song@symantec.com

DISTRIBUTION (Continued)

THIRD QUARTER 2019 STATUS REPORT SULFIDATED ZERO VALENT IRON IN-SITU PILOT TEST

SMI HOLDING LLC 455 AND 485/487 EAST MIDDLEFIELD ROAD MOUNTAIN VIEW, CALIFORNIA

OCTOBER 16, 2019

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