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December 20, 2012

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By Alameda County Environmental Health at 5:34 pm, Jan 02, 2013

Mr. Mark E. Detterman, P.G., CEG
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Re: Site Conceptual Model and Work Plan to Evaluate Post-Remediation Site Conditions
Former Petroleum Underground Storage Tank (UST) Site
David D. Bohannon Organization Property Located at
575 Paseo Grande - San Lorenzo, CA

Dear Mr. Detterman:

Enclosed for your review is the *Site Conceptual Model and Work Plan to Evaluate Post-Remediation Site Conditions* (Report) prepared by Stantec Consulting Services Inc. (Stantec) on behalf of David D. Bohannon Organization (Bohannon) for the site located at 575 Paseo Grande in San Lorenzo, California (the Site). This Report was prepared pursuant to the Alameda County Environmental Health (ACEH) letter to Bohannon dated August 31, 2012. As requested in the letter, this Report synthesizes multi-media analytical data for the Site, evaluates potential exposure pathways and receptors, develops screening criteria for evaluation of potential risks to human health, and proposes additional multi-media sampling to evaluate post-remediation Site conditions.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge. If you have any questions regarding the enclosed report, please contact me at (650) 345-8222.

Sincerely,

Scott E. Bohannon, Senior Vice President

cc: Mr. Chris Maxwell, Stantec Consulting Services Inc.
Mr. Andrew A. Bassak, Manatt, Phelps, and Phillips LLP

**Site Conceptual Model and Work
Plan to Evaluate Post-
Remediation Site Conditions
David D. Bohannon Organization**

575 Paseo Grande
San Lorenzo, California
Stantec PN: 185702534



Stantec

December 21, 2012

Limitations and Certifications

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of David D. Bohannon Organization for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

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Principal Geologist

Information, conclusions, and recommendations provided by Stantec in this document have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Reviewer:



Mason Albrecht, P.E. #C78130
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List of Acronyms

ACEH	Alameda County Environmental Health
ACPWA	Alameda County Public Works Agency
APN	assessor's parcel number
ASTM	American Society for Testing and Materials
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene and xylenes
Cal-EPA	California Environmental Protection Agency
DO	dissolved oxygen
DPE	dual-phase extraction
DTSC	Department of Toxic Substances Control
DTW	depth-to-groundwater
ESL	environmental screening level
ft/ft	feet per foot
GC/MS	gas chromatograph/mass spectrometer
HASP	health and safety plan
Hg	mercury
mg/kg	milligrams per kilogram
mL/min	milliliters per minute
MRL	method reporting limit
ORP	oxidation reduction potential
PID	photoionization detector
ppm	parts per million
RA	risk assessment
RIRA	Report of Interim Remedial Actions
RWQCB	Regional Water Quality Control Board
SCM	site conceptual model
SECOR	SECOR International Incorporated
Stantec	Stantec Consulting Services Inc.
TPH	total petroleum hydrocarbon
TPHg	total petroleum hydrocarbon as gasoline
µg/L	micrograms per liter
USA	Underground Service Alert
USCS	Unified Soil Classification System
US EPA	United States Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound

1.0 Introduction

Stantec Consulting Services Inc. (Stantec; formerly SECOR) on behalf of David D. Bohannon Organization (Bohannon) presents this site conceptual model (SCM) and work plan to evaluate post-remediation site conditions (Work Plan) for the property located at 575 Paseo Grande, San Lorenzo, California (the Site; Fuel Leak Case No. RO0000167). This report was prepared by Stantec to address technical comment numbers 2 and 3 of the letter from Alameda County Environmental Health (ACEH) to Bohannon dated August 31, 2012 (Letter). The technical comments of the Letter were based on ACEH review of Bohannon's documents prepared by Stantec entitled, "Report of Dual-Phase Extraction System Operations, Soil Vapor Sampling, and Risk Analysis," dated November 22, 2011 (Stantec, 2011), and the "Second Quarter 2012 (Semi-Annual) Groundwater Monitoring Report," dated July 27, 2012 (Stantec, 2012). ACEHs technical comments pertaining to potential data gaps and requirements for this report are described in Section 1.1 below, along with a summary of the report sections that address each technical comment. As requested in the Letter, this report synthesizes multi-media analytical data for the Site, evaluates potential exposure pathways and potential receptors, develops screening criteria for evaluation of potential risks to human health, and proposes additional multi-media sampling to evaluate post-remediation Site conditions. The Report is organized into the following sections:

- Section 1 – Introduction
- Section 2 – Site Conceptual Model
- Section 3 – Work Plan to Evaluate Post-Remediation Site Conditions
- Section 4 – References

1.1 SUMMARY OF POTENTIAL DATA GAPS

The following describes the technical comments of the Letter related to potential data gaps identified by ACEH, along with a summary of actions completed or proposed in this report to address each comment. Section 3.0 presents a work plan to evaluate post-remediation Site conditions to address ACEH technical comments where appropriate.

- Technical Comment #2 – Request for Residential Well Decommissioning Update

Section 2.3 of this report describes the current status of the two identified residential irrigation wells located across from the Site. Stantec assisted the property owner with the decommissioning of one of the irrigation wells. The other well is still in-place, but is permanently inactive according to the well owner.

- Technical Comment #3a – Evaluation of Success of Remedial Actions

Section 2.4.1 summarizes dual-phase extraction (DPE) system operations with respect to areas on-site with historically elevated petroleum hydrocarbon impacts to saturated soil including former source areas. Considering the most likely future Site use for commercial development with on-site building(s),

evaluation of potential vapor intrusion concerns is considered the most appropriate measure of remedial progress for the Site. The Site-specific risk assessment (RA) summarized in Section 2.5 concluded that the concentrations of volatile organic compounds (VOCs) detected in soil gas collected from shallow soil vapor wells do not pose a health risk to occupants of a potential future building on-site including commercial and residential land use. This report proposes additional shallow soil vapor sampling and soil sampling within former source areas, and groundwater sampling from select existing on-site wells as described in Section 3.0 to evaluate current post-remediation Site conditions.

□ Technical Comment #3b – Location of Vapor Wells

Section 2.4.3 summarizes shallow soil gas sampling in the context of historical sources of petroleum hydrocarbon contamination on-site. As described in Section 2.4.3, vapor points SV-1 and SV-4 are located within or adjacent to areas of historical elevated soil impacts in the former underground storage tank (UST) and product line areas. The Site-specific RA summarized in Section 2.5 concluded that the concentrations of VOCs in soil gas from limited shallow soil vapor wells do not pose a health risk to occupants of a potential future building on-site including commercial and residential land use. Stantec will conduct additional shallow soil vapor sampling as described in Section 3.0 including within former source areas to further evaluate current post-remediation Site conditions.

□ Technical Comment #3c – Documentation of Extent of Groundwater Dewatering

Section 2.2 summarizes the inferred hydraulic influence of the groundwater extraction element of the DPE system on-site corresponding to measurements of depth-to-groundwater (DTW) collected at the approximate midpoint in time of DPE operations.

□ Technical Comment #3d – Downgradient, Lateral, and Vertical Extent of Groundwater Plume

As described in Section 2.4.2, monitoring wells MW-5, MW-6, and MW-7 were installed following evaluation of results of the 1999 Gore-Sorber™ survey to constrain the lateral extents of potential impacts to groundwater downgradient of the Site. Concentrations of petroleum hydrocarbons in these wells have been below laboratory method reporting limits (MRLs) for ten years. Select discrete depth groundwater samples will be collected downgradient of the Site as described in Section 3.0 to supplement the existing groundwater data.

2.0 Site Conceptual Model

2.1 SITE HISTORY AND CURRENT USE

The Site is located at 575 Paseo Grande in San Lorenzo, Alameda County, California (see Figure 1). The Site consists of assessor's parcel number (APN) 412-31-93. The Site and subject of the SCM is bounded by a vacant commercial building owned by Bohannon to the east (APN 412-31-92), Paseo Largavista to the west, Paseo Grande to the south, and residential development to the north. Residences are also located to the west of Paseo Largavista (see Figure 2). Over the last 25 years, the Site has been used as an asphalt-paved parking area located in a C1 commercial zone. The Site was a gasoline station prior to 1969. Little information is known about the Site history related to its use as a gasoline service station. Source areas for soil and groundwater contamination on-site include the former tank pit, approximately 110 feet of fuel delivery system piping, and a grease sump and/or hydraulic lift pit in an area which may have been the former service garage. A summary of previous Site investigations and remedial actions including initial corrective actions related to the gasoline service station underground equipment is included in Appendix A of this report.

2.2 GEOLOGY AND HYDROGEOLOGY

The Site geology was initially characterized as part of SECOR's, "*Limited Subsurface Investigation Report and Work Plan for Additional Soil and Groundwater Assessment*," dated February 19, 2003 (SECOR, 2003a). Further characterization was achieved from soil borings advanced during chemical injection and DPE operations at the Site.

Figure 3 shows the historical well and soil boring locations at the Site. Boring logs are included in Appendix B for all Site soil borings, monitoring wells, and remediation wells. Subsurface materials at the Site generally consist of fine-grained soils (silt and clay) with minor amounts of sand. Based on the classification of materials encountered in the soil borings, Stantec has divided the geology beneath the Site into three zones, designated herein as 'A', 'B' and 'C' from shallowest to deepest. The subsurface geology is illustrated on geologic cross-section A – A' and geologic cross-section B – B', included as Figures 4 and 5, respectively.

Site soil borings reveal that the lithology consists of varying amounts of clay, silty-clay and clayey silts with minor amounts of sand. Based on historic monitoring data from the three on-site monitoring wells, it appears that the predominant clay layer (where present) acts as a semi-confining layer for the underlying groundwater.

Groundwater flow

The groundwater monitoring network at the Site consists of seven monitoring wells (MW-1 through 7) installed to 15 feet below ground surface (bgs) within the A-zone on-site. Groundwater monitoring has

occurred at the Site using wells MW-1 through MW-3 since 1996, and also using wells MW-4 through MW-7 since 2000. Well construction information for monitoring wells and remediation wells is shown in Table 1. Historical depth-to-groundwater measurements and groundwater elevations are shown in Table 2. A-zone groundwater generally occurs from 5 to 7 feet bgs on-site. A potentiometric surface map for the A-zone illustrating the interpreted groundwater surface elevation and flow direction on September 18, 2012, is presented as Figure 6. The A-zone hydraulic gradient across the Site was approximately 0.0024 feet per foot (ft/ft) toward the southwest which is consistent with the historical west-southwest groundwater flow pattern for the Site.

Hydraulic Influence of Dual-Phase Extraction System

DTW measurements in on- and off-site wells were not routinely collected during DPE operations. However, DTW was measured in select A-zone Site wells on June 30, 2009, at the approximate midpoint in time of DPE operations (see Table 3). Figure 7 shows the approximate groundwater potentiometric surface in the A-zone in the vicinity of the Site on June 30, 2009. As shown on Figure 7 and inferred from the select DTW measurements, the groundwater extraction element of the DPE system resulted in significant cone of depression in A-zone groundwater on-site and off-site.

2.3 EVALUATION OF POTENTIAL RECEPTORS AND PREFERENTIAL PATHWAYS

Potential future Site uses may include commercial/industrial or residential development. The receptors to be considered in a RA are potential future commercial/industrial or residential Site occupants and Site construction workers. The following summarizes previous evaluations of potential receptors and preferential pathways. Section 2.5 evaluates the potential exposure pathways to contamination on-site in terms of human health risk.

Sensitive Receptor Survey

A sensitive receptor survey was performed by SECOR as described in the document entitled, "*Sensitive Receptor Survey and Conduit Study*," (Receptor Study), dated June 30, 2003 (SECOR, 2003b), that investigated public and private water wells that could potentially be affected by contamination in groundwater emanating from the Site. The report identified three irrigation wells located a minimum distance of approximately 1,400 feet from the Site (see Figure 1 of Appendix C). No water production wells for potable use were identified within the search radius. San Lorenzo Creek is located approximately 2,000 feet north of the Site. San Lorenzo Creek drains to San Francisco Bay to the west. Groundwater flow from the Site has been historically measured as west to southwest, suggesting groundwater at the Site does not flow toward San Lorenzo Creek. Groundwater likely flows toward San Francisco Bay, which is approximately two miles southwest of the Site. The Receptor Study determined that neither the identified irrigation wells nor San Lorenzo Creek has been or could be impacted by petroleum hydrocarbons in groundwater originating from the Site.

Residential Well Identification and Decommissioning

The following addresses ACEH's request for residential well decommissioning update in Technical Comment #2 of the August 31, 2012 letter:

As described in the "*Semi-Annual (Second Half 2003) Groundwater Monitoring Report*," dated June 21, 2004 (EFI Global, 2004a), EFI Global identified two inactive landscape irrigation wells at two separate residential addresses located west of the Site as shown in Appendix C (see Figure 9 in Appendix C). The resident at 15975 Paseo Largavista requested assistance from Bohannon to properly abandon the well. EFI Global assisted the property owner at 15975 Paseo Largavista with removal of the pump in the irrigation well and abandonment of the well by filling the well with concrete. Bohannon understands that the second well located at 15962 Via Del Sol is still in-place. The owner of the second well reported to Bohannon that the well is not currently in use and would not be used in the future.

Conduit Study for Potential Preferential Pathways

Appendix C contains maps showing utility corridors/conduits identified as part of previous conduit surveys that were conducted at the Site. The objective of the previous conduit studies was to determine the locations and depths of subsurface conduits (*i.e.*, utility trenches) in the vicinity of the Site and to evaluate the potential effect of these pathways on the off-site migration of petroleum hydrocarbon-impacted groundwater and/or soil vapors.

The "*Third Quarter 1999 Groundwater Monitoring Results and Plume Definition Investigation Report*," dated October 22, 1999 (SECOR, 1999) describes results of a 1999 utility trench survey during which volatile organic vapors were detected at 89 parts per million (ppm) by photoionization detector (PID) in a utility vault located approximately 200 feet south of the Site on Paseo Grande.

The depths of subsurface utilities identified during the Receptor Study (SECOR, 2003b) suggest that perched groundwater in the vicinity of downgradient wells MW-5, MW-6, and MW-7 could flow within coarse-grained backfill materials used for construction of the utilities. Petroleum hydrocarbons have typically not been detected at wells MW-5, MW-6, and MW-7.

Based on these previous receptor surveys, the utility corridors running along Paseo Grande and Paseo Largavista shown in Appendix C have the potential to be preferential pathways for off-site contaminant migration in perched groundwater and volatilization to soil gas within the utility corridors. Section 3.0 describes off-site groundwater sampling to further evaluate the extent the utility corridors may serve as preferential pathways.

2.4 NATURE AND EXTENT OF CONTAMINATION

The following presents a discussion of the distribution and extent of petroleum hydrocarbon contamination at the Site in soil, groundwater, and soil vapor, including historical chemical concentrations and a summary of chemical of fate and transport.

2.4.1 Soil

Several soil samples have been collected for Site investigation purposes and during well installations prior to remedial activities at the Site. Table 4 and Figure 8 summarize the historical laboratory analytical data for soil that are representative of pre-remediation conditions at the Site. Figure 8 also shows the approximate extent of the excavations of soil with residual impacts from the underground fuel systems equipment sources as documented in the report entitled, "*Report of Interim Remedial Actions*" (RIRA), dated June 4, 1996 (SECOR, 1996), and locations of historical soil sample borings relative to Site remediation wells. The cross-sections depicted on Figures 4 and 5 show soil sample analytical results from the 2003 investigation 'SB-' soil borings. Appendix B includes logs of borings for soil sampling and well construction showing observed petroleum hydrocarbon impacts and PID measurements.

The 'SB-' soil borings shown on Figure 3 were advanced to characterize residual chemical impacts in soil remaining after excavation of the former UST and product lines as documented in the RIRA (SECOR, 1996). The 'R-' boring were advanced to provide further delineation of chemical impacts in soil prior to installation of DPE wells ('DP-'). Soil boring SB-4 was advanced near the south-southeast portion of the former product line and pump island excavation as documented in the RIRA where sidewall confirmation samples (including U-EW-1, U-EW-1A, U-SW-2, and Pump Island) indicated residual total petroleum hydrocarbon (TPH) concentrations (predominantly in the lighter petroleum hydrocarbon range indicative of gasoline; TPHg). As shown in Table 4, TPHg was detected in soil boring SB-4 to 16.5-feet bgs with maximum concentration of 190 milligrams per kilogram (mg/kg) detected at 9- and 11-feet bgs. Later borings R-1 through R-5 were advanced in the vicinity of soil boring SB-4 and the southern pump island excavation. As shown on the boring logs in Appendix B, petroleum odors and elevated PID readings were noted in borings R-1 through R-5 in the silt and clay sediments from approximately 5 -to-15 feet bgs. DPE was conducted at wells DP-6 and DP-7 to address the residual soil contamination documented by these borings.

Other soil borings SB-1, SB-2, SB-3, SB-5, and SB-6 indicate the pre-remediation soil concentrations in the silts and clays from 8 feet bgs to as deep as approximately 20 feet bgs within and adjacent to the former UST and pump island excavations. The other 'R-' borings on-site indicate field observations of petroleum hydrocarbon impacts within the interval of 8 -to-16 feet bgs. Though vacuum radius of influence achieved through full-scale DPE was not measured, it is likely that DPE significantly reduced petroleum hydrocarbon concentrations in soil within the former UST, product line, and pump island excavations on-site as evidenced by the cumulative petroleum hydrocarbon mass removed by the DPE system (approximately 700 pounds).

It is likely that leaking former gasoline service station equipment resulted in vertical migration of petroleum hydrocarbons and sorption of these chemicals onto the silt and clay sediments with the majority of impacts in the approximate depth interval of 8 -to-15 feet bgs. Contaminants have partitioned from soil and dissolved in groundwater. Operation of the DPE system extracted and treated contaminants in soil vapor and groundwater.

Select soil borings will be advanced and soil samples collected on-site based on results of proposed additional shallow soil vapor sampling to be conducted on-site as described in Section 3.0.

2.4.2 Groundwater

Table 5 shows historical petroleum hydrocarbon concentrations in Site monitoring wells and remediation wells. Figure 9 is a Site plan showing petroleum hydrocarbon concentrations in groundwater during the most recent (third quarter 2012) monitoring event on September 18, 2012. Appendix D contains trend graphs of TPHg and benzene concentrations in select Site monitoring wells including MW-1, MW-2, MW-3, MW-4, and POBS-A1.

Discussion of General Concentration Trends

Concentrations of petroleum hydrocarbons in on-site monitoring well MW-1 are currently and have predominantly been below laboratory MRLs since 1999.

Concentrations of petroleum hydrocarbon constituents in off-site and downgradient monitoring wells MW-5, MW-6, and MW-7 have been below laboratory MRLs for ten years following the beginning of groundwater monitoring at these well locations in December 2000, and continue to be below laboratory MRLs. These results indicate that petroleum hydrocarbon constituents found in on-site groundwater have not significantly impacted off-site groundwater.

Concentrations of petroleum hydrocarbons in groundwater in on-site monitoring well MW-2, located immediately downgradient of the southern portion of the former pump island excavation that had elevated petroleum concentrations in soil confirmation samples, remain well below historical concentrations. The concentrations of TPHg and benzene detected during the September 18, 2012, monitoring event were 410 micrograms per liter ($\mu\text{g/L}$) and 4.7 $\mu\text{g/L}$, respectively, and are considered to be stable compared to historical concentrations.

As shown in Table 5 and described in the 2Q12 groundwater monitoring report (Stantec, 2012), sample analytical results from monitoring well MW-4 suggest a localized rebound in petroleum hydrocarbon concentrations since post-DPE monitoring conducted in January 2010. The concentrations of TPHg and benzene in monitoring well MW-4 on June 8, 2012, were 3,400 $\mu\text{g/L}$ and 83 $\mu\text{g/L}$, respectively. Concentrations decreased during the September 18, 2012, event to 1,400 $\mu\text{g/L}$ of TPHg and 25 $\mu\text{g/L}$ of benzene.

As documented in the 2Q12 groundwater monitoring report (Stantec, 2012), petroleum hydrocarbon concentrations in former UST source area well POBS-A1 decreased to historical low concentrations and in immediately downgradient monitoring well MW-3 to below MRLs. Third quarter 2012 results for POBS-A1 and monitoring well MW-3 suggest localized rebound in petroleum hydrocarbon concentrations. The concentrations were 2,600 $\mu\text{g/L}$ of TPHg and 1,100 $\mu\text{g/L}$ benzene in POBS-A1, and 480 $\mu\text{g/L}$ of TPHg

and 110 µg/L of benzene in monitoring well MW-3. Concentrations of TPHg and benzene in POBS-A1 will be monitored during the fourth quarter 2012.

Delineation of Impacts to Groundwater

Groundwater monitoring wells MW-5, MW-6, and MW-7 were installed to determine if on-site groundwater impacts and the apparent impacts indicated by concentrations in soil gas by the 1999 Gore-Sorber™ survey described below affected off-site groundwater, and to constrain the downgradient and lateral extent of potential impacts to groundwater. As discussed above, concentrations of petroleum hydrocarbons in these wells have been below laboratory MRLs for ten years. Stantec will perform groundwater sampling as described in Section 3.0 to further characterize the lateral extent of impacts to groundwater downgradient of the Site. The proposed sampling will also evaluate the extent to which concentrations in soil gas identified during the 1999 Gore-Sorber™ and identified as a potential data gap in Technical Comment #3 of the ACEH Letter indicate impacts to groundwater emanating from the Site. Stantec will perform additional groundwater sampling in existing on-site wells located upgradient of monitoring well MW-4 to evaluate the source of residual impacts to groundwater in monitoring well MW-4.

2.4.3 Vapor

Site Soil Vapor Sampling

As described in the DPE Report, soil vapor samples were collected at the Site in April 2011 to evaluate the potential vapor intrusion pathway into a proposed building on-site. The locations of the shallow vapor samples are included on Figure 3. Vapor sample location SV-1 is located within the former UST excavation extents. Vapor sample SV-4 is located approximately within or adjacent to the former product line where preliminary soil characterization samples indicated the highest identified TPH concentrations on-site (SECOR, 1995). Table 6 contains the results of soil vapor sample analysis for VOCs. As seen in Table 6, all detected VOCs including benzene are below published screening levels for commercial/industrial and residential land use. Additional soil vapor sampling will be conducted on-site as described in Section 3.0 to evaluate current Site conditions.

Off-Site Passive Soil Vapor Survey

A passive soil vapor survey using Gore-Sorber™ modules was conducted at the Site as described in the 3Q99 groundwater monitoring report (SECOR, 1999) as a screening tool for potential contamination in soil and groundwater off-site. The Gore-Sorber™ modules consist of adsorbent material installed near the surface (3 feet bgs) that adsorbs contaminants present in soil gas. Analytical data from sorber modules show the mass of chemicals adsorbed on the modules rather than the concentration of chemicals present in soil gas. The data indicate detections of petroleum hydrocarbons in soil gas to the west and southwest of the Site, although these detections were reported to be at low to moderately-low levels in soil gas by W.L. Gore laboratory. W.L. Gore laboratory indicated that although the data suggest detectable levels at sample locations, soil gas plumes were not discernible.

2.5 RISK EVALUATION

Populations that could potentially be exposed to residual contamination on-site include future Site construction workers and commercial/industrial or residential building occupants (assuming this Site is redeveloped in the future).

The primary current or potential future exposure pathways include:

- Dermal contact with soil or incidental inhalation of dust during construction activities at the Site; and,
- Residential or commercial/industrial building occupant inhalation through vapor intrusion to indoor air.

Ingestion of groundwater is not considered to be a potential future exposure pathway. One residential irrigation well identified across from the Site was decommissioned and the other will not be used in the future. The use of groundwater at the Site will be restricted through a land use covenant on the property as described below.

The following presents an evaluation of each exposure pathway in terms of potential risk to human health.

Vapor Intrusion to Indoor Air

Vapor intrusion to indoor air is a potentially complete exposure pathway. Table 5 presents a comparison of current petroleum hydrocarbon concentrations in groundwater in Site monitoring wells to final environmental screening levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (RWQCB; May 2008) for groundwater that are based on Aquatic Habitat goals and for potential vapor intrusion concerns where available. Benzene concentrations in on- and off-site monitoring wells were below the ESLs for screening for potential vapor intrusion into buildings (540 µg/L), with the exception of POBS-A1 which had a benzene concentration in September 18, 2012 of 1,100 µg/L.

As described in Section 2.4.3, analytical results for VOCs in shallow soil gas samples collected on-site in April 2011 were below published screening levels for commercial/industrial and residential land use. The Site-specific vapor intrusion RA in the DPE Report evaluated human health risk with respect to the above shallow soil vapor results and indicated that the Site under the conditions in April 2011 (with respect to potential vapor intrusion) was suitable for occupants to be present in a potential future Site building assuming either commercial/industrial or residential land use (Stantec, 2011).

Stantec will conduct additional shallow soil vapor sampling on-site as described in Section 3.0 to evaluate post-remediation Site conditions.

Direct Exposure to Site Soils

Shallow soil could be contacted by future Site workers either during Site redevelopment (if such development were to occur) or Site maintenance such as utility repairs (assuming the Site was to be redeveloped and such utilities were installed); therefore, direct exposure by future Site occupants is considered a potentially complete exposure pathway. Pre-remediation soil results in Table 4 were compared to RWQCB ESLs for both commercial/industrial and residential land use which take into account direct exposure to soils by future Site occupants or construction workers through incidental ingestion, dermal contact, or inhalation of volatiles or dust. The ESLs are intended to be used as screening for potential risks associated with future Site uses and are not intended as cleanup goals for the Site.

Additional soil samples will be collected from select soil boring locations based on the results of proposed additional soil vapor sampling described in Section 3.0. Results of additional soil samples will be compared to ESLs for the purposes of soil management during potential future Site development. Site land use will be restricted for future Site occupants and/or workers as described below.

Ingestion of Groundwater

Considering the presence of select petroleum hydrocarbon compounds that exceed current State of California drinking water standards, the Site will include appropriate restrictions for future groundwater use as described below. The area of the Site includes a community water system for drinking water and other water use (landscape), and the restriction against groundwater use at the Site is appropriate.

2.5.1 Cleanup Objective

Based on the most likely potential future Site use of commercial development and the risk evaluation above, the primary cleanup objective for the Site is to demonstrate that concentrations in shallow soil vapor on-site do not pose a risk to human health in terms of vapor intrusion into a future Site commercial building, and concentrations in soil do not pose a risk to human health in terms of direct contact by Site construction workers during potential future redevelopment of the Site. The results of the 2011 RA indicate shallow soil vapor concentrations do not pose a health risk to potential future Site building occupants. As described above and in Section 3.0, further shallow soil vapor sampling and soil sampling is proposed on-site to evaluate post-remediation Site conditions.

A secondary objective is the long-term attainment of water quality goals including drinking water. The DPE system effectively removed mass from soil and groundwater. The additional data collection proposed in Section 3.0 will be used to determine if further mass removal is needed to facilitate long-term attainment of water quality goals.

2.5.2 Land Use Restrictions

Considering the potential for exposure by future Site worker or resident, a land use covenant (deed restriction) will be placed on the property which will restrict the use of shallow soil and groundwater at the Site. The deed restriction shall be coupled with a management plan that describes proper handling and disposal of soils during Site redevelopment including provisions for screening removed soils for hydrocarbon contamination.

3.0 Work Plan to Evaluate Post-Remediation Site Conditions

This Section describes the objectives and methods to monitor post-remediation conditions at the Site.

3.1 OBJECTIVE AND RATIONALE

The objective of this Work Plan is to characterize residual petroleum hydrocarbon impacts at the Site after completion of remedial activities including DPE and to further evaluate the groundwater conditions downgradient of the Site. Previous investigations conducted prior to DPE operations at the Site show that the majority of impacts were to the silts and clays of the 'A' zone between 8 and 15 feet bgs. The predominant impacts to groundwater on-site are also within wells screened within the 'A' zone. Recent groundwater monitoring results indicate residual impacts to 'A' zone groundwater in on-site monitoring wells MW-3 and POBS-A1 and off-site monitoring well MW-4. Recent groundwater monitoring also shows that concentrations of petroleum hydrocarbons in groundwater off-site (NOBS-B1) and former source area 'B' zone wells are either below or only slightly exceeding laboratory MRLs.

As described above, the results of the 2011 RA indicate shallow soil vapor concentrations from on-site shallow vapor wells do not pose a health risk to potential future Site building occupants. Stantec proposes to conduct additional shallow soil vapor sampling on-site as the primary method of evaluating current post-remediation Site conditions. Consistent with the soil vapor sampling in 2011, Stantec proposes to install ten additional shallow soil vapor wells and collect soil vapor samples from the ten new and four existing shallow vapor wells for laboratory analysis for comparison to applicable screening levels for vapor intrusion concerns and potential revision of the Site-specific RA.

Stantec will also advance direct-push soil borings on-site adjacent to select proposed shallow soil vapor wells, with bias to wells where soil vapor concentrations exceed screening levels for vapor intrusion concerns (if any). The soil borings will be advanced to depths of approximately 20 feet bgs, logged continuously from the surface to the total depth of the boring, and soil samples will be collected at regular intervals for laboratory analysis. The purpose of these potential borings is to characterize residual impacts to soil that could contribute to elevated concentrations in soil vapor and groundwater.

Seven soil borings will also be advanced downgradient of the Site to delineate water-bearing zones off-site for groundwater sample collection. Following review of the soil boring data, Stantec will advance direct-push borings adjacent to each of the seven soil borings for collection of groundwater samples using the HydroPunch™ method. The purpose of the HydroPunch™ groundwater samples is to further characterize the lateral extent of impacts to groundwater downgradient of the Site. The proposed HydroPunch™ samples will also assist to evaluate potential volatilization and migration of VOCs in adjacent utility corridors along Paseo Grande and Paseo Largavista.

Stantec will perform additional groundwater sampling in existing on-site wells located upgradient of monitoring well MW-4 including well NIW-A1 to evaluate the source of residual impacts to groundwater in monitoring well MW-4.

3.2 SCOPE OF WORK

The following section outlines Stantec's procedures and methods for the proposed scope of work.

3.2.1 Preliminary Activities

Stantec will update the existing Site-specific health and safety plan (HASP) to address the new scope of work. A copy of the HASP will be kept on-site at all times when work is in progress. The locations of all proposed boring locations will be marked with white paint and Underground Service Alert (USA) will be notified at least 72 hours prior to beginning field work. Additionally, Stantec will contract with a subsurface utility locator to clear the individual boring locations of obstructions. Stantec will obtain all applicable permits, including soil boring and encroachment permits from the Alameda County Public Works Agency (ACPWA). Based on soil vapor sampling in 2011, permits may not be required by ACPWA for the proposed shallow soil vapor well installations.

3.2.2 Shallow Soil Vapor Sampling Procedures

The following presents the proposed additional soil vapor sampling at the Site which is in general accordance with the April 2012 *Advisory – Active Soil Gas Investigations* developed by the California Environmental Protection Agency/Department of Toxic Substances Control (Cal-EPA/DTSC) and Los Angeles and San Francisco RWQCB's and consistent with the 2011 shallow soil vapor survey at the Site. The purpose of the soil vapor sampling is to further evaluate the potential for vapors associated with residual petroleum hydrocarbons in soil and/or groundwater to be present at concentrations that could pose a risk to conceptual future occupants of a Site building (if the Site was to be redeveloped with commercial and/or residential structures).

Soil Vapor Well Construction

Ten new shallow soil vapor wells (SV-5 through SV-14) are proposed at the locations shown in Figure 10. Locations were selected to provide the best estimate of current conditions related to VOCs in soil gas associated with Site soil and groundwater affected by residual petroleum hydrocarbon compounds. Borings for shallow vapor wells will be advanced manually using a hand auger to a maximum depth of 3 feet bgs consistent with the soil vapor sampling conducted in 2011. One 6-inch soil sample will be collected from approximately 2.5 -to-3 feet bgs from each boring location with a slide hammer. The soil samples will be submitted to PTS Laboratories of Santa Fe Springs, California under chain-of-custody procedures to be analyzed for physical parameters in the Cal-EPA/DTSC soil vapor intrusion package.

The soil vapor wells will be constructed by adding a 6-inch-long stainless steel screen to the borehole attached to ¼-inch-diameter Teflon® tubing which will extend above the ground surface at each boring. The screen will be placed on top of approximately 3 inches of No. 2/12 sand at the bottom of each boring. Sand will be filled to approximately 6 inches above the screen, followed by approximately 4 inches of dry granular bentonite, and hydrated granular bentonite to the ground surface. The Teflon® tubing will be closed off at the surface in each well for at least 48 hours to allow subsurface conditions to equilibrate prior to vapor sampling.

Soil Vapor Sampling

One soil vapor sample will be collected from each of the ten new vapor wells and four existing vapor wells (SV-1 through SV-4). Prior to sampling, a helium shroud will be placed over the sampling train above each sampling location and sealed at the ground in a layer of hydrated bentonite. A vacuum shut-in test will be conducted at each location by applying a vacuum of 5- to-10 inches mercury (in Hg) to the sample train for one minute and observing any loss of vacuum. Sample train fittings will be adjusted and shut-in test repeated if vacuum loss is observed. After a successful shut-in test is completed at each sampling location, the shroud will be filled with helium and maintained at a concentration of at least 30 percent helium. Helium concentration inside the shroud will be measured with a helium detector (Dielectric® MGD-2002 or equivalent).

After filling the shroud with helium, well purging will be conducted to remove three well volumes using a lung box, Tedlar® bag, and a vacuum pump. During purging, the Tedlar® bag will be measured for helium with the helium detector as a field leak check.

Soil vapor samples will be collected in laboratory-supplied and batch-certified 1-liter Summa canisters equipped with flow regulators. Sample flow rates will be set at approximately 200 milliliters per minute (mL/min) using a regulator that is pre-calibrated in the laboratory. Start and stop times and initial and final vacuum pressures will be recorded on field sheets and the chain-of-custody. The 1-liter Summa canisters will be shipped under chain-of-custody procedures to Air Toxics Ltd. (Air Toxics) in Folsom, California, a California-certified analytical laboratory. Samples will be submitted for analysis of VOCs using modified Method TO-15 (a gas chromatograph/mass spectrometer [GC/MS] analytical method) and for the leak check compound, helium, using modified American Society for Testing and Materials (ASTM) D-1946.

3.2.3 Direct-Push Soil Sampling Procedures

As described previously, select on-site soil borings will be advanced and soil samples collected adjacent to the proposed locations for shallow soil vapor samples based on the results of laboratory analysis of shallow soil vapor samples for VOCs.

Soil borings will be advanced at the proposed off-site HydroPunch™ locations on Figure 10 primarily to delineate the depth-of-groundwater for collection of discrete depth groundwater samples using

HydroPunch™ as described in Section 3.2.4. Soil samples may be collected for chemical analysis at these locations from the depth intervals described below based on field evidence of contamination in the soil boring.

Soil borings will be advanced using a dual-wall direct-push soil coring system under the supervision of a Stantec geologist. Boring locations will be hand augered to a depth of 5 feet bgs prior to direct-push sampling. The soil borings will be advanced and continuously cored to a total depth of approximately 20 feet bgs. The liners containing the soil samples will be removed from the sampler and retained for lithologic description and chemical analysis.

A Stantec geologist will log the soils encountered from the continuous core to total depth according to the Unified Soil Classification System (USCS) and will maintain a soil boring log of these descriptions. Any odor or staining will be noted, and soils will be screened for organic vapors using a PID. Soil samples will be collected from 5-, 10-, 15-, and 20-foot bgs. Soil samples may be collected at slightly different depths based on field evidence of odor, staining, or elevated PID readings.

Soil samples will be collected directly from the soil core in Terra Core preservation vials in accordance with the United States Environmental Protection Agency (US EPA) 5035 preparation method. Samples retained for analysis will be labeled to indicate job number, boring number, sample depth, sample number, time and date collected, and then stored in a cooler containing ice. Soil samples will be delivered to TestAmerica of Pleasanton, California under chain-of-custody documentation. Soil samples will be analyzed for TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Methods 8015M and 8021B. Upon completion, each soil boring will be backfilled to the surface with neat cement grout.

All sampling equipment will be washed between sampling locations using a phosphate-free detergent and double-rinsed using clean water.

3.2.4 Groundwater Sampling Procedures

Off-Site HydroPunch™ Sampling

Stantec proposes advancing seven HydroPunch™ soil borings at the locations downgradient of the Site as shown on Figure 10 for the collection of discrete depth groundwater samples. Up to two HydroPunch™ samples will be collected from depths based on observations of groundwater in the soil borings, and will generally target the 'A' zone water-bearing sediments including perched groundwater from 5- to-8 feet bgs and deeper silty sand lens starting at approximately 13 feet bgs. HydroPunch™ soil borings will be advanced using a truck-mounted, direct-push sampling system under the supervision of a Stantec geologist. Upon penetration of the upper perched groundwater zone (where encountered), the sampling rod will be retracted to expose a stainless-steel screen to the formation. Groundwater samples will be collected using either a stainless-steel bailer, a disposable bailer, or a peristaltic pump fitted with disposable tubing. Following sample collection from the perched water zone, the sampling rods and

screen will be removed from the borehole and decontaminated using a pressure-washing system; the sampling system will then be placed back in the borehole and advanced to the deeper water-bearing zone for collection of a second groundwater sample. Groundwater samples will be transferred to laboratory-supplied glassware, labeled, and transported to TestAmerica under chain-of-custody documentation. Groundwater samples will be analyzed for gasoline range organics and BTEX by EPA Method 8260B.

Upon completion, each soil boring will be backfilled to the surface with neat cement grout.

On-Site Well Sampling

Wells will be purged and sampled using a low-flow purging method consisting of new dedicated tubing attached to a variable speed peristaltic pump set to extract groundwater at a rate of approximately 250 mL/min. Temperature, conductivity, pH, dissolved oxygen (DO) content, and oxidation reduction potential (ORP) will be monitored using a flow-through cell during purging to confirm stable water conditions prior to sampling.

Samples will be collected from each well using the dedicated tubing to eliminate the possibility of cross-contamination between wells. Samples will be placed in laboratory-supplied sample containers, labeled, and stored on ice pending delivery under chain-of-custody documentation to TestAmerica. Groundwater samples will be analyzed for gasoline range organics and BTEX by EPA Method 8260B.

3.2.5 Waste Management

All waste generated during this investigation will be stored on-site in sealed 55-gallon drums and labeled with the generation date and nature of contents. Waste will be disposed of appropriately, based on analytical results. Disposal of all wastes will be conducted in accordance with federal, state and local regulations.

3.3 SCHEDULE AND REPORTING

Stantec is prepared to complete the proposed scope of work within six weeks of approval of this Work Plan. Following receipt of analytical results, Stantec will prepare a report summarizing field activities, analytical results, subsurface conditions, and our findings and conclusions. The report will include tabulated laboratory sample analytical results, scaled site plans showing sampling locations and chemical results, complete laboratory reports, and soil boring logs and cross-sections, as necessary.

4.0 References

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Stantec

**SITE CONCEPTUAL MODEL AND WORK PLAN TO EVALUATE POST-REMEDATION SITE
CONDITIONS
DAVID D. BOHANNON ORGANIZATION**

TABLES

Site Conceptual Model and Work Plan to Evaluate Post-Remediation
Site Conditions
David D. Bohannon Organization
575 Paseo Grande
San Lorenzo, California
Stantec PN: 185702534.200.0005
December 21, 2012

TABLE 1
Well Construction Details
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Well	Date Installed	Top of Casing Elevation (ft amsl) ¹	Total Depth (ft bgs)	Casing Diameter (inches)	Screen Slot Size (inches)	Screen Length (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
MW-1	5/10/1996	29.77	15.5	2	0.02	9.75	5.5	15.25
MW-2	5/10/1996	29.54	15.5	2	0.02	9.75	5.5	15.25
MW-3	5/10/1996	29.34	14.5	2	0.02	9.75	4.5	14.25
MW-4	10/2/2000	28.64	15	2	0.02	9	6	15
MW-5	10/2/2000	28.56	15	2	0.02	9	6	15
MW-6	10/2/2000	27.70	15	2	0.02	9	6	15
MW-7	10/2/2000	28.22	15	2	0.02	9	6	15
PIW-A1	5/4/2004	32.46	18	4	0.02	10	8	18
PIW-A2	5/4/2004	32.57	18	4	0.02	10	8	18
PIW-A3	5/4/2004	31.74	18	4	0.02	10	8	18
PIW-A4	5/6/2004	32.35	18	4	0.02	10	8	18
PIW-B1	5/3/2004	32.11	25.5	4	0.02	6	19.5	25.5
PIW-B2	5/3/2004	32.37	26	4	0.02	6	20	26
PIW-B3	5/4/2004	31.91	26	4	0.02	6	20	26
PIW-B4	5/4/2004	32.18	26	4	0.02	6	20	26
POBS-A1	5/6/2004	29.84	18	1	0.02	10	8	18
POBS-B1	5/6/2004	29.95	26	1	0.02	6	20	26
POBS-B2	5/6/2004	29.21	26	2	0.02	6	20	26
NIW-A1	5/5/2004	31.53	18	4	0.02	10	8	18
NIW-A2	5/5/2004	30.80	18	4	0.02	10	8	18
NIW-B1	5/5/2004	29.91	26	4	0.02	6	20	26
NIW-B2	5/5/2004	31.04	26	4	0.02	6	20	26
NOBS-B1	5/7/2004	28.54	26	2	0.02	6	20	26
DP-1	9/30/2005	32.53	20.5	8	0.02	10	4.75	14.75
DP-2	9/29/2005	32.35	20	8	0.02	10	4.25	14.25
DP-3	9/29/2005	32.22	20	8	0.02	10	4.50	14.50
DP-4	9/28/2005	32.07	20	8	0.02	10	4.25	14.25
DP-5	9/28/2005	32.24	20.25	8	0.02	9.75	4.75	14.50
DP-6	9/29/2005	31.66	20.25	8	0.02	10	4.50	14.50
DP-7	9/29/2005	31.34	20.25	8	0.02	10	4.50	14.50

Abbreviations:

ft amsl = feet above mean sea level
ft bgs = feet below ground surface
in = inches

Notes:

- 1) Top of casing elevations surveyed by Mid Coast Engineers on September 24, 2012; North American Vertical Datum of 1988, NAVD 88.
- 2) Well construction information in Table 1 was updated in September 2012 for GeoTracker compliance.

TABLE 2
Historical Groundwater Elevations
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Date Sampled	TOC Elevation¹ (ft amsl)	DTW (ft BTOC)	Groundwater Elevation (ft amsl)
MW-1			
5/17/1996	27.11	5.65	21.46
10/8/1996		7.47	19.64
4/1/1997		6.27	20.84
6/12/1997		6.90	20.21
9/10/1997		7.48	19.63
6/8/1999		6.44	20.67
9/13/1999		7.56	19.55
12/21/1999		7.41	19.70
3/17/2000		5.35	21.76
12/5/2000	26.98	6.99	19.99
2/28/2001		5.71	21.27
8/22/2001		7.39	19.59
5/22/2002		6.25	20.73
8/29/2002		7.23	19.75
12/2/2002		7.13	19.85
3/4/2003		5.77	21.21
12/18/2003		6.37	20.61
4/13/2004		6.13	20.85
12/2/2004		6.93	20.05
5/27/2005		5.90	21.08
8/24/2006		6.79	20.19
1/13/2010		6.59	20.39
5/3/2012		5.92	21.06
9/18/2012	29.77	7.32	22.45
MW-2			
5/17/1996	26.73	5.56	21.17
10/8/1996		7.15	19.58
4/1/1997		6.61	20.12
6/12/1997		6.76	19.97
9/10/1997		7.19	19.54
6/8/1999		6.45	20.28
9/13/1999		7.46	19.27
12/21/1999		7.26	19.47
3/17/2000		5.56	21.17
12/5/2000	26.73	7.01	19.72
2/28/2001		5.81	20.92
8/22/2001		7.42	19.31
5/22/2002		6.40	20.33
8/29/2002		7.26	19.47
12/2/2002		7.02	19.71
3/4/2003		5.91	20.82
12/18/2003		6.47	20.26
4/13/2004		6.28	20.45
12/2/2004		6.80	19.93
5/27/2005		6.11	20.62
8/24/2006		6.90	19.83
1/13/2010		6.53	20.20
5/3/2012		6.17	20.56
9/18/2012	29.54	7.37	22.17

TABLE 2
Historical Groundwater Elevations
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Date Sampled	TOC Elevation¹ (ft amsl)	DTW (ft BTOC)	Groundwater Elevation (ft amsl)
MW-3			
5/17/1996	26.15	4.39	21.76
10/8/1996		6.82	19.33
4/1/1997		5.53	20.62
6/12/1997		6.18	19.97
9/10/1997		6.81	19.34
6/8/1999		5.74	20.41
9/13/1999		6.88	19.27
12/21/1999		6.66	19.49
3/17/2000		4.51	21.64
12/5/2000	26.55	6.84	19.71
2/28/2001		5.44	21.11
8/22/2001		7.29	19.26
5/22/2002		6.22	20.33
8/29/2002		7.26	19.29
12/2/2002		6.85	19.70
3/4/2003		5.72	20.83
12/18/2003		6.15	20.40
4/13/2004		5.97	20.58
12/2/2004		6.64	19.91
5/27/2005		5.74	20.81
8/23/2006		6.69	19.86
1/13/2010		6.08	20.47
5/3/2012		5.72	20.83
9/18/2012	29.34	7.18	22.16
MW-4			
12/5/2000	25.87	6.28	19.59
2/28/2001		4.99	20.88
8/22/2001		6.73	19.14
5/22/2002		5.50	20.37
8/29/2002		6.55	19.32
12/2/2002		6.28	19.59
3/4/2003		5.28	20.59
12/18/2003		5.85	20.02
4/13/2004		5.50	20.37
12/2/2004		6.05	19.82
5/27/2005		5.46	20.41
8/24/2006		6.15	19.72
1/13/2010		5.78	20.09
5/3/2012		5.38	20.49
6/8/2012		5.87	20.00
9/18/2012	28.64	6.65	21.99

TABLE 2
Historical Groundwater Elevations
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Date Sampled	TOC Elevation¹ (ft amsl)	DTW (ft BTOC)	Groundwater Elevation (ft amsl)
MW-5			
12/5/2000	25.77	6.25	19.52
2/28/2001		4.95	20.82
8/22/2001		6.69	19.08
5/22/2002		5.50	20.27
8/29/2002		6.54	19.23
12/2/2002		6.37	19.40
3/4/2003		5.41	20.36
12/18/2003		5.65	20.12
4/13/2004		5.37	20.40
12/2/2004		6.03	19.74
5/27/2005		5.46	20.31
8/24/2006		6.17	19.60
1/13/2010		5.72	20.05
5/3/2012		5.52	20.25
9/18/2012	28.56	6.67	21.89
MW-6			
12/5/2000	24.89	5.68	19.21
2/28/2001		4.35	20.54
8/22/2001		6.15	18.74
5/22/2002		4.91	19.98
8/29/2002		5.96	18.93
12/2/2002		5.70	19.19
3/4/2003		4.69	20.20
12/18/2003		5.05	19.84
4/13/2004		4.87	20.02
12/2/2004		5.42	19.47
5/27/2005		4.75	20.14
8/24/2006		5.57	19.32
1/13/2010		5.17	19.72
5/3/2012		4.82	20.07
9/18/2012	27.70	6.10	21.60
MW-7			
12/5/2000	25.43	6.43	19.00
2/28/2001		4.76	20.67
8/22/2001		6.95	18.48
5/22/2002		5.55	19.88
8/29/2002		NM	--
12/2/2002		6.43	19.00
3/4/2003		5.10	20.33
12/18/2003		5.65	19.78
4/13/2004		5.27	20.16
12/2/2004		6.15	19.28
5/27/2005		5.12	20.31
8/24/2006		6.28	19.15
1/13/2010		5.97	19.46
5/4/2012		5.20	20.23
9/18/2012	28.22	6.60	21.62

TABLE 2
Historical Groundwater Elevations
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Date Sampled	TOC Elevation¹ (ft amsl)	DTW (ft BTOC)	Groundwater Elevation (ft amsl)
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Abbreviations:

DTW = Depth to water
ft amsl = feet above mean sea level
ft BTOC = feet below top of casing
NM = Not measured
TOC = Top of casing

Notes:

1) Top of casing elevations surveyed by Mid Coast Engineers on September 24, 2012; North American Vertical Datum of 1988, NAVD 88. Previous surveys in May 1996 and December 2000 referenced National Geodetic Vertical Datum, NGVD 29.

TABLE 3
Groundwater Elevations During DPE Operations - June 30, 2009
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Well ID	TOC Elevation ¹ (ft amsl)	DTW (ft BTOC)	Groundwater Elevation (ft amsl)
MW-1	29.77	8.45	21.32
MW-2	29.54	9.75	19.79
MW-3	29.34	9.70	19.64
MW-4	28.64	7.33	21.31
POBS-A1	29.84	10.50	19.34
PIW-A4	32.35	12.80	19.55
NIW-A2	30.80	9.64	21.16

Abbreviations:

DTW = Depth to water
ft amsl = feet above mean sea level
ft BTOC = feet below top of casing
TOC = Top of casing

Notes:

1) Top of casing elevations surveyed by Mid Coast Engineers on September 24, 2012; North American Vertical Datum of 1988, NAVD 88. Previous surveys in May 1996 and December 2000 referenced National Geodetic Vertical Datum, NGVD 29.

TABLE 4
Pre-Remediation Soil Sample Analytical Results - Petroleum Hydrocarbons
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, California

Sample Location	Sample ID	Sample Date	Sample Depth (feet bgs)	TPH (mg/kg)		Volatiles (mg/kg)			
				Diesel	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
NIW-B2	NIW-B2-14	5/5/2004	14	NA	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
PIW-A2	PIW-A2-5.5	5/5/2004	5.5	NA	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
	PIW-A2-9.5	5/5/2004	9.5	NA	150	<0.062	<0.062	0.91	<0.062
POBS-B2	POBS-2B-9	5/6/2004	9	NA	480	<3.1	<3.1	<3.1	<3.1
	POBS-2B-14	5/6/2004	14	NA	1,500	7.5	<6.2	17	21
SB1	SB1-8	1/2/2003	8	1,700	1,400	<6.2	<6.2	24	<6.2
	SB1-11	1/2/2003	11	40	280	<1.2	<1.2	2.8	11
	SB1-13.5	1/2/2003	13.5	79	390	<1.2	<1.2	3.0	7.9
	SB1-19.5	1/2/2003	19.5	16	400	5.1	<3.1	<3.1	<3.1
SB2	SB2-5.5	1/2/2003	5.5	160	<1.0	<0.005	<0.005	<0.005	<0.005
	SB2-8	1/2/2003	8	34	2.3	<0.005	<0.005	<0.005	<0.005
	SB2-15	1/2/2003	15	10	60	<0.62	<0.62	<0.62	<0.62
SB3	SB3-8	1/2/2003	8	23	390	2.6	<1.2	6.9	25
	SB3-10	1/2/2003	10	19	490	3.4	3.3	6.0	23
	SB3-17	1/2/2003	17	1.2	<1.0	<0.005	<0.005	<0.005	<0.005
	SB3-19.5	1/2/2003	19.5	1.5	<1.0	<0.005	<0.005	<0.005	<0.005
SB4	SB4-9	1/2/2003	9	16	190	<0.62	<0.62	<0.62	<0.62
	SB4-11	1/2/2003	11	8.7	190	<1.2	<1.2	<1.2	1.3
	SB4-13	1/2/2003	13	4.8	58	<0.62	<0.62	<0.62	<0.62
	SB4-16.5	1/2/2003	16.5	3.8	1.1	<0.005	<0.005	0.014	0.018
SB5	SB5-10	1/2/2003	10	58	450	<3.1	<3.1	<3.1	3.2
	SB5-13.5	1/2/2003	13.5	36	500	<3.1	<3.1	4.5	6.8
	SB5-17	1/2/2003	17	2.7	3.6	0.031	0.027	0.048	0.13
	SB5-20.5	1/2/2003	20.5	1.9	<1.0	<0.005	<0.005	<0.005	<0.005
<i>Commercial/Industrial ESLs</i>				<i>180</i>	<i>180</i>	<i>0.27</i>	<i>9.3</i>	<i>4.7</i>	<i>11</i>
<i>Residential ESLs</i>				<i>100</i>	<i>100</i>	<i>0.12</i>	<i>9.3</i>	<i>2.3</i>	<i>11</i>

TABLE 4
Pre-Remediation Soil Sample Analytical Results - Petroleum Hydrocarbons
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, California

Sample Location	Sample ID	Sample Date	Sample Depth (feet bgs)	TPH (mg/kg)		Volatiles (mg/kg)			
				Diesel	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
SB6	SB6-10	1/2/2003	10	36	150	<0.62	<0.62	<0.62	<0.62
	SB6-12	1/2/2003	12	54	910	<6.2	<6.2	<6.2	<6.2
	SB6-15.5	1/2/2003	15.5	2.2	42	<0.62	<0.62	<0.62	<0.62
	SB6-20	1/2/2003	20	4.4	<1.0	<0.005	<0.005	<0.005	<0.005
	SB6-24	1/2/2003	24	1.1	<1.0	<0.005	<0.005	<0.005	<0.005
MW-4	MW-4 @ 5'	10/2/2000	5	NA	<1.0	<0.005	<0.005	<0.005	<0.005
	MW-4 @ 10'	10/2/2000	10	NA	93	<0.62	<0.62	<0.62	<0.62
MW-5	MW-5 @ 10'	10/2/2000	10	NA	<1.0	<0.005	<0.005	<0.005	<0.005
MW-6	MW-6 @ 10'	10/3/2000	10	NA	<1.0	<0.005	<0.005	<0.005	<0.005
MW-7	MW-7 @ 10'	10/3/2000	10	NA	<1.0	<0.005	<0.005	<0.005	<0.005
MW-1	MW1-7.5	5/10/1996	7.5	<1	<10	<0.005	<0.005	<0.005	<0.005
	MW1-10.5	5/10/1996	10.5	<1	17	<0.005	0.1	0.19	0.25
MW-2	MW2-12.5	5/10/1996	12.5	<1	480	<0.20	0.37	3.2	6.5
	MW2-5	5/10/1996	5	<1	<10	<0.005	<0.005	<0.005	<0.005
MW-3	MW3-5.5	5/10/1996	5.5	<1	<10	<0.005	<0.005	<0.005	<0.005
<i>Commercial/Industrial ESLs¹</i>				180	180	0.27	9.3	4.7	11
<i>Residential ESLs¹</i>				100	100	0.12	9.3	2.3	11

Abbreviations:

bgs = below ground surface
 TPH = Total Petroleum Hydrocarbons
 mg/kg = milligrams per kilogram
 <X.XX = Analyte was not detected above the specified laboratory reporting limit

Notes:

1) Environmental Screening Levels (ESLs) established by the California Regional Water Quality Control Board, San Francisco Bay Region (May 2008). The listed values are for shallow soils (<10 feet-bgs) where groundwater is not a current or potential source of drinking water.

TABLE 5
Historical Groundwater Analytical Results
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Date Sampled		TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Chromium (µg/L)	Dissolved Inorganic Lead (µg/L)
Groundwater Monitoring Wells									
MW-1	5/17/1996	1,100	<0.5	8.7	7.4	17	--	<10	<50
	10/8/1996	120	<0.5	<0.5	2.7	<0.5	--	--	--
	4/1/1997	550	<0.5	<0.5	7.6	6.6	--	--	--
	6/12/1997	160	<0.5	<0.5	2.9	1.7	--	--	--
	9/10/1997	640	2.2	3.8	7.4	16	--	--	--
	6/8/1999	<50	<0.5	<0.5	<0.5	<0.5	<10	<10	<20
	9/13/1999	<50	<0.5	<0.5	<0.5	1.1	--	--	<5
	12/21/1999	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	3/17/2000	<50	<0.5	<0.5	<0.5	0.79	<5	--	<5
	12/5/2000	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	2/28/2001	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	8/22/2001	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<5
	5/22/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	8/29/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/2/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	3/4/2003	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/18/2003	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	4/13/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	6/18/2004	150	1.5	<0.5	2.7	2.4	--	--	--
	5/27/2005	<50	1.6	<0.5	<0.5	<0.5	--	--	--
	8/24/2006	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	1/13/2010	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	5/3/2012	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
MW-2	5/17/1996	23,000	900	330	650	1,500	--	<10	<50
	10/8/1996	8,400	530	<50	400	360	--	--	--
	4/1/1997	7,600	470	64	210	250	--	--	--
	6/12/1997	8,200	440	52	190	190	--	--	--
	9/10/1997	8,500	390	51	220	240	--	--	--
	6/8/1999	2,100	240	8	33	40	<10	<10	33
	9/13/1999	1,300	120	<5	<5	15	--	--	--
	12/21/1999	1,400	110	5.6	11	17	--	--	<5
	3/17/2000	1,200	180	19	28	31	<50	--	<5
	12/5/2000	800	75	1.8	11	14	--	--	--
	2/28/2001	1,200	120	7.1	19	27	--	--	--
	8/22/2001	990	75	3.5	8.9	8.1	<5	--	<5
	5/22/2002	1,700	230	12	12	25	--	--	--
	8/29/2002	1,000	66	2.6	12	12	--	--	--
	12/2/2002	1,100	76	8.7	11	17	--	--	--
	3/4/2003	1,100	130	4.5	22	24	--	--	--
	12/18/2003	910	55	4.1	3.3	3.7	--	--	--
	4/13/2004	2,700	350	15	18	24	--	--	--
	10/5/2004	2,000	120	5.5	<2.5	8.3	--	--	--
	5/27/2005	5,700	450	53	240	71	--	--	--
	8/24/2006	1,400	90	4.7	16	21	--	--	--
	1/13/2010	130^J	1.2	<0.5	<0.5	<1.0	--	--	--
	5/3/2012	350	22	<0.5	2.1	<1.0	--	--	--
	9/18/2012	410	4.7	<0.5	<0.5	<1.0	--	--	--
<i>SF Bay RWQCB ESL, Final¹</i>		210	46	130	43	100	NA	NA	NA
<i>SF Bay RWQCB ESL, VI¹</i>		NA	540	38,000	17,000	16,000	NA	NA	NA

TABLE 5
Historical Groundwater Analytical Results
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Date Sampled	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Chromium (µg/L)	Dissolved Inorganic Lead (µg/L)
MW-3								
5/17/1996	6,700	140	45	210	180	--	<10	<50
10/8/1996	1,800	2,700	240	910	970	--	--	--
4/1/1997	27,000	520	50	520	450	--	--	--
6/12/1997	29,000	2,700	160	940	500	--	--	--
9/10/1997	290,000	1,800	3,200	2,800	6,900	--	--	--
6/8/1999	1,700	320	6.4	15	<0.5	<10	<10	24
9/13/1999	5,400	1,000	<20	<20	<20	--	--	--
12/21/1999	8,800	1,400	63	17	23	--	--	<5
3/17/2000	1,500	190	<5	7.6	<5	<50	--	<5
12/5/2000	5,400	790	20	7.4	10	--	--	--
2/28/2001	3,600	850	15	25	10	--	--	--
8/22/2001	8,100	1,600	28	44	17	<50	--	<5
5/22/2002	5,400	1,000	32	13	21	--	--	--
8/29/2002	6,700	1,700	55	49	38	--	--	--
12/2/2002	5,700	650	17	37	33	--	--	--
3/4/2003	5,000	650	18	42	27	--	--	--
12/18/2003	5,200	910	25	20	21	--	--	--
4/13/2004	3,900	1,200	19	<5.0	<10	--	--	--
6/18/2004	4,300	1,600	40	81	26	--	--	--
8/27/2004	6,900	2,100	59	220	<50	--	--	--
10/5/2004	9,800	2,500	52	160	38	--	--	--
12/2/2004	8,300	2,400	41	200	29	--	--	--
12/14/2004	15,000	3,600	140	560	210	--	--	--
5/27/2005	5,500	840	36	210	41	--	--	--
8/23/2006	1,700	190	5.3	51	<10	--	--	--
1/13/2010	<50	2	<0.5	<0.5	<1.0	--	--	--
5/3/2012	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
9/18/2012	480/440	110/100	2.6/2.4	0.66/0.62	1.2/1.1	--	--	--
MW-4								
12/5/2000	3,900	320	13	41	31	--	--	<5
2/28/2001	3,400	250	14	44	22	--	--	<5
8/22/2001	4,800	260	12	27	9	<50	--	<5
5/22/2002	5,100	320	29	74	50	--	--	--
8/29/2002	3,700	260	<5	30	28	--	--	--
12/2/2002	5,100	250	8.9	26	22	--	--	--
3/4/2003	4,500	170	18	63	47	--	--	--
12/18/2003	2,900	160	8.3	8	<5	--	--	--
4/13/2004	7,400	290	29	110	100	--	--	--
6/18/2004	2,700	140	12	36	16	--	--	--
8/27/2004	460	19	1.2	1.1	1.5	--	--	--
10/5/2004	460	19	<1.0	<1.0	<1.0	--	--	--
12/2/2004	2,800	120	5.4	8.3	5.3	--	--	--
5/27/2005	7,300	350	37	100	50	--	--	--
8/24/2006	2,400	59	8.2	19	14	--	--	--
1/14/2010	400 ^J	1.6	<0.5	<0.5	<1.0	--	--	--
5/3/2012	6,800	190	26	15	25	--	--	--
6/8/2012	3,400	83	11	7.1	11	<0.50	--	--
9/18/2012	1,400	25	4.2	1.2	3.6	--	--	--
<i>SF Bay RWQCB ESL, Final¹</i>	210	46	130	43	100	NA	NA	NA
<i>SF Bay RWQCB ESL, VI¹</i>	NA	540	38,000	17,000	16,000	NA	NA	NA

TABLE 5
Historical Groundwater Analytical Results
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Date Sampled	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Chromium (µg/L)	Dissolved Inorganic Lead (µg/L)
MW-5								
12/5/2000	<50	<0.5	<0.5	<0.5	<0.5	--	--	<5
2/28/2001	<50	<0.5	<0.5	<0.5	<0.5	--	--	<5
8/22/2001	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<5
5/22/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
8/29/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/2/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
3/4/2003	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/18/2003	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
4/13/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
12/2/2005	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
5/27/2005	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
8/24/2006	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
1/14/2010	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
5/3/2012	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
MW-6								
12/5/2000	<50	<0.5	<0.5	<0.5	<0.5	--	--	<5
2/28/2001	<50	<0.5	<0.5	<0.5	<0.5	--	--	<5
8/22/2001	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<5
5/22/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
8/29/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/2/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
3/4/2003	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/18/2003	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
4/13/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
12/2/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
5/27/2005	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
8/24/2006	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
1/13/2010	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
5/3/2012	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
MW-7								
12/5/2000	<50	<0.5	<0.5	<0.5	1.5	--	--	<5
2/28/2001	<50	<0.5	<0.5	<0.5	6.7	--	--	<5
8/22/2001	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<5
5/22/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/2/2002	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
3/4/2003	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/18/2003	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
4/13/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
12/2/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
5/27/2005	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
8/24/2006	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
1/13/2010	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
5/4/2012	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
Peroxide Treatment Area - A Zone Injection Wells								
PIW-A1								
5/13/2004	6,800	460	50	31	300	--	--	--
6/18/2004	240	10	2.1	4	11	--	--	--
8/27/2004	220	14	1.2	2	5	--	--	--
10/5/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
12/2/2004	640	63	12.0	15	29	--	--	--
PIW-A2								
5/13/2004	20,000	1,500	460	760	2,600	--	--	--
6/18/2004	2,800	150	14	6.5	90	--	--	--
8/27/2004	500	34	3	4.4	12	--	--	--
12/2/2004	350	6.1	1.2	2.4	5.4	--	--	--
PIW-A3								
12/14/2004	1,500	220	28	55	99	--	--	--
SF Bay RWQCB ESL, Final ¹	210	46	130	43	100	NA	NA	NA
SF Bay RWQCB ESL, VI ¹	NA	540	38,000	17,000	16,000	NA	NA	NA

TABLE 5
Historical Groundwater Analytical Results
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Date Sampled	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Chromium (µg/L)	Dissolved Inorganic Lead (µg/L)
Peroxide Treatment Area - B Zone Injection Wells								
PIW-B1								
5/13/2004	1,900	28	<5.0	11	51	--	--	--
6/18/2004	270	22	1	2.2	2.7	--	--	--
8/27/2004	230	11	0.85	1.7	4.3	--	--	--
12/2/2002	66	<0.5	<0.5	<0.5	<1.0	--	--	--
PIW-B3								
5/13/2004	3,300	420	17	7.8	44	--	--	--
6/18/2004	180	1.2	<0.5	<0.5	2.4	--	--	--
8/27/2004	230	20.0	0.93	3.3	2.9	--	--	--
12/2/2004	64	0.75	<0.5	<0.5	<1.0	--	--	--
Peroxide Treatment Area - A Zone Observation Wells								
POBS-A1								
5/13/2004	16,000	2,200	220	480	980	--	--	--
6/18/2004	11,000	2,200	150	120	820	--	--	--
8/27/2004	23,000	2,900	140	180	470	--	--	--
10/5/2004	13,000	2,400	83	130	94	--	--	--
12/2/2004	17,000	3,500	240	210	730	--	--	--
12/14/2004	13,000	2,700	200	220	510	--	--	--
5/27/2005	9,600	1,200	62	110	180	--	--	--
8/24/2006	8,500	1,700	58	120	100	--	--	--
1/13/2010	7,300 ^J	1,100	29	53	42	--	--	--
5/4/2012	540	110	2.0	1.4	<1.0	--	--	--
9/18/2012	2,600	1,100	27	8.3	18	--	--	--
Peroxide Treatment Area - B Zone Observation Wells								
POBS-B1								
5/13/2004	11,000	250	71	160	590	--	--	--
6/18/2004	3,500	9.8	<0.5	0.8	13	--	--	--
8/27/2004	500	1.4	<0.5	<0.5	<1.0	--	--	--
12/2/2004	190	2.6	<0.5	<0.5	<1.0	--	--	--
5/27/2005	68	17.0	<0.5	1.6	0.52	--	--	--
8/24/2006	50	1.1	<0.5	<0.5	<1.0	--	--	--
5/4/2012	<50	0.80	<0.5	<0.5	<1.0	--	--	--
9/18/2012	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
POBS-B2								
5/13/2004	4,500	150	23	11	120	--	--	--
6/18/2004	97	7.4	0.8	1.6	1.7	--	--	--
8/27/2004	240	36.0	1.6	6.7	4.2	--	--	--
12/2/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
5/27/2005	97	33.0	0.56	1.3	0.74	--	--	--
8/24/2006	57	<0.5	<0.5	<0.5	<1.0	--	--	--
5/3/2012	83	8.8	<0.5	<0.5	<1.0	--	--	--
9/18/2012	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
Nitrate Injection Area - A Zone Injection Wells								
NIW-A1								
5/13/2004	9,300	1,800	59	250	96	--	--	--
6/18/2004	3,100	340	22	93	55	--	--	--
8/27/2004	250	13	1.4	6	5.7	--	--	--
10/5/2004	1,700	150	<5.0	24	12	--	--	--
12/2/2004	1,400	28	6.2	10	23	--	--	--
5/27/2005	14,000	1,300	61.0	680	300	--	--	--
NIW-A2								
5/13/2004	970	18	<2.5	<2.5	4	--	--	--
6/18/2004	200	6.4	1.7	2.1	3.5	--	--	--
8/27/2004	<500	6.3	<5.0	<5.0	<10	--	--	--
12/2/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
5/27/2005	550	14.0	0.7	1.8	0.93	--	--	--
SF Bay RWQCB ESL, Final ¹	210	46	130	43	100	NA	NA	NA
SF Bay RWQCB ESL, VI ¹	NA	540	38,000	17,000	16,000	NA	NA	NA

TABLE 5
Historical Groundwater Analytical Results
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Date Sampled	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Chromium (µg/L)	Dissolved Inorganic Lead (µg/L)
Nitrate Injection Area - B Zone Injection Wells								
NIW-B1								
5/13/2004	170	6.5	1.1	2.4	8.0	--	--	--
6/18/2004	160	2.9	0.7	2.6	2.5	--	--	--
8/27/2004	110	6.9	<0.5	1.4	2.0	--	--	--
12/2/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
NIW-B2								
5/13/2004	260	8.9	1.5	4	8.4	--	--	--
6/18/2004	120	1.0	<0.5	1.1	<1	--	--	--
8/27/2004	120	4.4	<0.5	1.1	1.6	--	--	--
12/2/2004	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
Nitrate Injection Area - Observation Wells								
NOBS-B1								
5/13/2004	120	4.6	0.8	2.3	5.4	--	--	--
6/18/2004	88	1.9	0.7	1.7	<1	--	--	--
8/27/2004	180	5.5	0.53	0.99	1.6	--	--	--
12/2/2004	<50	2.0	<0.5	<0.5	<1.0	--	--	--
8/24/2006	< 50	< 0.5	< 0.5	< 0.5	< 1.0	--	--	--
5/3/2012	< 50	< 0.5	< 0.5	< 0.5	< 1.0	--	--	--
9/18/2012	< 50	< 0.5	< 0.5	< 0.5	< 1.0	--	--	--
<i>SF Bay RWQCB ESL, Final¹</i>	210	46	130	43	100	NA	NA	NA
<i>SF Bay RWQCB ESL, VI¹</i>	NA	540	38,000	17,000	16,000	NA	NA	NA

Abbreviations:

µg/L = micrograms per liter

MTBE = methyl tert-butyl ether

TPH-G = Total Petroleum Hydrocarbons, Gasoline Range

-- = water sample not analyzed for specified constituents

J = the chromatograph for this sample does not match the chromatographic pattern of the specified standard

480/440 = primary and duplicate sample analytical results.

NA = not available or not applicable

Notes:

Bold indicates detected concentration.

1) Environmental Screening Levels (ESLs) established by the California Regional Water Quality Control Board, San Francisco Bay Region (May 2008). The Final listed values are lowest of groundwater ESLs and are based on aquatic habitat goals where groundwater is not a current or potential source of drinking water. The ESLs for screening of groundwater where there is a potential for vapor intrusion (VI) into buildings are also included.

TABLE 6
Comparison of Soil Vapor Sample Results to Screening Values
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, California

Sample Identification	Sample Date	Tubing Diameter (inches)	Sample Depth (feet bgs)	Volatile Organic Compounds (VOCs) ($\mu\text{g}/\text{m}^3$)												Helium (%)
				Ethanol	Dichloro difluoro methane (Freon 12)	Acetone	Methylene Chloride	2-Butanone (Methyl Ethyl Ketone)	Cyclohexane	2,2,4-Trimethyl-pentane	Benzene	Toluene	Tetrachloro-ethene (PCE)	Chloro-benzene	o-Xylene	
SV-1	4/4/2011	0.25	2.5-3	30 ^J	ND<6.1	39	4.6	28	ND<4.3	ND<5.8	11	72	11	110	11	ND<0.12
SV-2	4/4/2011	0.25	2.5-3	45 ^J	ND<5.5	29	ND<3.9	16	ND<3.8	ND<5.2	12	84	19	120	11	ND<0.11
SV-3	4/4/2011	0.25	2.5-3	ND<18	34	40	ND<8.3	130	38	860	25	120	ND<16	150	19	ND<0.12
SV-4	4/4/2011	0.25	2.5-3	53 ^J	ND<6.6	36	ND<4.6	83	ND<4.6	ND<6.2	18	120	ND<9.0	150	17	ND<0.13
Industrial CHHSLs				NA	NA	NA	NA	NA	NA	NA	280	890,000	NA	NA	2,100,000	NA
CHHSLs				NA	NA	NA	NA	NA	NA	NA	85	320,000	NA	NA	740,000	NA
Industrial ESLs				NA	NA	1,800,000	17,000	2,900,000	NA	NA	280	180,000	1,400	580,000	58,000	NA
Residential ESLs				NA	NA	660,000	5,200	1,000,000	NA	NA	84	63,000	410	210,000	21,000	NA

Notes:

- bgs = below ground surface
- $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
- % = percent
- ND< = Analyte not detected above respective laboratory equipment reporting limit.
- J= Laboratory estimated value, between the method detection limit and the method quantification limit.
- ESLs Table E-2 (Cal-EPA, 2008).
- CHHSLs with engineered fill below sub-slab gravel (Cal-EPA, 2010).

Stantec

**SITE CONCEPTUAL MODEL AND WORK PLAN TO EVALUATE POST-REMEDATION SITE
CONDITIONS
DAVID D. BOHANNON ORGANIZATION**

FIGURES

Site Conceptual Model and Work Plan to Evaluate Post-Remediation
Site Conditions

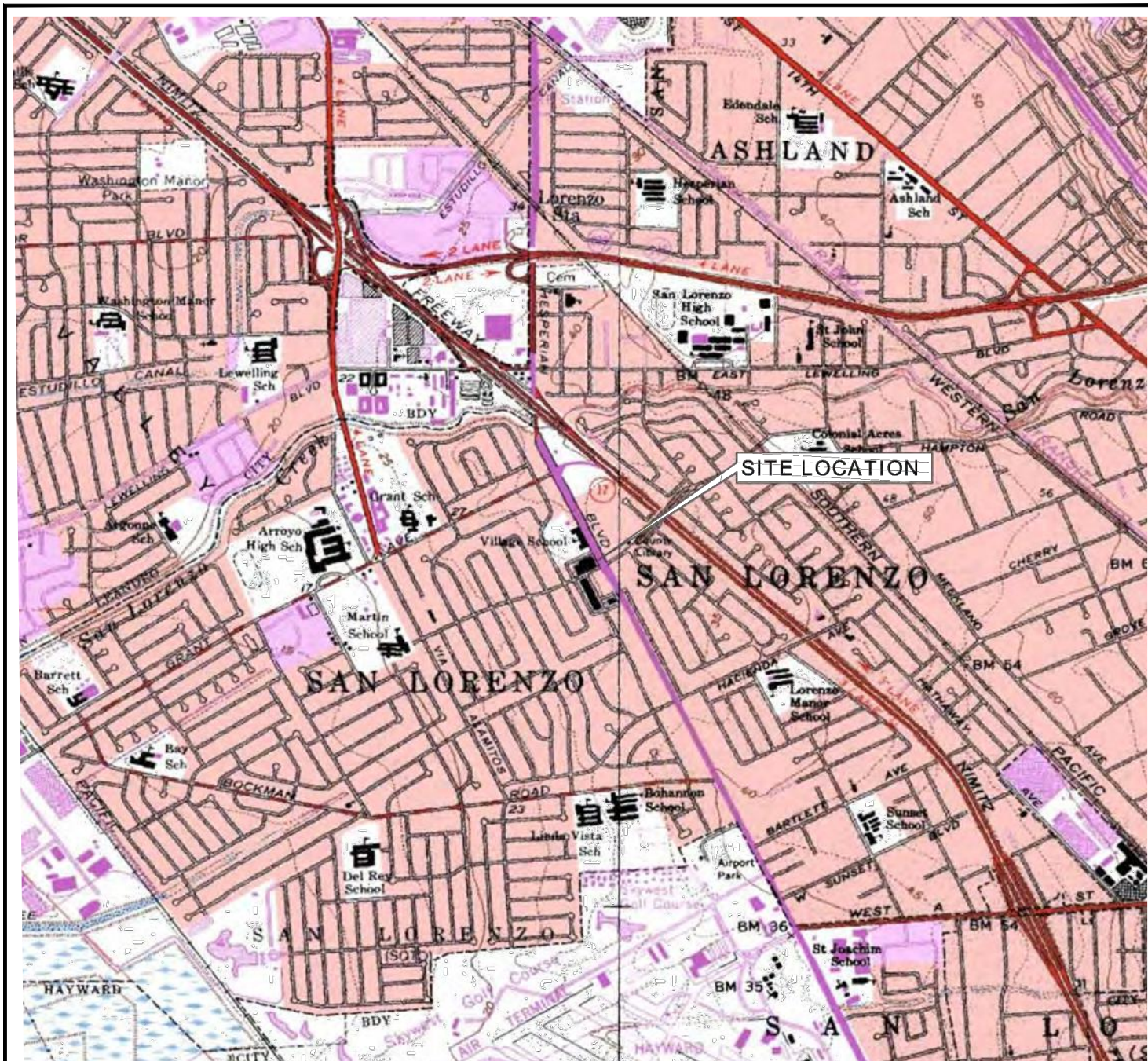
David D. Bohannon Organization

575 Paseo Grande

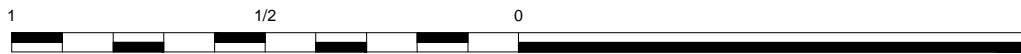
San Lorenzo, California

Stantec PN: 185702534.200.0005

December 21, 2012



CALIFORNIA



SCALE IN MILE



SCALE IN FEET

Image courtesy of the U.S. Geological Survey and Microsoft TerraService OpenGIS Map Server



Stantec

57 Lafayette Circle, 2nd Floor
Lafayette California

PHONE: (925) 299-9300 FAX: (925) 299-9302

FOR:
DAVID D. BOHANNON ORGANIZATION

575 PASEO GRANDE
SAN LORENZO, CALIFORNIA

JOB NUMBER:
185702534.200.0003

DRAWN BY:
JMA

CHECKED BY:
JMA

APPROVED BY:
CRM




DATE:
11/02/12

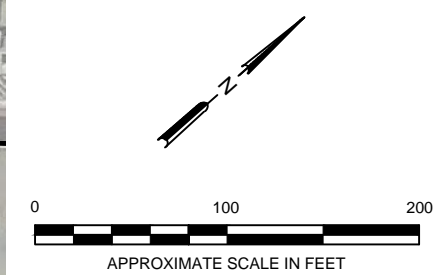
SITE LOCATION MAP

1



LEGEND

-  PARCEL BOUNDARIES (RESIDENTIAL AND COMMERCIAL)
-  FORMER GAS STATION - BOHANNON APN: 412-31-93 (AREA OF INTEREST)
-  VACANT PROPERTY - BOHANNON APN: 412-31-92




FOR:
DAVID D. BOHANNON ORGANIZATION
575 PASEO GRANDE
SAN LORENZO, CALIFORNIA

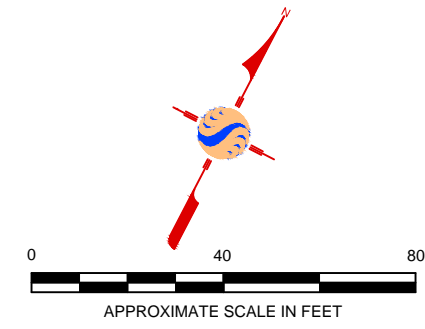
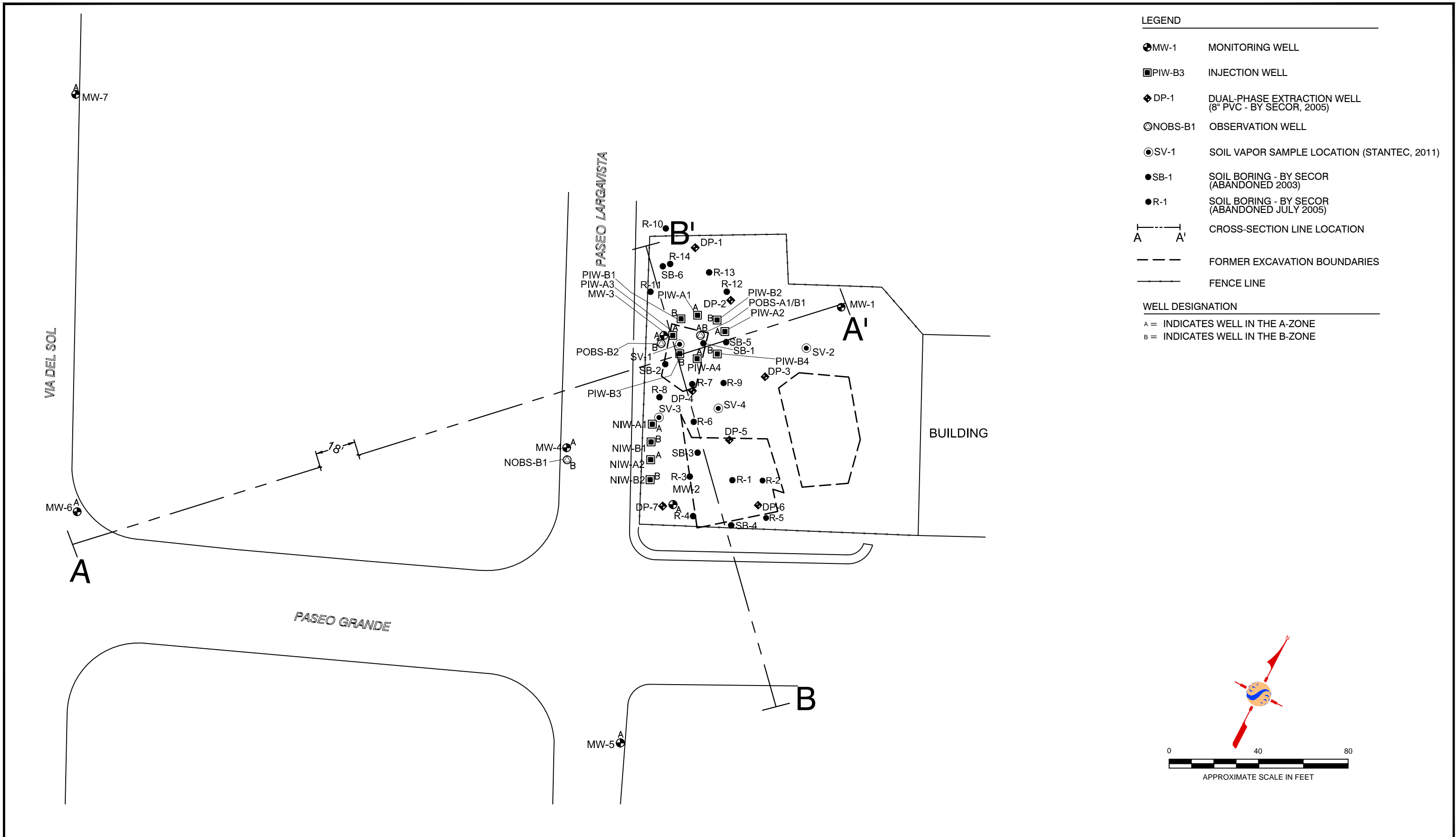
JOB NUMBER: 185702534.200.0003



SITE PLAN MAP

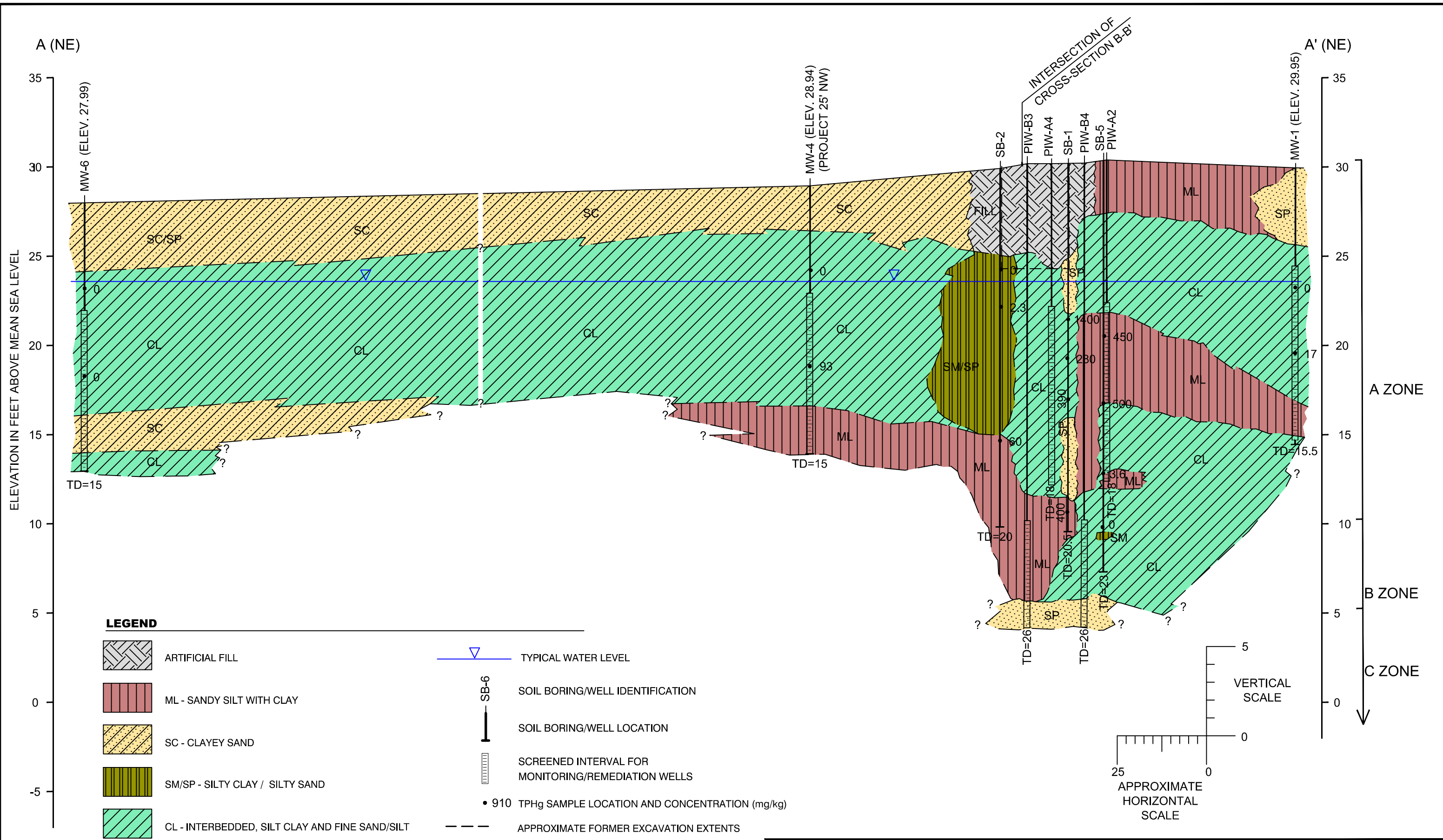
CHECKED BY: JMA
APPROVED BY: CRM

FIGURE: 













DATE: 11/02/12



 57 Lafayette Circle, 2nd Floor Lafayette, CA 94549 (925) 299-9300/299-9302 (Fax)	FOR: DAVID D. BOHANNON ORGANIZATION 575 PASEO GRANDE SAN LORENZO, CALIFORNIA		SITE PLAN		FIGURE: 
	JOB NUMBER: 185702534.200.0003	DRAWN BY: RRR	CHECKED BY: JMA	APPROVED BY: CRM	DATE: 12/12/12



LEGEND

-  ARTIFICIAL FILL
-  ML - SANDY SILT WITH CLAY
-  SC - CLAYEY SAND
-  SM/SP - SILTY CLAY / SILTY SAND
-  CL - INTERBEDDED, SILT CLAY AND FINE SAND/SILT
-  SP - FINE SAND WITH GRAVEL
-  TYPICAL WATER LEVEL
-  SB-6 SOIL BORING/WELL IDENTIFICATION
-  SOIL BORING/WELL LOCATION
-  SCREENED INTERVAL FOR MONITORING/REMEDATION WELLS
-  • 910 TPHg SAMPLE LOCATION AND CONCENTRATION (mg/kg)
-  - - - APPROXIMATE FORMER EXCAVATION EXTENTS

ABBREVIATIONS

- TPHg - Total Petroleum Hydrocarbons as Gasoline
- mg/kg - Milligrams per Kilogram



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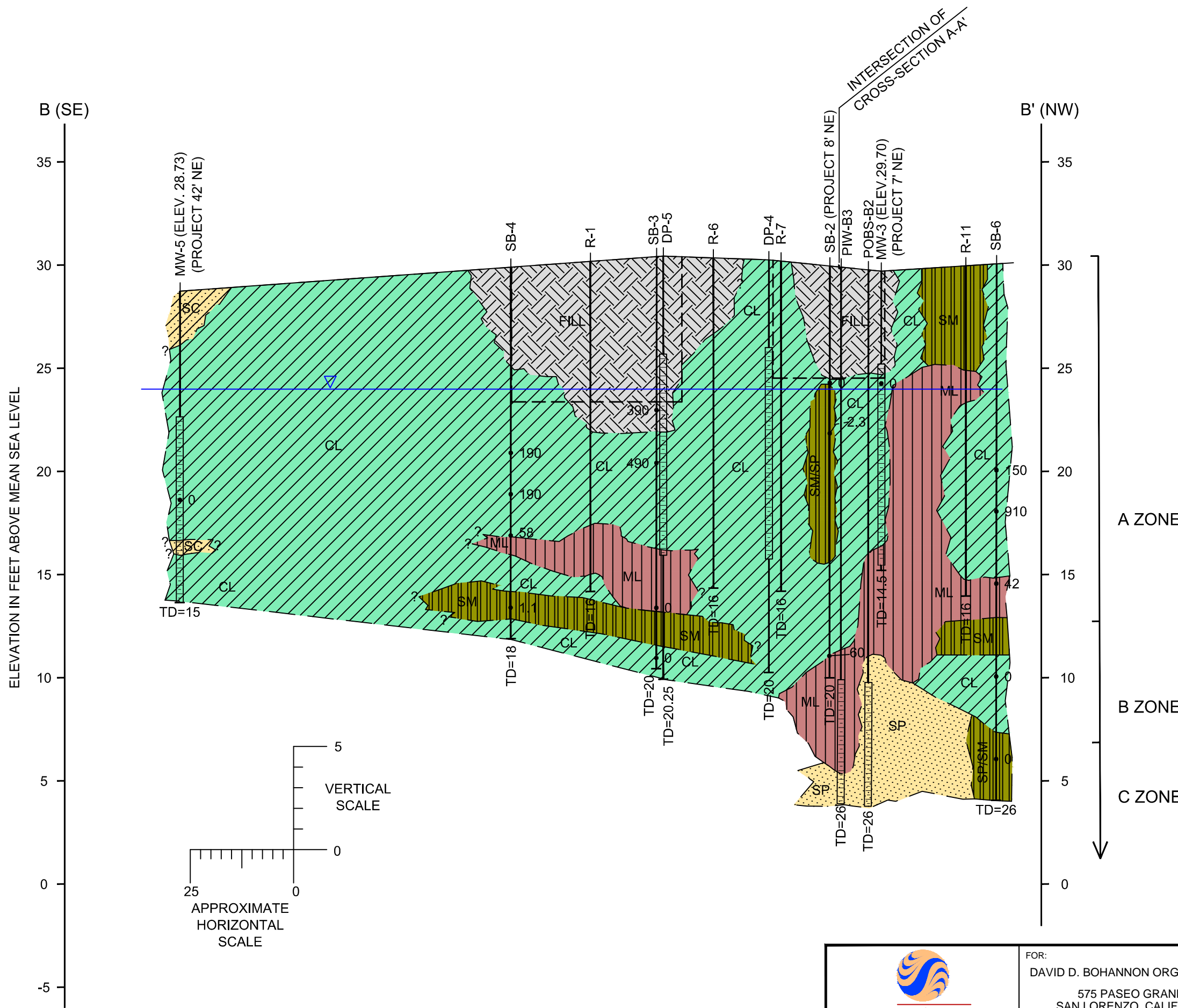
FOR:
DAVID D. BOHANNON ORGANIZATION
575 PASEO GRANDE
SAN LORENZO, CALIFORNIA

JOB NUMBER: 185702534.200.0003
DRAWN BY: RRR

GEOLOGIC CROSS SECTION A-A'

CHECKED BY: JMA
APPROVED BY: CRM

FIGURE:
DATE: 12/10/12

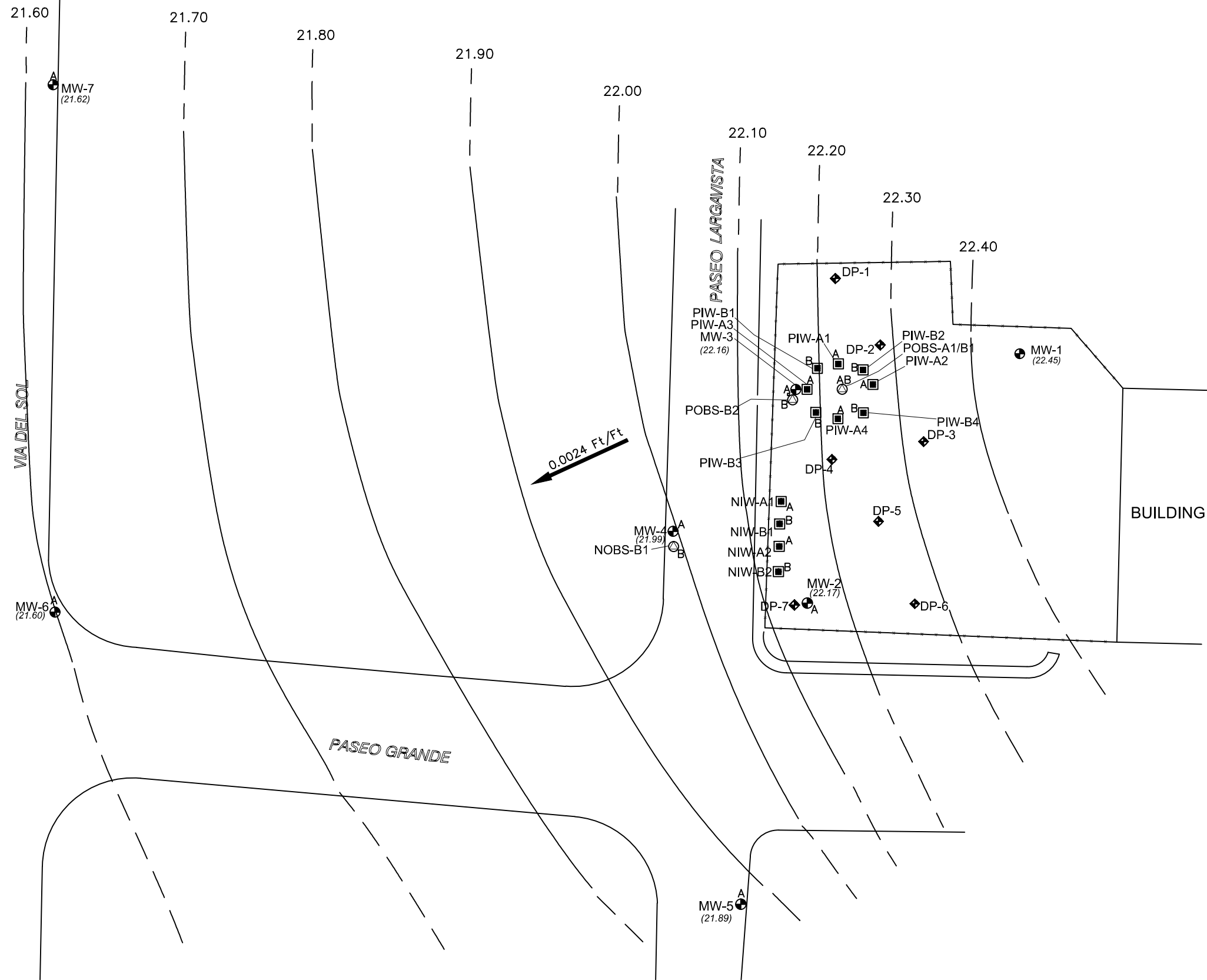


- LEGEND**
- ARTIFICIAL FILL
 - ML - SANDY SILT WITH CLAY
 - SC - CLAYEY SAND
 - SM/SP - SILTY CLAY / SILTY SAND
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 - APPROXIMATE FORMER EXCAVATION EXTENTS

ABBREVIATIONS

TPHg - Total Petroleum Hydrocarbons as Gasoline
 mg/kg - Milligrams per Kilogram

 Stantec 57 Lafayette Circle, 2nd Floor Lafayette, CA 94549 (925) 299-9300/299-9302 (Fax)	FOR: DAVID D. BOHANNON ORGANIZATION 575 PASEO GRANDE SAN LORENZO, CALIFORNIA		GEOLOGIC CROSS SECTION □□□□		FIGURE:
	JOB NUMBER: 185702534.200.0003	DRAWN BY: RRR	CHECKED BY: JMA	APPROVED BY: CRM	DATE: 12/10/12



LEGEND

	MW-6	MONITORING WELL
	PIW-B3	INJECTION WELL
	DP-1	DUAL-PHASE EXTRACTION WELL (8" PVC - BY SECOR, 2005)
	NOBS-B1	OBSERVATION WELL
	— 22.00	GROUNDWATER SURFACE ELEVATION CONTOUR (DASHED WHERE INFERRED)
	(22.45)	GROUNDWATER ELEVATION (FEET ABOVE MSL)
	0.0024 Ft/Ft	HYDRAULIC GRADIENT

WELL DESIGNATION

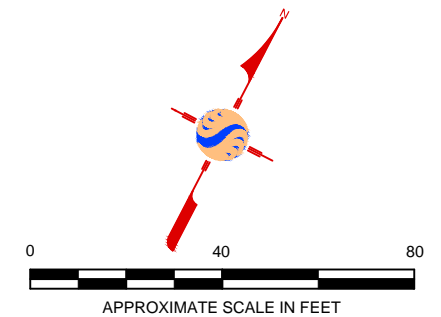
A = INDICATES WELL IN THE A-ZONE
 B = INDICATES WELL IN THE B-ZONE

NOTES

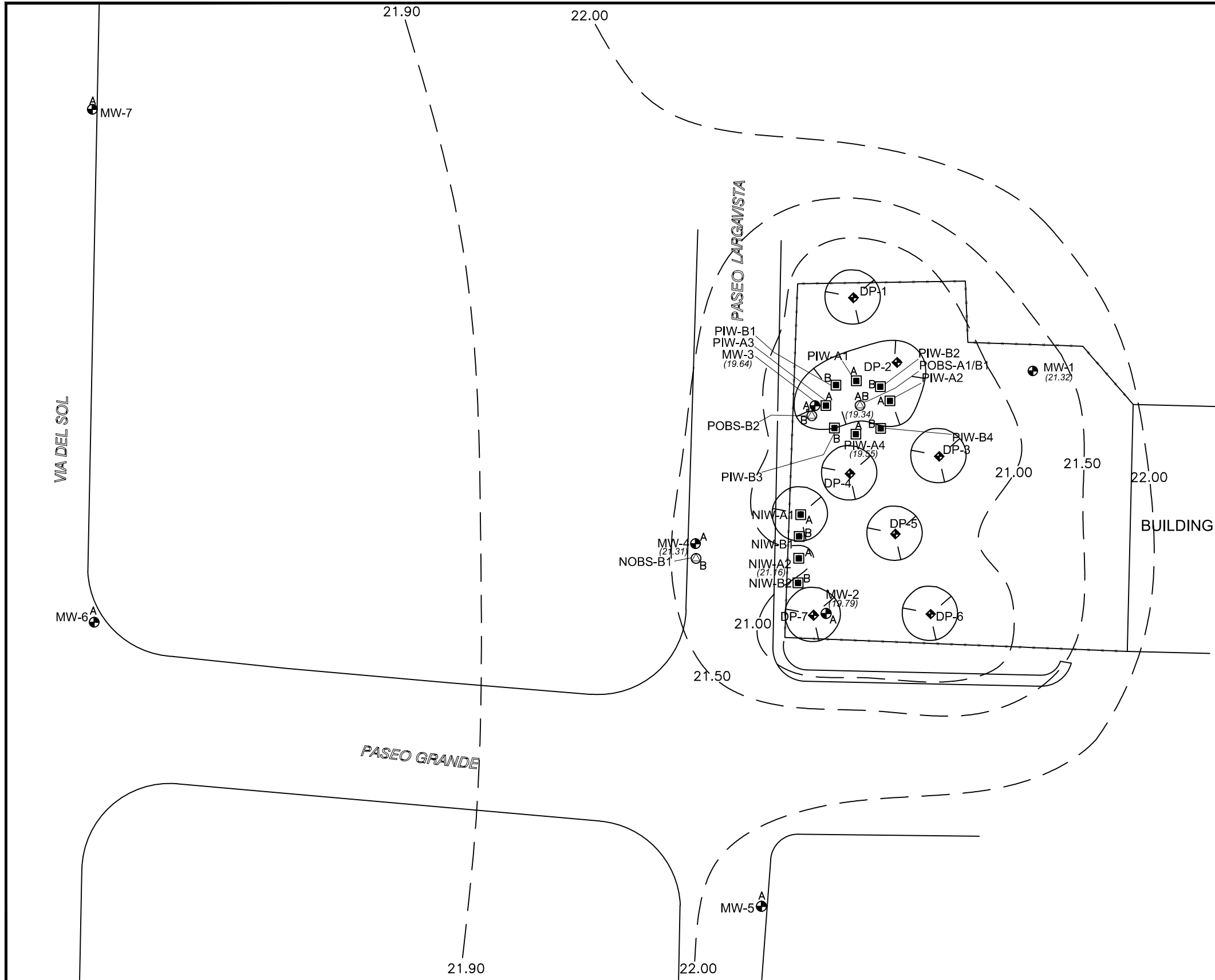
1) SITE WELLS WERE SURVEYED ON SEPTEMBER 24, 2012 BY MID COAST ENGINEERS OF WATSONVILLE, CALIFORNIA.

MID COAST JOB NUMBER 12093, CERTIFIED BY LEE D. VAAGE

SITE COORDINATE SYSTEM:
 U.S. STATE PLANE, CALIFORNIA ZONE 3
 PROJECT DATUM NAD83/NAVD88
 US SURVEY FEET



 57 Lafayette Circle, 2nd Floor Lafayette, CA 94549 (925) 299-9300/299-9302 (Fax)	FOR: DAVID D. BOHANNON ORGANIZATION 575 PASEO GRANDE SAN LORENZO, CALIFORNIA		GROUNDWATER POTENTIOMETRIC SURFACE MAP SEPTEMBER 1 2012		FIGURE:
	JOB NUMBER: 185702534.200.0003	DRAWN BY: JMA/RRR	CHECKED BY: JMA	APPROVED BY: CRM	DATE: 12/12/12



LEGEND

	MW-6	MONITORING WELL
	PIW-B3	INJECTION WELL
	DP-1	DUAL-PHASE EXTRACTION WELL (8" PVC - BY SECOR, 2005)
	NOBS-B1	OBSERVATION WELL
	— 22.00	GROUNDWATER SURFACE ELEVATION CONTOUR (DASHED WHERE INFERRED)
	(21.32)	GROUNDWATER ELEVATION JUNE 30, 2009 (FEET ABOVE MSL)

WELL DESIGNATION

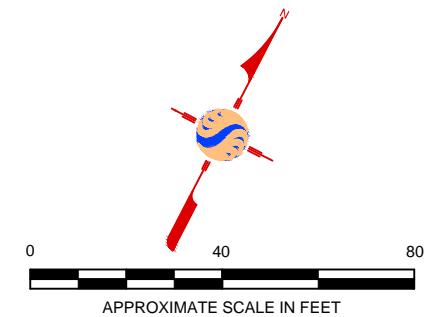
A = INDICATES WELL IN THE A-ZONE
 B = INDICATES WELL IN THE B-ZONE

NOTES

1) SITE WELLS WERE SURVEYED ON SEPTEMBER 24, 2012 BY MID COAST ENGINEERS OF WATSONVILLE, CALIFORNIA.

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SITE COORDINATE SYSTEM:
 U.S. STATE PLANE, CALIFORNIA ZONE 3
 PROJECT DATUM NAD83/NAVD88
 US SURVEY FEET



 57 Lafayette Circle, 2nd Floor Lafayette, CA 94549 (925) 299-9300/299-9302 (Fax)	FOR: DAVID D. BOHANNON ORGANIZATION 575 PASEO GRANDE SAN LORENZO, CALIFORNIA		INFERRED GROUNDWATER POTENTIOMETRIC SURFACE DURING DPE OPERATIONS 11 NE 0000		FIGURE:
	JOB NUMBER: 185702534.200.0003	DRAWN BY: JMA/RRR	CHECKED BY: JMA	APPROVED BY: CRM	DATE: 12/12/12

LEGEND

- MW-1 MONITORING WELL
- PIW-B3 INJECTION WELL
- ◆ DP-1 DUAL-PHASE EXTRACTION WELL (8" PVC - BY SECOR, 2005)
- NOBS-B1 OBSERVATION WELL
- SB-1 SOIL BORING - BY SECOR (ABANDONED 2003)
- R-1 SOIL BORING - BY SECOR (ABANDONED JULY, 2005)
- - - FORMER EXCAVATION BOUNDARIES
- FENCE LINE

WELL DESIGNATION

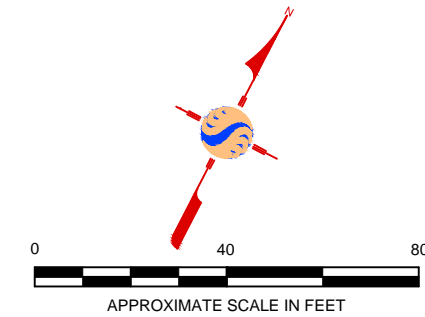
- A = INDICATES WELL IN THE A-ZONE
- B = INDICATES WELL IN THE B-ZONE

NOTES

CONCENTRATIONS OF COMPOUNDS ARE MEASURED IN MILLIGRAMS PER LITROGRAM (□ □/□□).

ABBREVIATIONS

- TPHg TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- TPHd TOTAL PETROLEUM HYDROCARBONS AS DIESEL
- B Benzene
- T Toluene
- E EthylBenzene
- X Xylenes
- Depth (ft) Depth in Feet Below Ground Surface
- ND< Not Detected at or Above Reporting Limit



MW-7						
Depth (ft)	TPHd	TPHg	B	T	E	X
10	NA	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005

SB-6						
Depth (ft)	TPHd	TPHg	B	T	E	X
10	36	150	ND<0.62	ND<0.62	ND<0.62	ND<0.62
12	54	910	ND<6.2	ND<6.2	ND<6.2	ND<6.2
15.5	2.2	42	ND<0.62	ND<0.62	ND<0.62	ND<0.62
20	4.4	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005
24	1.1	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005

MW-3						
Depth (ft)	TPHd	TPHg	B	T	E	X
5.5	ND<1.0	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.005

POBS-B2						
Depth (ft)	TPHd	TPHg	B	T	E	X
9	NA	480	ND<3.1	ND<3.1	ND<3.1	ND<3.1
14	NA	1,500	7.5	ND<6.2	17	21

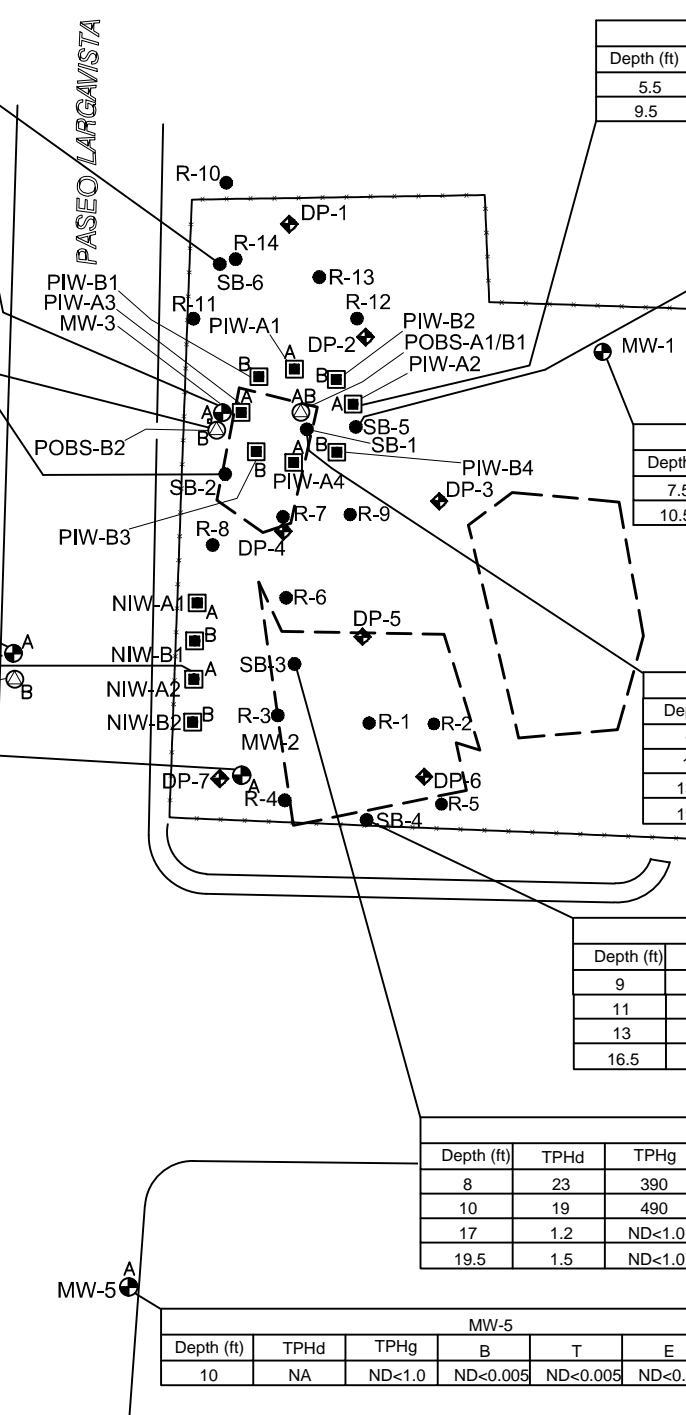
SB-2						
Depth (ft)	TPHd	TPHg	B	T	E	X
5.5	160	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005
8	34	2.3	ND<0.005	ND<0.005	ND<0.005	ND<0.005
15	10	60	ND<0.62	ND<0.62	ND<0.62	ND<0.62

MW-4						
Depth (ft)	TPHd	TPHg	B	T	E	X
5	NA	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005
10	NA	93	ND<0.005	ND<0.005	ND<0.005	ND<0.005

NIW-B2						
Depth (ft)	TPHd	TPHg	B	T	E	X
14	NA	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005

MW-2						
Depth (ft)	TPHd	TPHg	B	T	E	X
5	ND<1.0	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.005
12.5	ND<1.0	480	ND<0.20	0.37	3.2	6.5

MW-6						
Depth (ft)	TPHd	TPHg	B	T	E	X
10	NA	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005



PIW-A2						
Depth (ft)	TPHd	TPHg	B	T	E	X
5.5	NA	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9.5	NA	150	ND<0.062	ND<0.062	0.91	ND<0.062

SB-5						
Depth (ft)	TPHd	TPHg	B	T	E	X
10	58	450	ND<3.1	ND<3.1	ND<3.1	3.2
13.5	36	500	ND<3.1	ND<3.1	4.5	6.8
17	2.7	3.6	0.031	0.027	0.048	0.13
20.5	1.9	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005

MW-1						
Depth (ft)	TPHd	TPHg	B	T	E	X
7.5	ND<1.0	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.005
10.5	ND<1.0	17	ND<0.005	0.1	0.19	0.25

SB-1						
Depth (ft)	TPHd	TPHg	B	T	E	X
8	1,700	1,400	ND<6.2	ND<6.2	24	ND<6.2
11	40	280	ND<1.2	ND<1.2	2.8	11
13.5	79	390	ND<1.2	ND<1.2	3.0	7.9
19.5	16	400	5.1	ND<3.1	ND<3.1	ND<3.1

SB-4						
Depth (ft)	TPHd	TPHg	B	T	E	X
9	16	190	ND<0.62	ND<0.62	ND<0.62	ND<0.62
11	8.7	190	ND<1.2	ND<1.2	ND<1.2	1.3
13	4.8	58	ND<0.62	ND<0.62	ND<0.62	ND<0.62
16.5	3.8	1.1	ND<0.005	ND<0.005	0.014	0.018

SB-3						
Depth (ft)	TPHd	TPHg	B	T	E	X
8	23	390	2.6	ND<1.2	6.9	25
10	19	490	3.4	3.3	6.0	23
17	1.2	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005
19.5	1.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005

MW-5						
Depth (ft)	TPHd	TPHg	B	T	E	X
10	NA	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005

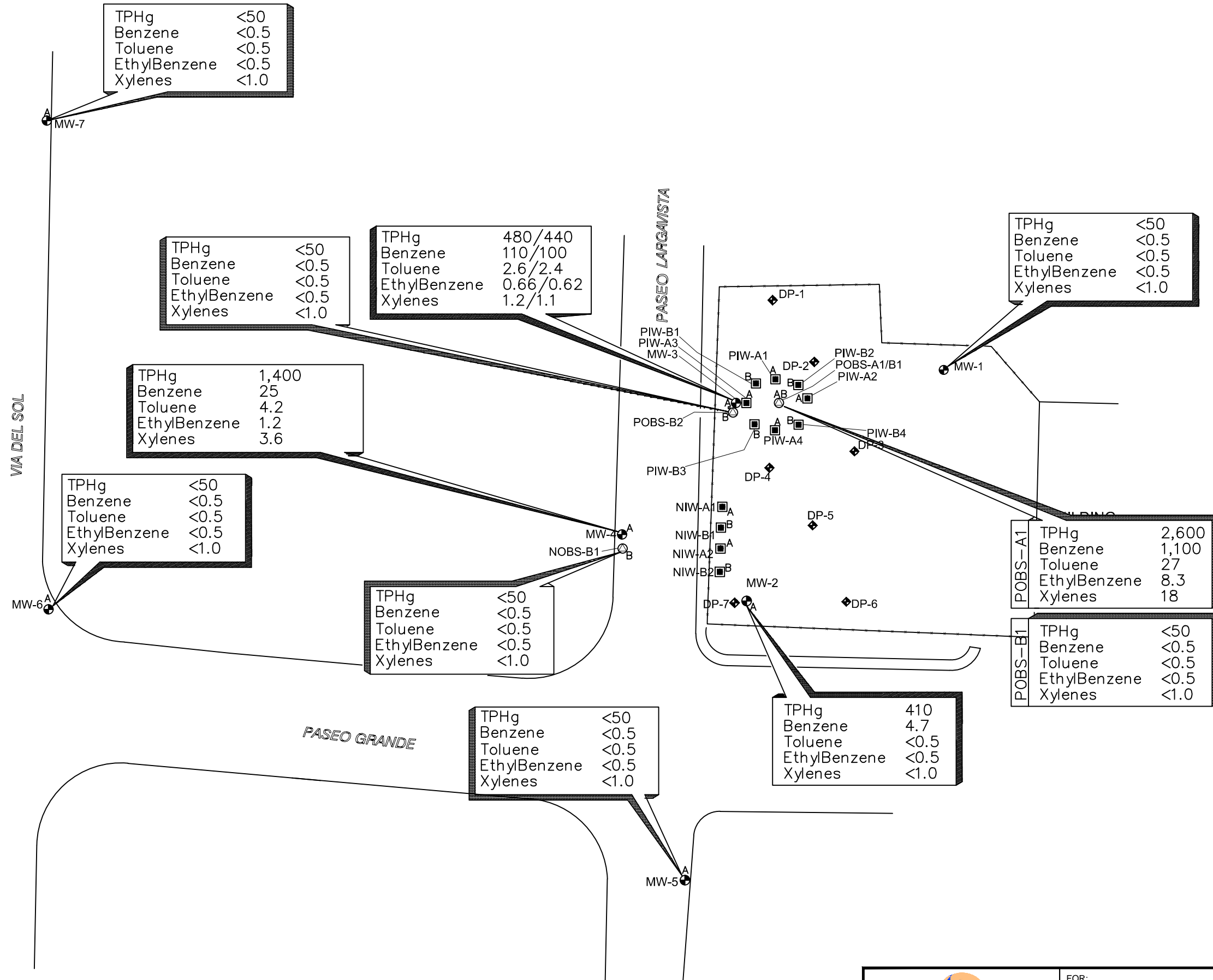


FOR:
DAVID D. BOHANNON ORGANIZATION
575 PASEO GRANDE
SAN LORENZO, CALIFORNIA

JOB NUMBER: 185702534.200.0003
DRAWN BY: JMA

PETROLEUM HYDROCARBON CONCENTRATIONS IN SOIL PRE REMEDIATION

CHECKED BY: JMA
APPROVED BY: CRM
DATE: 12/12/12



LEGEND

- MW-1 MONITORING WELL
- PIW-B3 INJECTION WELL
- ◆ DP-1 DUAL-PHASE EXTRACTION WELL (8" PVC - BY SECOR, 2005)
- NOBS-B1 OBSERVATION WELL
- FENCE LINE

WELL DESIGNATION

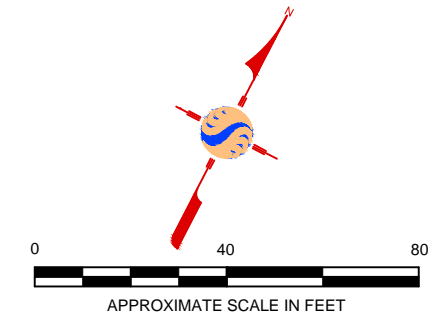
A = INDICATES WELL IN THE A-ZONE
 B = INDICATES WELL IN THE B-ZONE

NOTES

CONCENTRATIONS OF COMPOUNDS ARE MEASURED IN MICROGRAMS PER LITER (ug/L).

ABBREVIATIONS

TPHg	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B	Benzene
T	Toluene
E	EthylBenzene
X	Xylenes



TPHg	<50
Benzene	<0.5
Toluene	<0.5
EthylBenzene	<0.5
Xylenes	<1.0

TPHg	<50
Benzene	<0.5
Toluene	<0.5
EthylBenzene	<0.5
Xylenes	<1.0

TPHg	480/440
Benzene	110/100
Toluene	2.6/2.4
EthylBenzene	0.66/0.62
Xylenes	1.2/1.1

TPHg	<50
Benzene	<0.5
Toluene	<0.5
EthylBenzene	<0.5
Xylenes	<1.0

TPHg	1,400
Benzene	25
Toluene	4.2
EthylBenzene	1.2
Xylenes	3.6

TPHg	<50
Benzene	<0.5
Toluene	<0.5
EthylBenzene	<0.5
Xylenes	<1.0



TPHg	<50
Benzene	<0.5
Toluene	<0.5
EthylBenzene	<0.5
Xylenes	<1.0

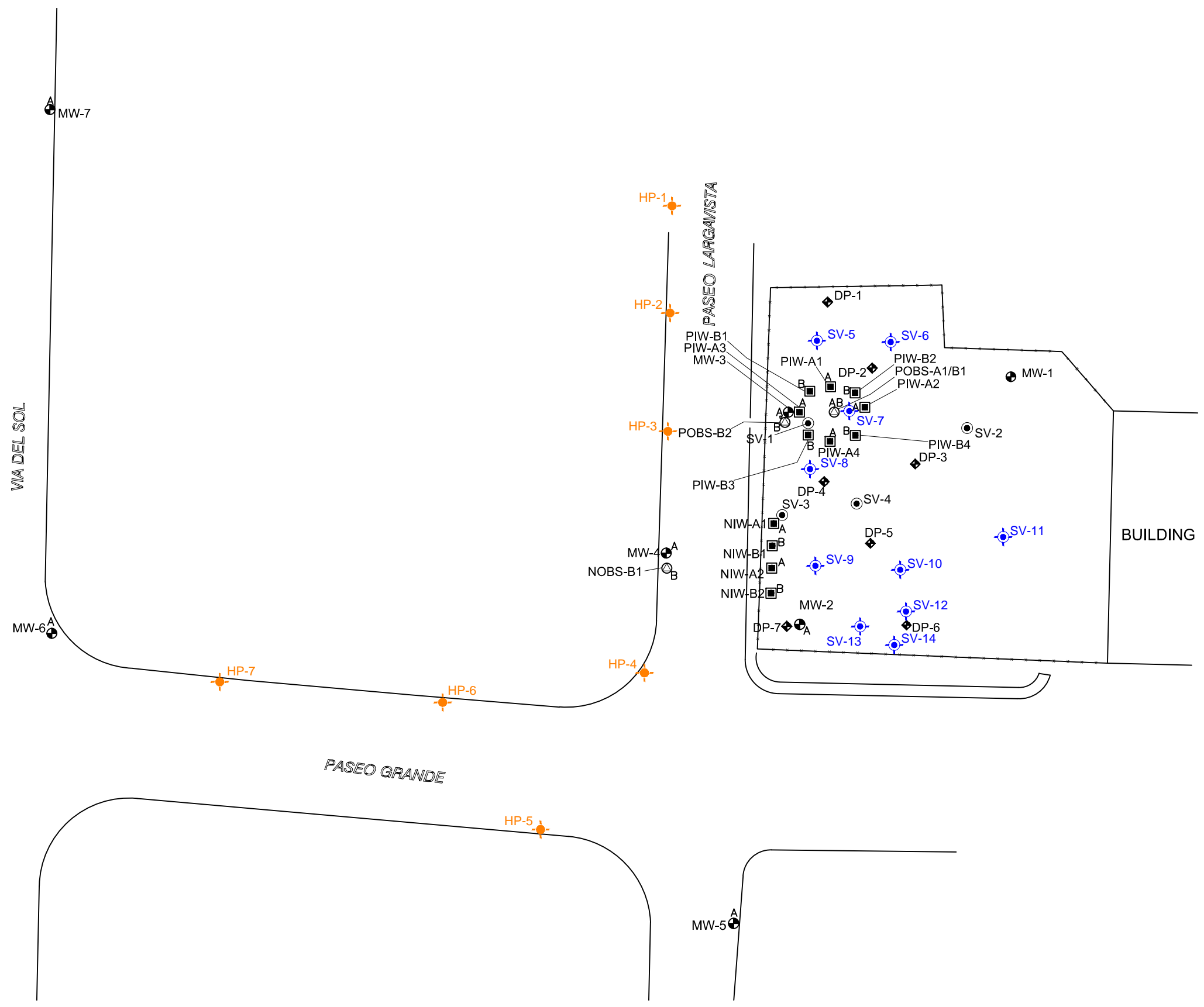
TPHg	<50
Benzene	<0.5
Toluene	<0.5
EthylBenzene	<0.5
Xylenes	<1.0

TPHg	410
Benzene	4.7
Toluene	<0.5
EthylBenzene	<0.5
Xylenes	<1.0

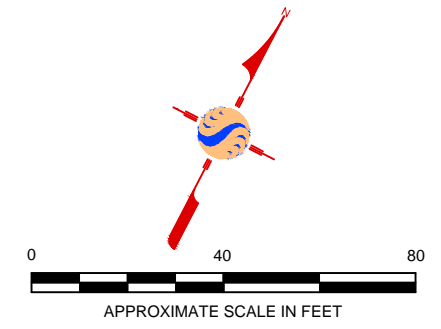
TPHg	2,600
Benzene	1,100
Toluene	27
EthylBenzene	8.3
Xylenes	18


TPHg	<50
Benzene	<0.5
Toluene	<0.5
EthylBenzene	<0.5
Xylenes	<1.0

 57 Lafayette Circle, 2nd Floor Lafayette, CA 94549 (925) 299-9300/299-9302 (Fax)	FOR: DAVID D. BOHANNON ORGANIZATION 575 PASEO GRANDE SAN LORENZO, CALIFORNIA		PETROLEUM AND DROCARBON CONCENTRATIONS IN GROUND WATER SEPTEMBER 2011		FIGURE: 
	JOB NUMBER: 185702534.200.0003	DRAWN BY: RRR	CHECKED BY: JMA	APPROVED BY: CRM	DATE: 12/12/12



- LEGEND**
- MW-1 MONITORING WELL
 - PIW-B3 INJECTION WELL
 - ◆ DP-1 DUAL-PHASE EXTRACTION WELL (8" PVC - BY SECOR, 2005)
 - ⊙ NOBS-B1 OBSERVATION WELL
 - ⊙ SV-1 SOIL VAPOR SAMPLE LOCATION (STANTEC, 2011)
 - ⊙ SV-5 PROPOSED SOIL VAPOR SAMPLE LOCATION AND POTENTIAL SOIL BORING LOCATION
 - ⊙ HP-1 PROPOSED HYDROPUNCH SAMPLE LOCATION
 - FENCE LINE
- WELL DESIGNATION**
- A = INDICATES WELL IN THE A-ZONE
 - B = INDICATES WELL IN THE B-ZONE



 57 Lafayette Circle, 2nd Floor Lafayette, CA 94549 (925) 299-9300/299-9302 (Fax)	FOR: DAVID D. BOHANNON ORGANIZATION 575 PASEO GRANDE SAN LORENZO, CALIFORNIA		PROPOSED SAMPLING LOCATIONS		FIGURE: 10
	JOB NUMBER: 185702534.200.0003	DRAWN BY: RRR	CHECKED BY: JMA	APPROVED BY: CRM	DATE: 12/12/12

Stantec

**SITE CONCEPTUAL MODEL AND WORK PLAN TO EVALUATE POST-REMEDATION SITE
CONDITIONS
DAVID D. BOHANNON ORGANIZATION**

APPENDIX A
**Summary of Previous Site Investigations and Remedial
Actions**

Site Conceptual Model and Work Plan to Evaluate Post-Remediation
Site Conditions

David D. Bohannon Organization

575 Paseo Grande

San Lorenzo, California

Stantec PN: 185702534.200.0005

December 21, 2012

APPENDIX A
Summary of Previous Site Investigations and Remedial Actions

David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, California

Investigation activities were conducted in March 1995 to determine if former underground service station equipment remained on-site. The work was conducted by Twining Laboratories, Inc. as documented in their letter report dated April 15, 1995. The investigation included a magnetometer survey followed by an exploratory excavation. In summary, the work conducted identified underground gasoline service station equipment which included what appeared to be the former tank pit, approximately 110 feet of fuel delivery system piping, and a grease sump and/or hydraulic lift pit in an area which may have been the former service garage. Field evidence and one soil sample indicated the potential for soil contamination along the piping runs, around the grease sump, and around the inferred location of the former tank pit. Characterization of the magnitude and extent of potential soil contamination were not performed during the initial activities.

In June 1995, SECOR conducted additional activities at the Site which included removal of the former underground storage tank (UST) system piping and the former grease sump, and characterization soil sampling along the pipelines and around the former grease sump and former tank pit areas. This work was summarized in SECOR's "*Preliminary Characterization Report*" to ACEH dated June 29, 1995 (SECOR, 1995). The characterization data from this investigation indicated that there were two areas of concern at the Site: 1) the former grease sump area; and 2) the former gasoline distribution system area. SECOR subsequently conducted excavation activities in these two areas. The extents of excavation in these areas are shown on Figure 3. The soil excavated from the former sump area was transported off-site for disposal. The soil generated from the UST excavation was treated by means of aeration and later transported off-site for disposal. Three groundwater monitoring wells (MW-1, MW-2, and MW-3) were installed during the investigation activities to evaluate the degree to which the groundwater had been affected. The results of the soil characterization and groundwater monitoring activities are reported in SECOR's documents entitled, "*Report of Interim Remedial Actions*" (RIRA; SECOR, 1996), dated June 4, 1996, and "*Fourth Quarter 1996 Monitoring and Sampling Report*," dated November 26, 1996. Monitoring well locations are illustrated in Figures 3 and 6.

In June 1999, a utility trench survey was conducted around the Site, and a passive soil vapor survey was performed downgradient from the Site. The results of the utility trench and passive soil vapor surveys are documented in SECOR's document entitled, "*Third Quarter Groundwater Monitoring Results and Plume Definition Investigation Report*," dated October 22, 1999 (3Q99 GWM Report, SECOR, 1999).

On December 5, 2000, four additional groundwater monitoring wells (MW-4 through MW-7) were installed at the Site. Soil and groundwater sampling was conducted to evaluate possible off-site migration of petroleum-related constituents originating from the Site, and to collect data to direct further subsurface investigations and/or remediation at the Site, if necessary. The work was conducted in general accordance with SECOR's documents entitled, "*Work Plan for Additional Groundwater Monitoring Well Installation*," dated October 22, 1999, and "*Addendum to the Work Plan for Additional Groundwater Monitoring Well Installation*," dated December 2, 1999. The Work Plan was approved with comments in correspondence from the ACEH in a letter dated November 4, 1999. Historically, two of the on-site wells (MW-2 and MW-3) and one well immediately downgradient to the west (MW-4) contain elevated

APPENDIX A
SUMMARY OF PREVIOUS SITE INVESTIGATIONS AND REMEDIAL ACTIONS

concentrations of petroleum hydrocarbons. Wells further off-site to the west (MW-6 and MW-7) and south (MW-5) typically do not contain detectable levels of petroleum hydrocarbons, with exception of MW-7, which reported low concentrations of total xylenes (up to 6.7 micrograms per liter [$\mu\text{g/L}$]) in the first two sampling events (December 2000 and February 2001). The well has since been non-detect for all constituents.

In January 2003, SECOR performed an additional limited subsurface investigation as described in the document entitled, "*Remedial Action Work Plan*," dated October 25, 2002, and submitted to ACEH. The Work Plan was approved by ACEH in a letter dated October 28, 2002. Based on field observations, soil boring logs, and laboratory analytical results, SECOR concluded that: 1) perched groundwater was encountered within fill materials at approximately 5 to 8 feet bgs; 2) water-bearing zones were encountered in silt and sand at depths of 13- to -15 feet bgs (A zone), in sand from 16- to -19 feet bgs (B zone), and in silty sand at 22.5 feet bgs (C zone); and 3) soil sample analytical results suggest that the majority of chemical impact exists in silty clay from approximately 8- to -13.5 feet bgs within and adjacent to the former gasoline UST and pump island excavation. The findings of the investigation were presented in the document entitled, "*Limited Subsurface Investigation Report and Work Plan for Additional Soil and Groundwater Assessment*," dated February 19, 2003, and prepared by SECOR (SECOR, 2003a).

At the request of ACEH, a sensitive receptor survey was performed for the Site. The survey consisted of identifying the locations and depths of subsurface utilities near the Site and reviewing data provided by the California Department of Water Resources (DWR) for potential groundwater production wells. The survey results are presented in SECOR's document entitled, "*Sensitive Receptor Survey and Conduit Study*," dated June 30, 2003 (Receptor Study; SECOR, 2003b). The report indicates that no groundwater production wells are likely to be affected by hydrocarbons in the soil and groundwater at the Site. Section 2.4 contains further evaluation of potential receptors and preferential pathways at the Site.

Chemical Injection and Dual-Phase Extraction (DPE) Pilot Testing

The October 2002 *Remedial Action Workplan* (RAW) proposed nitrate injections to stimulate biological degradation of hydrocarbons in the groundwater. Based on the data collected in January 2003, additional remediation of soil was also recommended. An addendum to the RAW was submitted by SECOR in December 2003 proposing hydrogen peroxide injections for chemical oxidation of soils in addition to nitrate injections. The RAW addendum was approved by ACEH in a letter to Bohannon dated December 15, 2003.

In May 2004, EFI Global began the pilot groundwater remediation program. Four wells were installed on-site for the purposes of injecting nitrate solution into groundwater upgradient of well MW-4 (NIW-A1, NIW-A2, NIW-B1, and NIW-B2). Eight wells were installed on-site for injection of peroxide solution into soil and groundwater upgradient of well MW-3 (PIW-A1 to PIW-A4 and PIW-B1 to PIW-B4). Four wells were installed to observe the effects of the injection program (NOBS-B1, POBS-A1, POBS-B1, and POBS-B2). Injection and observation well installations were completed during May 2004 in accordance with the approved RAW, and initial chemical injections were completed during May/June 2004. Soil boring logs for these wells are provided in Appendix A. The well installation activities were described in the document entitled, "*Semi-Annual (First Half 2004) Groundwater Monitoring and Pilot Remedial Progress Report*" prepared by EFI Global (EFI Global, 2004b).

APPENDIX A
SUMMARY OF PREVIOUS SITE INVESTIGATIONS AND REMEDIAL ACTIONS

Additional injections were completed in July 2004 (Phase Two) and October 2004 (Phase Three). Progress groundwater sampling for Phases Two and Three was conducted in August 2004 and December 2004, respectively. Following Phase Three injections, EFI Global conducted a single-day DPE test (February 2005) and a five-day DPE test (April 2005) in the area of the former gasoline UST. The results of the Phase Three progress sampling (December 2004) and single-day DPE test (February 2005) are reported in the document entitled, "*Semi-Annual (Second Half 2004) Groundwater Monitoring and Pilot Remedial Progress Report*" (EFI Global, 2005).

Site-wide groundwater monitoring was conducted in May 2005. In June 2005, SECOR advanced 14 soil borings at locations intended to provide additional delineation of the target area for full-scale DPE system implementation. SECOR obtained an operation permit from the BAAQMD in July 2005 and installed seven additional remediation wells in September 2005. SECOR conducted additional Site-wide groundwater monitoring during August 2006. The results of the five-day DPE test (April 2005) and subsequent groundwater monitoring activities are presented in the "*Groundwater Monitoring and Remediation Progress Report*", dated April 23, 2007 (SECOR, 2007).

Full-Scale DPE Operations and Remedial Progress Sampling

During December 2008, additional DPE system infrastructure was added and full-scale DPE system operation commenced during January/February 2009. Full-scale DPE operations consisted of soil vapor and groundwater extraction and treatment from eleven (11) Site extraction wells and former chemical injection wells. Full-scale DPE operated through December 2009 at which point remedial progress groundwater monitoring was conducted during January 2010. DPE system operations and results of remedial progress groundwater monitoring are described in the "*Report of Dual-Phase Extraction System Operations, Soil Vapor Sampling, and Risk Analysis*" (DPE Report; Stantec, 2011). The results of groundwater monitoring and DPE system performance data indicated that the DPE system significantly reduced concentrations of total petroleum hydrocarbons in the gasoline range (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) in monitoring wells downgradient of the Site below historical concentrations and to near the laboratory reporting limit concentrations in monitoring wells immediately downgradient of the former UST on-site. DPE system treatment equipment was removed from the Site in December 2009; however, all wells used for extraction and aboveground conveyance piping remain on-site.

Soil vapor sample well installation and subsequent soil vapor sampling was conducted at four locations on-site during March and April 2011. The purpose of the soil vapor sampling was to evaluate the potential for vapors associated with residual petroleum hydrocarbons in soil and/or groundwater to be present at concentrations that could pose a risk to conceptual future occupants of a Site building (if the Site was to be redeveloped with commercial and/or residential structures). Results from the soil vapor sampling indicated that concentrations of petroleum hydrocarbons present in shallow soil vapor at the Site were below available screening criteria such as California Environmental Protection Agency California Human Health Screening Levels (CHHSLs) and Environmental Screening Levels (ESLs) published by the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB). A Site-specific vapor intrusion risk analysis was performed using the Johnson & Ettinger (J&E) model and the concentrations of all chemicals detected in soil vapor at the Site were inputted into the model. The J&E model results indicated that residual concentrations of chemicals in shallow soil vapor at the Site do

APPENDIX A
SUMMARY OF PREVIOUS SITE INVESTIGATIONS AND REMEDIAL ACTIONS

not pose a risk to human health considering commercial/industrial or residential land uses. A detailed description of soil vapor sampling and results of the risk analysis are included in the DPE Report (Stantec, 2011).

At the request of ACEH, Stantec performed additional groundwater monitoring during the second and third quarters of 2012 to monitor petroleum hydrocarbon concentrations in Site monitoring wells after the completion of full-scale DPE system operations. The monitoring results for the second quarter of 2012 are presented in the "*Second Quarter 2012 (Semi-Annual) Groundwater Monitoring Report*" (2Q12 GWM Report), dated July 27, 2012. The results of second quarter 2012 groundwater monitoring showed concentrations of petroleum hydrocarbons downgradient of the Site in monitoring wells MW-5, MW-6, and MW-7 remain below laboratory MRLs, concentrations in on-site monitoring wells MW-1 and MW-2 remain stable or near the laboratory MRLs, and significant decreases in petroleum hydrocarbon concentrations in well POBS-A1 and monitoring well MW-3 located within and immediately downgradient of the former UST excavation area. The monitoring results for the third quarter 2012 will be presented in the Third Quarter 2012 Groundwater Monitoring Report that will be submitted to ACEH under separate cover.

Stantec

**SITE CONCEPTUAL MODEL AND WORK PLAN TO EVALUATE POST-REMEDATION SITE
CONDITIONS
DAVID D. BOHANNON ORGANIZATION**

APPENDIX B

Soil Boring and Well Construction Logs

Site Conceptual Model and Work Plan to Evaluate Post-Remediation
Site Conditions

David D. Bohannon Organization
575 Paseo Grande
San Lorenzo, California

Stantec PN: 185702534.200.0005

December 21, 2012

ANDE, ZO,

GRANDE;

First

ASPHALT

2"φ 40

5% Bentonite

Hydrated

hard,

2"φ 40

#2/12

End

18/18

MW-1-4.5

18/15

MW-1-7.5

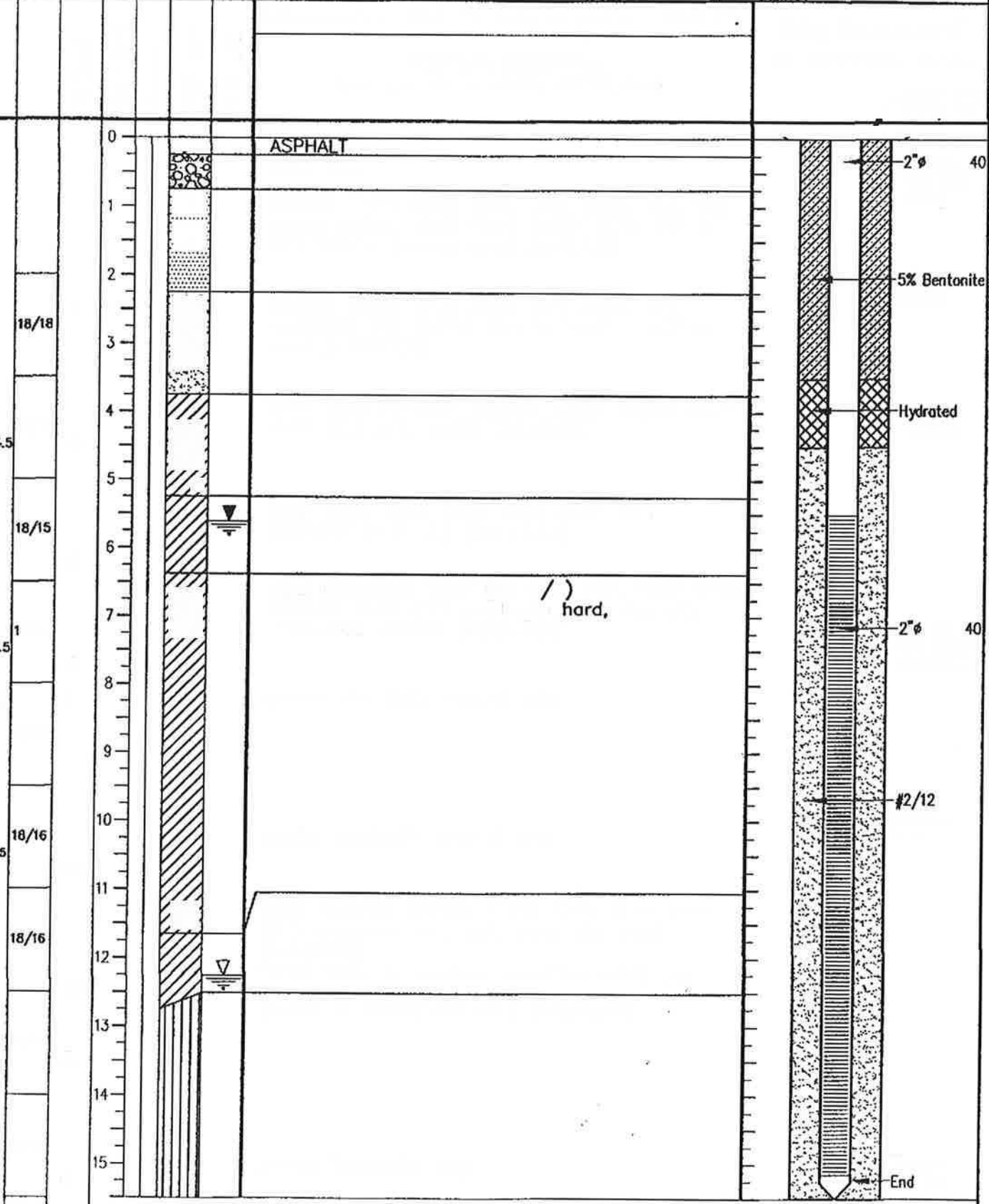
18/16

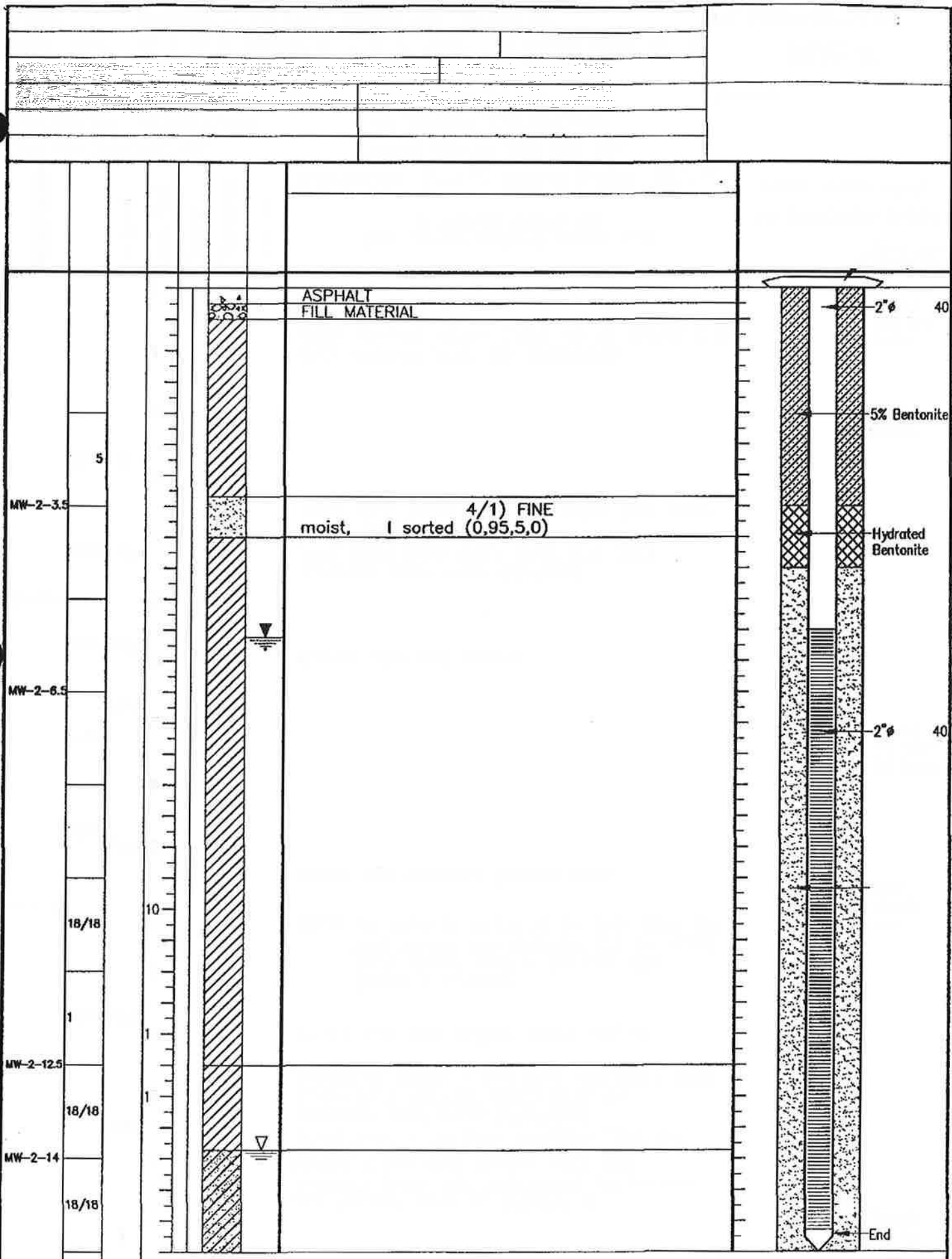
MW-1-10.5

18/16

E:\LOGS\BOHANNON\MW-1

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1
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15





161 E:\LOGS\BOHANNON\MW-2

ject:

DE, LORENZO,

Traffic-rated
Christy

40

5% Bentonite

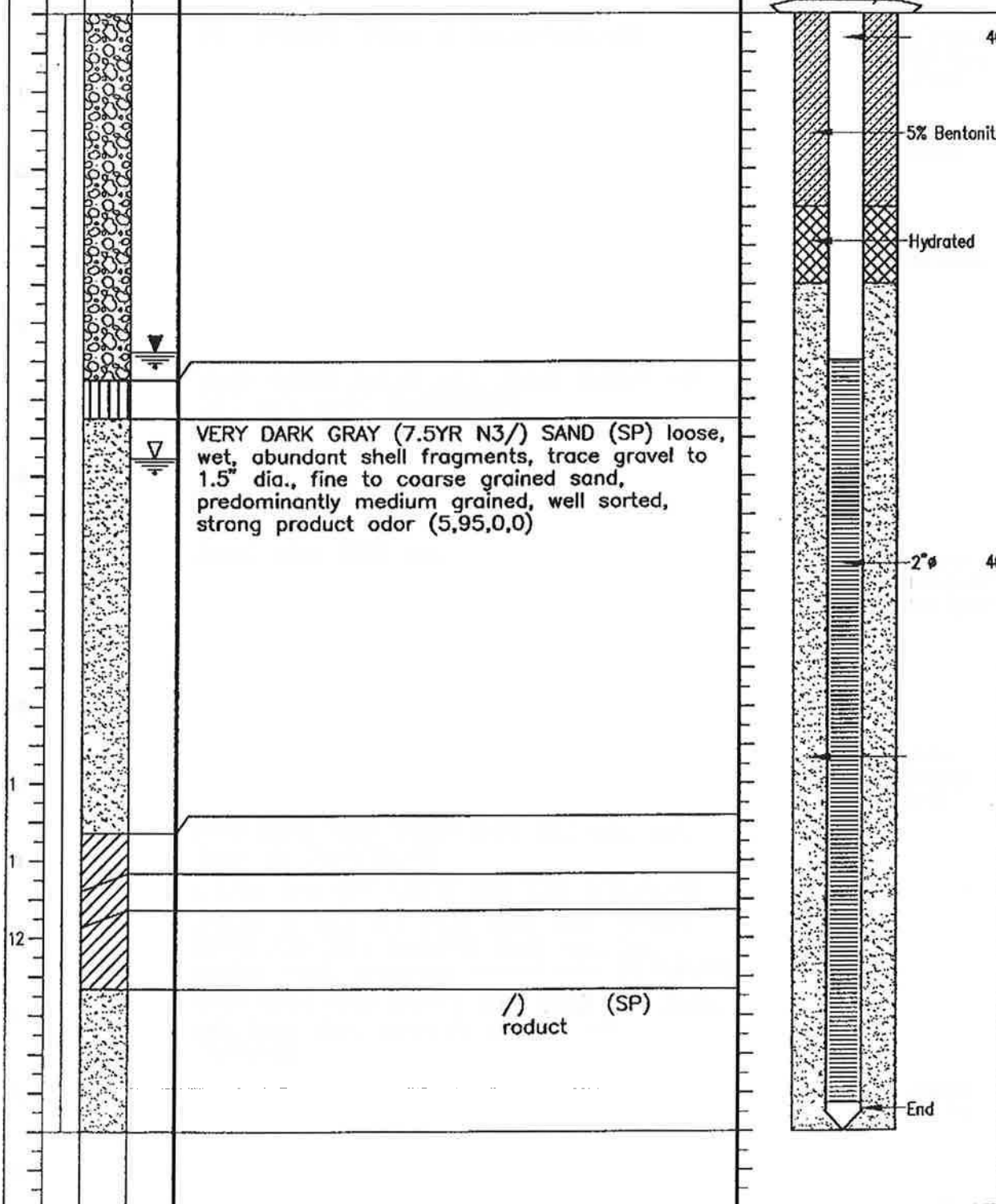
Hydrated

VERY DARK GRAY (7.5YR N3/) SAND (SP) loose,
wet, abundant shell fragments, trace gravel to
1.5" dia., fine to coarse grained sand,
predominantly medium grained, well sorted,
strong product odor (5,95,0,0)

2" ϕ 40

/) roduct (SP)

End



CLIENT : BOHANNON	START DATE : 10/2/00	MW-4 (Page 1 of 1)
PROJECT : WELL INSTALLATION	COMPLETION DATE : 10/2/00	
PROJECT NO. : 007.03814.006	MONITORING DEVICE PID 580B	LOG OF BORING
BORING LOCATION : 575 PASEO GRANDE	SAMPLING METHOD : CONTINUOUS CORE	
: SAN LORENZO, CA	SUBCONTRACTOR : GREGG DRILLING	
	DRILLING METHOD : HOLLOW STEM AUGER	
	HOLE DIAMETER : 2-INCH	
	LOGGED BY : C MELANCON	
	FIRST WATER : 12.5'	
	STABILIZED WATER : 7'	

Depth in FEET	Recovery/Sample	Sample ID	PID (ppm)	Blow Count	USCS	GRAPHIC	LITHOLOGIC DESCRIPTION	BORING: MW-4
0							3" Asphalt	
1							Baserock	
2					SC		DARK GRAYISH BROWN (2.5Y,4/2) CLAYEY SAND (SC) with silt; sand is fine-grained; medium dense; moist (0,65,15,20)	Grout
3							OLIVE BROWN (2.5Y,4/3) SILTY CLAY (CL) with fine-grained sand; very stiff; moist; medium to high plasticity (0,10,20,70)	2" SCH 40 Blank PVC
4								Bentonite Seal
5	X	MW-4 5'	0					
6								
7					CL		As above; stiff; moist	
8			45					
9							Stain and strong chemical odor, moist (0,25,10,65)	
10								#3 Monterey Sand
11	X	MW-4 10'	319					
12			310					
13			19		ML		DARK GREENISH GRAY (10Y,4/1) SANDY SILT (ML) with clay; sand is fine-grained; stiff; moist to wet; low to moderate plasticity; sand filled rootlets (0,30,45,20)	Screen: 0.020" Slot Size - 2" SCH 40 PVC
14								
15			12					
BORING COMPLETED AT A DEPTH OF 15 FEET BELOW GROUND SURFACE								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

	NOTES
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CLIENT : BOHANNON	START DATE : 10/2/00	MW-5 (Page 1 of 1)
PROJECT : WELL INSTALLATION	COMPLETION DATE : 10/2/00	
PROJECT NO. : 007.03814.006	MONITORING DEVICE PID 580B	LOG OF BORING
BORING LOCATION : 575 PASEO GRANDE	SAMPLING METHOD : CONTINUOUS CORE	
: SAN LORENZO, CA	SUBCONTRACTOR : GREGG DRILLING	
	DRILLING METHOD : HOLLOW STEM AUGER	
	HOLE DIAMETER : 2-INCH	
	LOGGED BY : C MELANCON	
	FIRST WATER : 12.0'	
	STABILIZED WATER : 6.5'	

Depth in FEET	Recovery/Sample	Sample ID	PID (ppm)	Blow Count	USCS	GRAPHIC	LITHOLOGIC DESCRIPTION	BORING: MW-4
0							3" Asphalt	
1							Baserock	
2					SC		DARK GRAYISH BROWN (2.5Y,4/2) CLAYEY SAND (SC) with silt; sand is fine-grained; medium dense; moist (0,65,15,20)	Grout
3							VERY DARK GRAY (2.5Y,3/1) SILTY CLAY (CL); very stiff; moist; moderate plasticity; caliche (0,0,25,75)	2" SCH 40 Blank PVC
4								Bentonite Seal
5			0					
6								
7			0		CL			
8								
9							Color change to olive brown (2.5Y,4/3)	
10			0					#3 Monterey Sand
11	X	MW-5 10'						
12			0		SC		OLIVE BROWN (2.5Y,4/3) CLAYEY SAND (SC) with silt; sand is fine-grained; medium dense; wet (0,55,15,30)	
13								Screen: 0.020" Slot Size - 2" SCH 40 PVC
14					CL		OLIVE BROWN (2.5Y,4/3) SANDY CLAY (CL) with silt; sand is fine-grained; very stiff; moist; caliche (0,30,15,55)	
15			0					
BORING COMPLETED AT A DEPTH OF 15 FEET BELOW GROUND SURFACE								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

	NOTES
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CLIENT : BOHANNON	START DATE : 10/2/00	MW-6 (Page 1 of 1)
PROJECT : WELL INSTALLATION	COMPLETION DATE : 10/2/00	
PROJECT NO. : 007.03814.006	MONITORING DEVICE PID 580B	LOG OF BORING
BORING LOCATION : 575 PASEO GRANDE	SAMPLING METHOD : CONTINUOUS CORE	
: SAN LORENZO, CA	SUBCONTRACTOR : GREGG DRILLING	
	DRILLING METHOD : HOLLOW STEM AUGER	
	HOLE DIAMETER : 2-INCH	
	LOGGED BY : C MELANCON	
	FIRST WATER : 11.5'	
	STABILIZED WATER : 6.5'	

Depth in FEET	Recovery/Sample	Sample ID	PID (ppm)	Blow Count	USCS	GRAPHIC	LITHOLOGIC DESCRIPTION	BORING: MW-4
0							Asphalt	
1							Baserock	
2					SC		DARK GRAYISH BROWN (2.5Y,4/2) CLAYEY SAND (SC) with silt; sand is fine-grained; medium dense	Grout
3					SP		CLEAN FILL SAND (see comments)	2" SCH 40 Blank PVC
4							VERY DARK GRAY (2.5Y,3/1) SILTY CLAY (CL); very stiff; moist; moderate plasticity; caliche (0,0,30,70)	Bentonite Seal
5			0					
6								
7			0		CL		Color change to dark grayish brown (2.5Y,4/2)	
8								
9								
10			0					
11	X	MW-6 10'						
12			0		SC		DARK GRAYISH BROWN (2.5Y,4/2) CLAYEY SAND (SC) with silt; sand is fine-grained; medium dense; moist to wet (0,60,15,25)	#3 Monterey Sand
13			0					
14								
15			0		CL		OLIVE BROWN (2.5Y,4/3) SANDY CLAY (CL) with silt; sand is fine-grained; very stiff; moist; caliche (0,30,15,55)	Screen: 0.020" Slot Size - 2" SCH 40 PVC
16							BORING COMPLETED AT A DEPTH OF 15 FEET BELOW GROUND SURFACE	
17								
18								
19								
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21								
22								
23								
24								
25								

H:\CONCORD\BOH-MW6.BOR

11-06-2000

CLIENT : BOHANNON	START DATE : 10/2/00	MW-7 (Page 1 of 1)
PROJECT : WELL INSTALLATION	COMPLETION DATE : 10/2/00	
PROJECT NO. : 007.03814.006	MONITORING DEVICE PID 580B	LOG OF BORING
BORING LOCATION : 575 PASEO GRANDE	SAMPLING METHOD : CONTINUOUS CORE	
: SAN LORENZO, CA	SUBCONTRACTOR : GREGG DRILLING	
	DRILLING METHOD : HOLLOW STEM AUGER	
	HOLE DIAMETER : 2-INCH	
	LOGGED BY : C MELANCON	
	FIRST WATER : 13.0'	
	STABILIZED WATER : 6.5'	

Depth in FEET	Recovery/Sample	Sample ID	PID (ppm)	Blow Count	USCS	GRAPHIC	LITHOLOGIC DESCRIPTION	BORING: MW-4
0							Asphalt	
1							Baserock	
2					SC		DARK GRAYISH BROWN (2.5Y,4/2) CLAYEY SAND (SC) with silt; sand is fine-grained; medium dense (0,70,10,20)	Grout
3					CL		DARK GRAYISH BROWN (2.5Y,3/2) CLAYEY SAND (SC) with silt; sand is fine-grained; medium dense; moist; moderate plasticity (0,15,20,65)	2" SCH 40 Blank PVC
4								Bentonite Seal
5			0		SC		VERY DARK GRAYISH BROWN (2.5Y,3/2) CLAYEY SAND (SC) with silt; sand is fine-grained; medium dense; moist to wet (0,65,15,20)	
6								
7			0				VERY DARK GRAY (2.5Y,3/1) SILTY CLAY (CL); very stiff; moist; moderate plasticity; caliche (0,0,25,75)	
8							Color change to dark grayish brown (2.5Y,4/2)	
9					CL			
10			0					#3 Monterey Sand
11	X	MW-7 10'						
12								
13			0		SC		DARK GRAYISH BROWN (2.5Y,4/2) CLAYEY SAND (SC) with silt; sand is fine-grained; moist to wet; dense (0,55,15,30)	Screen: 0.020" Slot Size - 2" SCH 40 PVC
14					CL			
15			0				OLIVE BROWN (2.5Y,4/3) SANDY CLAY (CL) with silt; sand is fine-grained; very stiff; moist; moderate plasticity (0,30,15,55)	
16								
17							BORING COMPLETED AT A DEPTH OF 15 FEET BELOW GROUND SURFACE	
18								
19								
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25								

H:\CONCORD\BOH-MW7.BOR

11-06-2000

SECOR

International Incorporated

Logged By: C. Melancon	Date Drilled: 1/2/03	Drilling Contractor: Gregg Drilling	Project Name: 575 Paseo Grande San Lorenzo, California	Method/Equipment: Continuous Sampler Geoprobe	Well Number: SB-1	
See "Legend to Logs" for sampling method, classifications and laboratory testing methods	Boring Diam.(in.): 2	Surface Elev.(ft.): NA	Groundwater Depth (ft.): ▽8 Perched Groundwater ▽15 Water-Bearing Zone	Total Depth (ft.): 20.0	Drive wt.(lbs.): NA	Drop Dist.(in.): NA

Boring	Depth, (ft.)	Sample Interval	Description	PID Readings (PPM)	Sample ID
			Asphalt / Baserock		
			GRAVELLY SAND (SW), fill materials Hand auger top four feet of boring		
	5				
			SAND (SP), very dark gray (5Y-3/1), sand is fine-grained, dense, wet, strong chemical odor, product sheen (0,100,0,0)	400	SB1-8
	10		SILTY CLAY (CL) WITH SAND, dark greenish gray (10Y-3/1), very stiff, moist, moderate plasticity, caliche nodules, strong chemical odor (0,10,30,60)	361	SB1-11
	15			350	SB1-13.5
			SAND (SP) WITH SILT, very dark gray (5Y-3/1), sand is fine-grained, medium dense, wet, strong chemical odor, product sheen, shell fragments (0,95,5,0)	297	
	20		SANDY SILT (ML) WITH CLAY, dark gray (2.5Y-3/1), stiff, moist, low plasticity, strong chemical odor (0,35,50,15)	179	SB1-19.5
	25				

575 PASEO GRANDE LOGS.GPJ LOG OF BH-REDLANDS-REV1

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **05OT.50063.01**
Date **1/2/03**

Log of Boring: SB-1

Approved by

(sheet 1 of 1)

SECOR

International Incorporated

Logged By: C. Melancon	Date Drilled: 1/2/03	Drilling Contractor: Gregg Drilling	Project Name: 575 Paseo Grande San Lorenzo, California	Method/Equipment: Continuous Sampler Geoprobe	Well Number: SB-2	
See "Legend to Logs" for sampling method, classifications and laboratory testing methods	Boring Diam. (in.): 2	Surface Elev. (ft.): NA	Groundwater Depth (ft.): ∇5 Perched Groundwater	Total Depth (ft.): 20.0	Drive wt. (lbs.): NA	Drop Dist. (in.): NA

Boring	Depth, (ft.)	Sample Interval	Description	PID Readings (PPM)	Sample ID
			Asphalt / Basalt		
			GRAVELLY SAND (SW), fill materials Hand auger top four feet of boring		
		5	SILTY SAND (SM) WITH GRAVEL AND TRACE CLAY, very dark gray (5Y-3/1), sand is fine-grained, gravel is fine-grained, medium dense, moderate chemical odor, moist to wet (15, 25, 60, 0)	34	SB2-5.5
		10	SAND (SP), very dark gray (5Y-4/1), sand is fine- to medium-grained, medium dense, wet, strong chemical odor, product shewn, shell fragments (0,100,0,0)	69	SB2-8
		15	SANDY SILT (ML) WITH CLAY, dark grayish brown (2.5Y-4/2), sand is fine-grained, stiff, moist to wet, strong chemical odor (0,30,50,20) No recovery 16' to 20'	281	SB2-15

575 PASEO GRANDE LOGS.GPJ LOG OF BH-REDLANDS-REV1

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **05OT.50063.01**
Date **1/2/03**

Log of Boring: **SB-2**

Approved by _____

SECOR

International Incorporated

Logged By: C. Melancon	Date Drilled: 1/2/03	Drilling Contractor: Gregg Drilling	Project Name: 575 Paseo Grande San Lorenzo, California	Method/Equipment: Continuous Sampler Geoprobe	Well Number: SB-3		
See "Legend to Logs" for sampling method, classifications and laboratory testing methods		Boring Diam. (in.): 2	Surface Elev. (ft.): NA	Groundwater Depth (ft.): ∇5 Perched Groundwater ∇14 Water-Bearing Zone	Total Depth (ft.): 20.0	Drive wt. (lbs.): NA	Drop Dist. (in.): NA

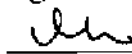
Boring	Depth, (ft.)	Sample Interval	Description	PID Readings (PPM)	Sample ID
	0		Asphalt / Baserock		
	0		SILTY GRAVEL (GM) WITH SAND, fill materials		
	0		Hand auger top four feet of boring		
	5			1	
	5		SILTY CLAY (CL), very dark gray (10YR-3/1), very stiff, moist, moderate plasticity, caliche nodules, strong chemical odor (0,0,20,80)	451	SB3-8
10			476	SB3-10	
15		CLAYEY SILT (ML) WITH SAND, olive brown (2.5Y-4/3), sand is fine-grained, medium stiff, moist to wet, faint chemical odor (0,10,60,30)			
15		SILTY SAND (SM) WITH CLAY, olive brown (2.5Y-4/4), sand is fine-grained, wet to moist, faint chemical odor (0,55,40,5)			
17			3	SB3-17	
17		SILTY CLAY (CL), olive brown (2.5Y-4/4), stiff, moist, moderate plasticity, faint chemical odor (0,0,30,70)			
20			1	SB3-19.5	

575 PASEO GRANDE LOGS.GPJ LOG OF BELREDLANDS-REV1

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **05OT.50063.01**
Date **1/2/03**


Log of Boring: **SB-3**

Approved by 

SECOR

International Incorporated

Logged By: C. Melancon	Date Drilled: 1/2/03	Drilling Contractor: Gregg Drilling	Project Name: 575 Paseo Grande San Lorenzo, California	Method/Equipment: Continuous Sampler Geoprobe	Well Number: SB-4	
See "Legend to Logs" for sampling method, classifications and laboratory testing methods	Boring Diam.(in.): 2	Surface Elev.(ft.): NA	Groundwater Depth (ft.): ▼13 Water-Bearing Zone	Total Depth (ft.): 20.0	Drive wt.(lbs.): NA	Drop Dist.(in.): NA


Boring	Depth, (ft.)	Sample Interval	Description	PID Readings (PPM)	Sample ID
 Cement grout	0		Asphalt / Baserock		
	0		GRAVELLY SAND (SW), fill materials Hand auger top four feet of boring		
	5		SILTY CLAY (CL), black (10YR-2/1), very stiff, moist, moderate plasticity, caliche nodules, faint chemical odor (0,0,20,80)	71	
	7.5		Strong chemical odor at 7.5'	261	
	9		Strong chemical odor, green staining at 9'	429	SB4-9
	10			381	SB4-11
	13		SANDY SILT (ML) WITH CLAY, dark gray (5Y-3/1), medium stiff, moist to wet, strong chemical odor (0,30,50,20)	323	SB4-13
	14		SILTY CLAY (CL), olive brown (2.5Y-4/3), very stiff, moist, moderate plasticity, moderate chemical odor (0,0,20,80)	12	
	15		SILTY SAND (SM), olive brown (2.5Y-4/3), sand is fine-grained, medium dense, wet, strong chemical odor, product sheen (0,80,20,0)	365	SB4-16.5
	16		SILTY CLAY (CL), olive brown (2.5Y-4/3), very stiff, moist, moderate plasticity, (0,0,20,80)	56	
18		No recovery 18' to 20'			
20					

575 PASEO GRANDE LOGS.GPJ LOG OF BH-REDLANDS-REV1

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. 05OT.50063.01
Date 1/2/03

Log of Boring: SB-4

Approved by 

SECOR

International Incorporated

Logged By: C. Melancon	Date Drilled: 1/2/03	Drilling Contractor: Gregg Drilling	Project Name: 575 Paseo Grande San Lorenzo, California	Method/Equipment: Continuous Sampler Geoprobe	Well Number: SB-5		
See "Legend to Logs" for sampling method, classifications and laboratory testing methods		Boring Diam. (in.): 2	Surface Elev. (ft.): NA	Groundwater Depth (ft.): ▼13 Water-Bearing Zone	Total Depth (ft.): 24.0	Drive wt. (lbs.): NA	Drop Dist. (in.): NA

Boring	Depth, (ft.)	Sample Interval	Description	PID Readings (PPM)	Sample ID
	0		Asphalt / Baserock		
	0-5		SANDY SILT (ML), dark olive brown (2.5Y-3/3), sand is fine-grained, medium stiff, moist to wet (0,35,65,0) Hand auger top four feet of boring	0	
	5-8		SILTY CLAY (CL), very dark gray (10YR-3/1), very stiff, moist, moderate plasticity, caliche nodules (0,0,20,80) Faint chemical odor at 8'	58	
	8-10		Strong chemical odor and green staining at 10'	370	SB5-10
	10-13.5		Cement Grout	333	
	13.5-15		SANDY SILT (ML) WITH CLAY, very dark grayish brown (2.5Y-3/2), stiff, moist to wet, strong chemical odor (0,25,60,15) SILTY CLAY (CL), very dark gray (10YR-3/1), very stiff, moist, moderate plasticity, strong chemical odor (0,0,20,80)	273	SB5-13.5
	15-17		SANDY SILT (ML) WITH CLAY, olive gray (5Y-4/2), stiff, moist to wet, strong chemical odor, product sheen (0,30,55,15) SILTY CLAY (CL), light olive brown (2.5Y-5/3), very stiff, moist, moderate plasticity, moderate chemical odor, caliche nodules (0,0,30,70)	269	SB5-17
	17-20.5		SANDY SILT (ML) WITH CLAY, olive gray (5Y-4/2), stiff, moist to wet, (0,30,55,15) SILTY SAND (SM) WITH CLAY, olive brown (2.5Y-4/4), sand is fine-grained, medium dense, wet, faint chemical odor (0,65,25,10)	45	SB5-20.5
	20.5-23		No recovery 23' to 24'	10	
	23-24		No recovery 23' to 24'		

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Project No. **05OT.50063.01**
Date **1/2/03**

Log of Boring: **SB-5**

Approved by

SECOR

International Incorporated

Logged By: C. Melancon	Date Drilled: 1/22/03	Drilling Contractor: Gregg Drilling	Project Name: 575 Paseo Grande San Lorenzo, California	Method/Equipment: Continuous Sampler Geoprobe	Well Number: SB-6		
See "Legend to Logs" for sampling method, classifications and laboratory testing methods		Boring Diam. (in.): 2	Surface Elev. (ft.): NA	Groundwater Depth (ft.): 19 Water-Bearing Zone	Total Depth (ft.): 26.0	Drive wt. (lbs.): NA	Drop Dist. (in.): NA

Boring	Depth, (ft.)	Sample Interval	Description	PID Readings (PPM)	Sample ID
	0		Asphalt / Basement		
	0		SANDY SILT (ML), very dark grayish brown (2.5Y-3/2), sand is fine-grained, stiff, moist to wet, faint chemical odor (0,40,60,0) Hand auger top four feet of boring	0	
	5		SILTY CLAY (CL), very dark gray (10YR-3/1), very stiff, moist, moderate plasticity, caliche nodules, faint chemical odor (0,0,20,80)	0	
	10		Green staining and strong chemical odor 10' to 14'	375	SB6-10
	15		SANDY SILT (ML) WITH CLAY, very dark grayish brown (2.5Y-3/2), sand is fine-grained, stiff, moist to wet, moderate chemical odor (0,30,50,20)	402	SB6-12
	20		No recovery from 16' to 20', presence of SILTY SAND (SM) lens inferred based on first-encountered water following removal of 16'-20' sample drive	64	SB6-15.5
	20		SILTY CLAY (CL), light olive brown (2.5Y-5/4), very stiff, moist, moderate plasticity, moderate chemical odor, abundant caliche nodules (0,0,20,80)		SB6-20
	25		SAND (SP) WITH SILT, olive brown (2.5Y-4/3), sand is fine-grained, medium dense, wet, moderate chemical odor (0,90,10,0)	117	SB6-24
	25		No recovery from 24.5' to 26'		

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Project No. 05OT.50063.01
Date 1/2/03

Log of Boring: SB-6
Approved by

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

NIW-A1 PAGE 1 OF 1



DRILLING: STARTED **5/5/04** COMPLETED: **5/5/04**
 INSTALLATION: STARTED **5/5/04** COMPLETED: **5/5/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **18.0**
 WELL DEPTH (ft): **18.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
0	ASPHALT		ASPHALT						0	
0 - 5			SILTY CLAY ; dark brown to black; slightly moist; no HC odor; (0,0,40,60)						0 - 5	
5			SILTY CLAY ; dark brown; slightly moist; no HC odor; (0,0,40,60)	X		1.5	3 4 8		5	← cement ← 4" PVC blank ← hydrated bentonite
5 - 10			SILTY CLAY ; grayish brown; slight HC odor; slightly moist; (0,0,30,70)	X		1.5	7 7 11		10	← sand #2/12
10 - 15			CLAYEY SILT ; brown; no odor; very moist to slightly saturated; (0,10,60,30)	X		1.5	5 7 8		15	← 4" PVC slotted 0.020"
15 - 18			SILTY SAND ; brown; saturated; no HC odor; fine grained sand; (0,90,10,0)	X		1.5	8 7 9		18	
18 - 20			Hole terminated at 18 feet.						20	
20 - 25									25	

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR.INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

NIW-A2 PAGE 1 OF 1



DRILLING: STARTED **5/5/04** COMPLETED: **5/5/04**
 INSTALLATION: STARTED **5/5/04** COMPLETED: **5/5/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **18.0**
 WELL DEPTH (ft): **18.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
0	ASPHALT									
0 - 4.5		CL	SILTY CLAY ; CL; brownish black; slightly moist; (0,0,40,60)							
4.5 - 8.5		CL	SILTY CLAY ; CL; brownish gray; slightly moist; (0,0,40,60)			1.5	2 4 6		5	cement 4" PVC blank hydrated bentonite
8.5 - 13.5		CL	SILTY CLAY ; CL; brownish gray; strong HC odor; slightly moist			1.5	5 7 8		10	
13.5 - 16.5		SC	CLAYEY SAND ; SC; brown; saturated; no HC odor; (0,70,10,20)			1.5	6 9 11		15	
16.5 - 18.0		SP	SILTY SAND ; SP; black; saturated; fine sand; no HC odor; (0,90,10,0)			1.5	10 12 13		18	4" PVC slotted 0.020"
18.0 - 20			Hole terminated at 18 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR.INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

NIW-B1 PAGE 1 OF 1



DRILLING: STARTED **5/5/04** COMPLETED: **5/5/04**
 INSTALLATION: STARTED **5/5/04** COMPLETED: **5/5/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **26.0**
 WELL DEPTH (ft): **26.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
			ASPHALT							
0 - 5		CL	SILTY CLAY ; CL; dark brown to black; slightly moist; no HC odor; (0,0,40,60)	X		1.5	2 5 10		5	
5 - 10		CL	SILTY CLAY ; CL; grayish brown; slight HC odor; slightly moist; white mottling; (0,0,30,70)	X		1.5	6 9 10		10	cement
10 - 15		ML	CLAYEY SILT ; ML; brown; no odor; very moist to slightly saturated; (0,10,70,20)	X		1.5	4 6 8		15	4" PVC blank
15 - 20		SP	SILTY SAND ; SP; brown; saturated; fine sand; no HC odor; (0,90,10,0)	X		1.5	9 5 8		20	hydrated bentonite sand #2/12
20 - 25		SW	SAND WITH GRAVEL ; SW; saturated; no HC odor; gravel up to 1/4"; (10,90,0,0)	X		1.5	14 16 20		25	4" PVC slotted 0.020"
25 - 26			Hole terminated at 26 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR.INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

NIW-B2 PAGE 1 OF 1



DRILLING: STARTED **5/5/04** COMPLETED: **5/5/04**
 INSTALLATION: STARTED **5/5/04** COMPLETED: **5/5/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **26.0**
 WELL DEPTH (ft): **26.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
	ASPHALT									
		CL	SILTY CLAY ; CL; brownish black; slightly moist; (0,0,30,70)							
5			As above; color change to brownish gray	X		1.5	9 30 30		5	
		CL	SILTY CLAY ; CL; grayish black; strong HC odor; slightly moist; (0,0,40,60)	X		1.5	4 6 10		10	cement
10				X						
		SC	CLAYEY SAND ; SC; brown; saturated; no HC odor; (0,70,10,20)	X		1.5	10 12 14		15	4" PVC blank
15				X						
		CL	SILTY CLAY ; CL; light brown; moist; (0,0,40,60)	X		1.5	9 9 15		20	hydrated bentonite sand #2/12
20				X						
		SW	GRAVELLY SAND ; SW; saturated; no HC odor; gravel up to 3/8"; (30,60,5,5)	X		1.5	8 12 15		25	4" PVC slotted 0.020"
25			Hole terminated at 26 feet.	X						

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ_SECOR.INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

NOBS-B1 PAGE 1 OF 1

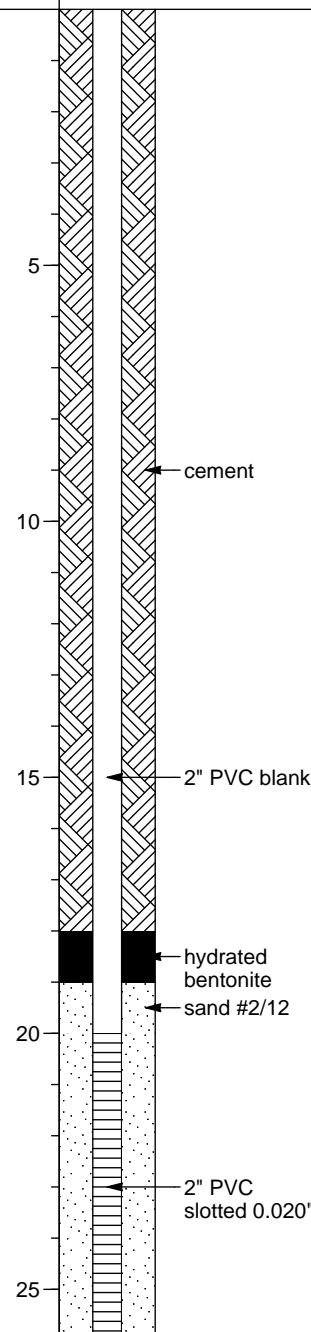


DRILLING: STARTED **5/7/04** COMPLETED: **5/7/04**
 INSTALLATION: STARTED **5/7/04** COMPLETED: **5/7/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **2**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **26.0**
 WELL DEPTH (ft): **26.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
			ASPHALT							
			SANDY CLAY ; light brown; slightly moist; (0,20,10,70)							
5			SILTY CLAY ; dark brown to black; moist; no HC odor							
10										
15										
20										
25										
			Hole terminated at 26 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR.INTL.GDT 5/7/07



PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

PIW-A2 PAGE 1 OF 1



DRILLING: STARTED **5/4/04** COMPLETED: **5/4/04**
 INSTALLATION: STARTED **5/4/04** COMPLETED: **5/4/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT: **CA Modified Split-Spoon**

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **18.0**
 WELL DEPTH (ft): **18.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
0 - 1	ASPHALT		ASPHALT							
1 - 2	CLAYEY GRAVEL		CLAYEY GRAVEL ; fill; dry							cement
2 - 5	SILTY CLAY WITH GRAVEL	CL	SILTY CLAY WITH GRAVEL ; CL; grayish brown; (20, 0,30,50)							4" PVC blank
5 - 7	SILTY CLAY	CL	SILTY CLAY ; CL; grayish brown; slightly moist; (0,0,40,60)	X		1.5	3 7 12		5	hydrated bentonite
7 - 10	CLAYEY SILT	ML	CLAYEY SILT ; ML; brownish gray; moist; strong HC odor; (0,0,70,30)	X		1.5	8 12 18		10	sand #2/12
10 - 13.5	SILTY CLAY	CL	SILTY CLAY ; CL; grayish brown; slight HC odor; saturated at 13.5' to moist at 15'; (0,0,40,60)	X		1.5	4 8 12		15	4" PVC slotted 0.020"
13.5 - 18	SILTY CLAY	CL	SILTY CLAY ; CL; brown; moist; no HC odor; (0,0,30,70)	X		1.5	8 10 12			
18 - 18			Hole terminated at 18 feet.							

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

PIW-A3 PAGE 1 OF 1



DRILLING: STARTED **5/7/04** COMPLETED: **5/7/04**
 INSTALLATION: STARTED **5/7/04** COMPLETED: **5/7/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT: **CA Modified Split-Spoon**

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **18.0**
 WELL DEPTH (ft): **18.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
0	ASPHALT									
0 - 5	ML	ML	CLAYEY SILT ; ML; brown; slightly moist; no HC odor; (0,0,60,40)			1.5	4 5 7		5	cement 4" PVC blank hydrated bentonite sand #2/12
5 - 10	CL	ML	SILTY CLAY ; CL; brownish gray; strong HC odor; white mottling; slightly moist; (0,0,30,70) SILT ; ML; brownish gray; saturated; no odor; (0,0,90,10)			1.5	6 9 15		10	
10 - 15	CL	CL	CLAY ; CL; gray; very dense to very stiff; moist; strong HC odor; (0,0,10,90)			1.5	6 6 7		15	
15 - 18	CL	CL	SILTY CLAY ; CL; gray; slight HC odor; ver moist; rust colored mottling; (0,0,40,60)			1.5	6 6 8		18	4" PVC slotted 0.020"
18 - 20			Hole terminated at 18 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

PIW-A4 PAGE 1 OF 1



DRILLING: STARTED **5/6/04** COMPLETED: **5/6/04**
 INSTALLATION: STARTED **5/6/04** COMPLETED: **5/6/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:


NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **18.0**
 WELL DEPTH (ft): **18.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
0 - 6			ASPHALT GRAVELLY FILL to 6'						0 - 6	
6 - 18			SILTY CLAY ; dark grayish brown; moist; strong HC odor; (0,0,40,60)						6 - 18	
18 - 25			Hole terminated at 18 feet.						18 - 25	

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR.INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:
PIW-B1 PAGE 1 OF 1



DRILLING: STARTED **5/3/04** COMPLETED: **5/3/04**
 INSTALLATION: STARTED **5/3/04** COMPLETED: **5/3/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY: **WBC**

EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **26.0**
 WELL DEPTH (ft): **25.5**
 BOREHOLE DIAMETER (in): **10**
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
	ASPHALT									
		ML	GRAVELLY SILT WITH CLAY ; ML; 7.5 YR 4/3 brown; dry; (25,0,60,15)							
			SILTY CLAY ; becomes black at 5.75'; moist' rootlets; HC odor; (0,0,40,60)			1.5	2 4 8		5	
		ML	CLAYEY SILT ; ML; grayish black; stiff; dry; strong HC odor; (0,0,70,30)			1.5	5 8 12		10	cement
		ML	SILT ; ML; 5 GN 4 gray; very stiff; saturated; strong HC odor; (0,0,100,0)			1.5	6 10 20		15	4" PVC blank
		ML	CLAYEY SILT ; ML; 10 YR 5/6 yellowish brown; stiff; moist to wet; no HC odor; (0,0,80,20)			1.5	5 7 7		20	hydrated bentonite sand #2/12
		SP	SAND ; SP; 10 YR 5/8 yellowish brown; saturated; rounded gravel; increased clay to sandy clayey sand ar 25.5 - 26'; (15,85,5,5)			1.5	6 15 25		25	4" PVC slotted 0.020"
			Lost 6" of borehole upon removal of plug Hole terminated at 26 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

PIW-B2 PAGE 1 OF 1



DRILLING: STARTED **5/3/04** COMPLETED: **5/3/04**
 INSTALLATION: STARTED **5/3/04** COMPLETED: **5/3/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **26.0**
 WELL DEPTH (ft): **26.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
			ASPHALT							above ground riser
		CL	GRAVEL FILL to 6"							
			SILTY CLAY ; CL; brown; slightly moist; (0,0,40,60)							
5		CL	CLAY ; CL; dark gray; moist; strong petroleum odor; (0,0,10,90)				4 6 8		5	4" PVC blank
		CL	SILTY CLAY ; CL; brown; moist; strong petroleum odor; gray mottling; (0,0,40,60)				5 6 7			
10		CL-ML	SILTY CLAY ; CL-ML; grayish brown; strong petroleum odor; very moist; (0,10,40,50)				6 8 8		10	cement
		SC	SANDY CLAY ; SC; brown; moist to saturated; HC odor; (0,30,10,60)				6 7 10		15	
15		CL-ML	SILTY CLAY ; CL-ML; brown; slightly saturated; no HC odor; (0,10,40,50)				9 10 12			
		SC	CLAYEY SAND ; SC; brown; saturated; (0,60,10,30)				10 18 18		20	hydrated bentonite sand #2/12
20		SP	SAND ; SP; light brown; fine-grained; saturated; (0,80,10,10)				4 6 10 4 4 8 8 8 20			4" PVC slotted 0.020"
25			Hole terminated at 26 feet.				12 25 30		25	

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_N1WS.GPJ SECOR.INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

PIW-B3 PAGE 1 OF 1



DRILLING: STARTED **5/4/04** COMPLETED: **5/4/04**
 INSTALLATION: STARTED **5/4/04** COMPLETED: **5/4/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **26.0**
 WELL DEPTH (ft): **26.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
0 - 1	ASPHALT		ASPHALT							
1 - 5	GRAVELLY SILT		GRAVELLY SILT ; 7.5 YR 4/3 brown; dry; (040,0,60,0)							4" PVC blank
5 - 8.5	SILTY CLAY		SILTY CLAY ; dark gray to black; moist; slight HC odor; some gravel upn to 1/4"; (10,0,30,60)	X		1.5	10 4 4		5	
8.5 - 9	SILTY CLAY		SILTY CLAY ; gray; strong HC odor; saturated at 8.5 - 9'; (0,0,40,60)	X		1.5	4 6 10		10	cement
9 - 13	SILTY CLAY		SILTY CLAY ; brownish gray; moist; HC odor; (0,0,30,70)	X		1.5	5 9 12		15	
13 - 20	CLAYEY SILT		CLAYEY SILT ; light brown; saturated; slight HC odor; (0,0,60,40)	X		1.5	3 3 4		20	hydrated bentonite sand #2/12
20 - 25	SAND		SAND ; brown; fine-grained; saturated; no HC odor; (0,85,5,15)	X		1.5	12 15 25		25	4" PVC slotted 0.020"
25 - 26			Hole terminated at 26 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR.INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **5/4/05** COMPLETED: **5/4/04**
 INSTALLATION: STARTED **5/4/05** COMPLETED: **5/4/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **4**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **26.0**
 WELL DEPTH (ft): **26.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
	ASPHALT		ASPHALT							
	GRAVELLY SILT		GRAVELLY SILT ; dry; fill; (20,10,60,10)							
5	SILTY CLAY	CL	SILTY CLAY ; CL; moist; slight HC odor; (0,0,40,60)	X		1.5	2 2 2		5	
10	CLAYEY SILT	ML	CLAYEY SILT ; ML; grayish brown; moist; HC odor; (0,0,70,30)	X		1.5	8 8 12		10	cement
15	SILT	ML	SILT ; ML; brownish gray; saturated; HC odor; (0,0,90,10)	X		1.5	4 8 10		15	4" PVC blank
20	CLAYEY SILT	CL-ML	CLAYEY SILT ; CL-ML; brown; moist to very moist; no HC odor; (0,0,60,40)	X		1.5	5 8 10		20	hydrated bentonite sand #2/12
25	SAND	SP	SAND ; SP; yellowish brown; fine-grained; saturated; no HC odor; (0,80,10,10)	X		1.5	8 10 30		25	4" PVC slotted 0.020"
			Hole terminated at 26 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_N1WS.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

POBS-A1/B1 PAGE 1 OF 1



DRILLING: STARTED **5/6/04** COMPLETED: **5/6/04**
 INSTALLATION: STARTED **5/6/04** COMPLETED: **5/6/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **1**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **26.0**
 WELL DEPTH (ft): **26.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
			ASPHALT GRAVELLY FILL up to 6"							
5		CL	SILTY CLAY ; CL; dark gray to black; moist; slight HC odor; some gravel up to 1/2"; (10,0,30,60)			1.5	4 4 7		5	
10		CL	SILTY CLAY ; CL; gray; strong HC odor; white mottling; (0,0,40,60)			1.5	5 7 11		10	
15		CL	SILTY CLAY ; CL; brownish gray; moist; strong HC odor; (0,0,30,710)			1.5	6 10 11		15	
20		ML	CLAYEY SILT ; ML; light brown; saturated; slight HC odor; (0,0,60,40)			1.5	4 5 4		20	
25		SP	SAND ; SP; black; fine-grained; saturated; no HC odor; (0,80,10,10)			1.5	13 14 19		25	
			Hole terminated at 26 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER:

WELL / PROBEHOLE / BOREHOLE NO:

POBS-B2 PAGE 1 OF 1



DRILLING: STARTED **5/6/04** COMPLETED: **5/6/04**
 INSTALLATION: STARTED **5/6/04** COMPLETED: **5/6/04**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT: **Hollow Stem Auger**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **NE**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **2**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **26.0**
 WELL DEPTH (ft): **26.0**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
0 - 4	ASPHALT GRAVELLY FILL to 4'									
4 - 6.5	CL	CL	SILTY CLAY ; CL; dark gray; slightly moist; HC odor; (0,0,40,60)	X		1.5	4 6 7		5	
6.5 - 10	SC	SC	SANDY CLAY ; SC; black; strong HC odor; very moist to saturated; visible oil; (0,30,10,60)	X		1.5	3 7 7		10	cement
10 - 13.5	ML	ML	CLAYEY SILT ; ML; blackish gray; moist; strong HC odor; (0,0,70,30)	X		1.5	11 12 12		15	2" PVC blank
13.5 - 20			FINE SAND WITH SOME GRAVEL ; brown; saturated; no HC odor; (10,80,5,5)	X		1.5			20	hydrated bentonite sand #2/12
20 - 25				X		1.5			25	2" PVC slotted 0.020"
25 - 26			Hole terminated at 26 feet.	X						

GEO FORM 304 BOHANNON-SAN LORENZO_P1WS_NIWS.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **12 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
0940			ASPHALT BASE FILL						
		GW-GM	GRAVELLY SAND WITH SILT ; GW-GM; 2.5 Y 4/1 dark yellowish brown to dark gray; loose; dry; poorly sorted; with gravel up to 3/4"; (20,60,20,0)						
		GW	SANDY GRAVEL ; GW; dark gray; loose; dry; gravel up to 3/4"; (50,40,10,0)					0	
5			Found geotextile layer (all above is fill?)					17	
		CL	CLAY ; CL; dark gray and black; hard; slightly moist; with caliche					377	
10			Grades dark gray with dark yellowish brown mottling; some silt					414	10
		ML	CLAYEY SILT ; ML; dark gray; moist; strong petroleum odor; moderately soft					317	
15								69	15
		CL	SILTY CLAY ; CL; dark gray; hard; slight petroleum odor; slightly moist; dark yellowish brown mottled					0	
1000			Hole terminated at 16 feet.						

GEO FORM 304 BOHANNON-SAN LORENZO_R1-R14.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **11-12 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1020			ASPHALT BASE FILL						
		GW	GRAVELLY SAND WITH SILT ; GW; 2.5 Y 4/1 dark yellowish brown to dark gray; loose; dry; poorly sorted; with gravel up to 3/4"; (20,60,20,0)					2	5
5		CL	CLAY ; CL; black; moist; strong petroleum odor; moderately hard; dark gray mottling					318	
10		CL-ML	CLAY WITH SILT ; CL-ML; dark gray; hard; moist; dark gray mottling					370	10
15								341	
15								135	15
1050			Hole terminated at 16 feet.						

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **9 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
0920			ASPHALT BASE FILL						
		GW-GM	GRAVELLY SAND WITH SILT ; GW-GM; 2.5 Y 4/1 dark yellowish brown to dark gray; loose; dry; poorly sorted; with gravel up to 3/4"; (20,60,20,0)					0	
5			Grades increasing gravel; less silt at base					0	
		CL	CLAY ; CL; black; hard; dry to moist; with caliche					0/47	
			Grades with dark mottling					175	
								184	
10		CL	CLAYEY SILT ; CL; dark gray; moist; strong petroleum odor; with dark yellow mottling						
15		CL-ML	CLAYEY SILT ; CL-ML; dark gray; moist; moderate petroleum odor; moderately soft; (0,0,60,40)					380	
			Grades increasing clay					22	
0940			Hole terminated at 16 feet.						

GEO FORM 304 BOHANNON-SAN LORENZO_R1-R14.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **NE** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
0905			ASPHALT BASE FILL						
		SC	CLAYEY SAND ; SC; very dark gray; medium dense; dry Grades increasing clay					0	
		SP	SAND ; SP; grayish brown; moist; moderately loose; fine to medium grained; with silt and clayey interbeds Grades CLAYEY SILT with FINE SAND					0	
5		ML	Thin layer of SW (1") CLAYEY SILT ; ML; grayish brown; soft; moist; dark red root traces					13	5
		CL	CLAY ; CL; very dark gray; moist; moderately hard; trace silt and fine sand					11	
		CL	CLAY ; CL; dark gray; with light gray mottles and caliche; strong odor					304	
10		CL	CLAY ; CL; dark gray; with light gray mottles and caliche; strong odor					452	10
		CL	CLAY ; CL; dark gray; with light gray mottles and caliche; strong odor					452	
		CL	CLAY ; CL; dark gray; with light gray mottles and caliche; strong odor					459	
15		ML	CLAYEY SILT ; ML; gray; soft; moist; with trace fine sand					323	15
		SC	SANDY CLAY ; SC; yellowish brown; dry; dark gray mottled						
0920			Hole terminated at 16 feet.					16	

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **8 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1000			ASPHALT SANDY GRAVEL ; (fill)					0	
5		ML	CLAYEY SILT ; ML; dark gray; soft; moist Grades increasing clay					2	5
		CL	CLAY ; CL; black; moderately hard; slightly moist; some silt					10	
		SM	SILTY SAND ; SM; dark yellowish brown and dark gray; wet; moderately loose; predominately fine sand					229	
10		ML	SILT ; ML; very dark gray; soft; wet; with fine sand in upper 0.5 feet					10	
								6	10
		CL	CLAY ; CL; black; with dark gray mottling; moderately hard; moist					225	
								392	
		CL	SILTY CLAY ; CL; dark gray; moist; moderately soft; some olive brown mottling					326	
15									15
1020			Hole terminated at 16 feet.						

GEO FORM 304 BOHANNON-SAN LORENZO_R1-R14.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **11 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1230			ASPHALT BASE FILL						
			SANDY GRAVEL FILL; GW; dark gray; loose; dry					0	
		CL-ML	CLAYEY SILT ; CL-ML; grayish brown; soft; dry					0	
5			Grades with reddish brown mottling (rootlets)					1	5
		CL	CLAY ; CL; black; moderately hard; slightly moist; with caliche					35	
			Grades with olive gray mottling; strong odor					337	
10								327	10
		CL	SILTY CLAY ; CL; dark gray; with yellowish brown mottling; moderately hard to moderately soft; moist; strong product odor					304	
								297	
15			Grades increasing silt					274	15
1350			Hole terminated at 16 feet.						

GEO FORM 304 BOHANNON-SAN LORENZO_R1-R14.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **8 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID Method	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1120		CL-ML	ASPHALT GRAVELLY SILT WITH CLAY ; CL-ML; (disturbed soil)		.			5	
			SANDY GRAVEL ; (fill)		.				
			As above		.				
5					.			8	5
		CL	CLAY ; CL; black; hard; moist; with dark gray mottling		.			404	
10		CL	CLAY ; CL; very dark gray; moderately hard; slightly moist		.			329	10
					.			313	
					.			307	
15		CL	SILTY CLAY ; CL; dark gray; moist; strong petroleum odor; moderately hard		.				15
1140			Hole terminated at 16 feet.		.			281	

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **13 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1145			ASPHALT BASE FILL						
			SANDY GRAVEL FILL; GW; dark gray to dark yellowish brown					1	
		SM	SILTY SAND ; SM; dark grayish brown; loose; moist; fine sand; trace fine gravel						
		ML	CLAYEY SILT ; ML; dark grayish brown; soft; moist; trace fine sand					0	
5			Grades with dark yellowish brown mottling; soft					0	5
		CL	CLAY ; CL; black; with dark gray mottling; moderately hard; slightly moist					0	
								2	
								370	
10		CL	CLAY ; CL; dark gray; moderately hard; slightly moist; with gray mottling and caliche					318	10
								306	
		ML	CLAYEY SILT ; ML; dark gray; moist; strong petroleum odor; moderately soft					249	
15								231	15
1210			Hole terminated at 16 feet.						

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **14 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1050			ASPHALT BASE FILL						
			MIXED SILTY CLAY AND FILL; dark grayish black, dark yellowish brown					17	
		CL	SILTY CLAY ; CL; very dark gray; moderately hard; slightly moist					9	
		ML	CLAYEY SILT WITH FINE SAND ; ML; dark gray; moist; moderately soft Grades no fine sand Clam shell fragment					0	5
5								9	
		CL	CLAY ; CL; black; dry; moderately hard					26	
10								372	10
		CL	CLAY ; CL; dark gray; hard; strong petroleum odor; slightly moist; with gray mottling					293	
								307	
		CL	SILTY CLAY ; CL; dark gray; moist; moderate petroleum odor; moderately soft					307	
15								257	15
1110			Hole terminated at 16 feet.						

GEO FORM 304 BOHANNON-SAN LORENZO_R1-R14.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **4 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1330			ASPHALT MIXED SOIL AND SANDY GRAVEL FILL; GW						
		SC	SANDY CLAY ; SC; dark grayish brown; hard; dry					1	
								2	
		GW	GRAVELLY SAND WITH SILT ; GW					1	
			SILT ; black to very dark brown; wet; soft to moderately soft; upper is high organic content with shell fragments; lower with clay					1	▽
5									5
		CL	CLAY ; CL; black; moderately hard; slightly moist					1	
								1	
								1	
10		CL	CLAY ; CL; dark gray; olive brown mottled; moderately hard; slightly moist; with caliche					289	10
								1	
		CL	CLAY ; CL; black; moderately hard; slightly moist; with caliche					0	
15		CL	CLAY ; CL; very dark gray; hard; slightly moist; with gray mottles					372	15
1350			Hole terminated at 16 feet.						

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **5.5 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
0830			ASPHALT BASE FILL						
		SM	FINE SAND ; SM; dark yellowish brown; with clay; dry; silty					1	
5		ML	SILT ; ML; brown; soft; moist; wet at 5.5 feet					2	5
		CL	CLAY ; CL; black; moist; moderately hard					1	
		SP-SM	SAND ; SP-SM; dark grayish brown; dense; dry; trace fine gravel at base						
10		CL	SILTY CLAY ; CL; very dark gray; moist; moderate petroleum odor; moderately hard; with caliche					378	10
		CL	CLAY WITH SILT ; CL; dark gray; strong petroleum odor; with olive and light gray mottling					470	
		CL-ML	CLAYEY SILT ; CL-ML; dark olive gray; with gray mottles; moderately soft; wet; strong petroleum odor					471	
15		CL-ML	CLAYEY SILT ; CL-ML; dark olive gray; with gray mottles; moderately soft; wet; strong petroleum odor					360	15
0850			Hole terminated at 16 feet.						

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **6.4 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
0800			ASPHALT FILL						
		CL-ML	CLAYEY SILT ; CL-ML; 10 YR 3/2 very dark grayish brown; dry; moderately hard					0	
		ML	SANDY SILT ; ML; fine sand; trace clay					0	
5		ML	SILT ; ML; grades wet at 6.4 feet					0	5
		CL	CLAY ; CL; very dark gray; moist; moderately hard					3	
10								97	
								0	10
								160	
								436	
		SW-SM	SAND WITH FINE GRAVEL ; SW-SM; dry; some clay						
			CLAY ; dark olive gray; trace caliche; dry						
								373	
15			SILTY CLAY ; moist						15
0825			Hole terminated at 16 feet.					333	

GEO FORM 304 BOHANNON-SAN LORENZO_R1-R14.GPJ SECOR INTL.GDT_5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **5.5 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1300			ASPHALT BASE FILL						
			MIXED SOIL AND FILL; GW					2	
		GW	GRAVELLY SAND ; GW					1	
		ML	SANDY SILT ; ML; brown; soft; slightly moist; grades with clay					0	5
5		ML	SILT ; ML; dark yellowish brown; soft; wet					1	
			As at 4 feet						
		CL	CLAY ; CL; black; moderately hard; slightly moist					0	
			Grades with caliche					1	
10			Grades very dark gray					267	10
			CLAY ; dark gray; moist; strong petroleum odor; moderately hard; with caliche					248	
		CL-ML	CLAYEY SILT ; CL-ML; dark gray; moist; moderately soft					327	15
15								89	
1320			Hole terminated at 16 feet.						

GEO FORM 304 BOHANNON-SAN LORENZO_R1-R14.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **7/20/05** COMPLETED: **7/20/05**
 INSTALLATION: STARTED **7/20/05** COMPLETED: **7/20/05**
 DRILLING COMPANY: **ECA**
 DRILLING EQUIPMENT: **Geoprobe**
 DRILLING METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Core**

NORTHING (ft): EASTING (ft):
 LATITUDE: LONGITUDE:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **6 7/20/05** BOREHOLE DEPTH (ft): **16.0**
 STATIC DTW (ft): **NE** WELL DEPTH (ft): ---
 WELL CASING DIAMETER (in): --- BOREHOLE DIAMETER (in):
 LOGGED BY: **B. Robitaille** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1350			ASPHALT BASE FILL						
			MIXED SOIL AND SANDY GRAVEL; GW					1	
								2	
								1	
5		CL-ML	CLAYEY SILT ; CL-ML; dark brown to very dark gray; dry; moderately soft					1	5
		ML	SILT ; ML; dark brown; soft; moist to wet					1	▽
		CL	CLAY ; CL; black; moderately hard; slightly moist; with caliche					27	
10		CL	CLAY ; CL; dark gray; with olive gray mottling; moderately hard; slightly moist; with caliche					33	10
			With silt					372	
								345	
								326	
15		CL-ML	CLAYEY SILT ; CL-ML; dark gray; moist; strong petroleum odor; moderately hard					319	15
1400			Hole terminated at 16 feet.						

GEO FORM 304 BOHANNON-SAN LORENZO_R1-R14.GPJ SECOR INTL.GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227.00**






WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **9/30/05** COMPLETED: **9/30/05**
 INSTALLATION: STARTED **9/30/05** COMPLETED: **9/30/05**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT:
 DRILLING METHOD:
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **15 9/30/06**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **8**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **20.5**
 WELL DEPTH (ft): **---**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
0740		GC	ASPHALT GRAVELLY SAND SOME CLAY ; GC; brown; dry; (30,30,0,40)							Blank PVC Grout
5		CL	SANDY CLAY TRACE GRAVEL AND FINE SAND ; CL; dark brown to black; moist; (10,35,0,45) Grades light brown, more gravels, then black						5	Hydrated Bentonite
10		CL	SANDY CLAY ; CL; black; high plasticity; moist; no gravel; (0,30,0,70)						10	0.020" Slotted PVC
0815 15		CL	SANDY CLAY TRACE GRAVEL AND COARSE SAND ; CL; light brown to gray; moist; moderate petroleum odor; medium to high plasticity; (5,25,0,70)						15	Blank PVC #3 Sand
20		CL	SANDY CLAY ; CL; gray; very dense; wet; trouble drilling; (0,40,0,60)						20	Cap
0830			Hole terminated at 20.5 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_DP1-7.GPJ SECOR INTL_GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227.00**

WELL / PROBEHOLE / BOREHOLE NO:

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DRILLING: STARTED **9/29/05** COMPLETED: **9/29/05**
 INSTALLATION: STARTED **9/29/05** COMPLETED: **9/29/05**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT:
 DRILLING METHOD:
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **14 9/29/05**
 STATIC DTW (ft): **NE**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **20.0**
 WELL DEPTH (ft): ---
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	
1240			ASPHALT SANDY GRAVELLY CLAY; CL; medium brown; angular gravels; moist; (15,30,0,55)							
5		CL	SANDY CLAY WITH FINE SAND ; CL; dark brown; low plasticity; moist; (0,40,0,60)						5	
1330		CL	SANDY CLAY ; CL; black; high plasticity; poorly sorted sand; fine with some coarse sand; (0,15,0,85)						10	
1345		CL	SANDY CLAY ; CL; brown; moist; (0,30,0,70)						15	
1350		CL	CLAY WITH SAND ; CL; gray; dense; wet; (0,40,0,60)						20	
1350			Hole terminated at 20 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_DP1-7.GPJ SECOR INTL_GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227.00**

WELL / PROBEHOLE / BOREHOLE NO:

DP-3 PAGE 1 OF 1



DRILLING: STARTED **9/29/05** COMPLETED: **9/29/05**
 INSTALLATION: STARTED **9/29/05** COMPLETED: **9/29/05**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT:
 DRILLING METHOD:
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **14 9/29/05**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): 8
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **20.2**
 WELL DEPTH (ft): ---
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
1030		SC	ASPHALT CLAYEY SAND WITH GRAVEL ; SC; brown; small poorly sorted gravel; (20,45,0,35)						6" Above Ground	
5		SC	CLAYEY SAND ; SC; dark brown; moist; medium brown; fine sand; trace small gravel or large sand; (5,50,0,45)						Blank PVC	Grout
10		CL	SANDY CLAY ; CL; black; high plasticity; no gravel; trace fine sand; more clay with depth; (0,5,0,95)						0.020" Slotted PVC	Hydrated Bentonite
1100		CL	SANDY CLAY ; CL; grayish green; medium plasticity; moist; moderate petroleum odor; poorly sorted fine to medium sand; (0,15,0,85)						#3 Sand	Blank PVC
1115		ML	SILTY SAND ; ML; light brown to grayish green; wet; no gravel; (0,30,70,0)						Hydrated Bentonite	Cap
20			Hole terminated at 20.2 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_DP1-7.GPJ SECOR INTL_GDT_5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227.00**

WELL / PROBEHOLE / BOREHOLE NO:

DP-4 PAGE 1 OF 1



DRILLING: STARTED **9/28/05** COMPLETED: **9/28/05**
 INSTALLATION: STARTED **9/28/05** COMPLETED: **9/28/05**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT:
 DRILLING METHOD:
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **14 9/28/05**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **8**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **20.0**
 WELL DEPTH (ft): **---**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	
0820		CL	ASPHALT GRAVEL FILL SANDY CLAY ; CL; light brown							
5		CL	SANDY CLAY ; CL; dark brown; slight petroleum odor; fine sand (30%)						5	
10			Grades to black clay; 10% fine sand						10	
15			Grades to gray silty clay; 40% fine sand; strong petroleum odor						15	
0925									15	
20			Hole terminated at 20 feet.						20	
1153									20	

GEO FORM 304 BOHANNON-SAN LORENZO_DP1-7.GPJ SECOR INTL_GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227.00**

WELL / PROBEHOLE / BOREHOLE NO:

DP-5 PAGE 1 OF 1



DRILLING: STARTED **9/28/05** COMPLETED: **9/28/05**
 INSTALLATION: STARTED **9/28/05** COMPLETED: **9/28/05**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT:
 DRILLING METHOD:
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **15 9/28/05**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **8**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **20.5**
 WELL DEPTH (ft): **---**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
1100			ASPHALT 3/4" round GRAVEL FILL and SAND; dry							6" Above Ground
5		GP	SANDY GRAVEL ; GP; moist; medium brown; medium to fine sand; (60,40,10,0) Gravel size and quantity decreases with depth; round 1/2"; (50,10,10,30)							Blank PVC Grout Hydrated Bentonite
1135 10		CL	SANDY CLAY WITH GRAVEL ; CL; dark brown; medium plasticity; moist; (5,10,0,85) Grades to black							0.020" Slotted PVC
1145 15		CL	SANDY CLAY ; CL; light brown; slight petroleum odor; fine sand; (0,20,0,80)							#3 Sand
		CL	CL; some small gravel; moderate petroleum odor							Blank PVC Hydrated Bentonite
20		CL	SILTY CLAY WITH FINE SAND ; CL; light brown; no gravel; (0,30,20,50)							Cap
1153			Hole terminated at 20.5 feet.							

GEO FORM 304 BOHANNON-SAN LORENZO_DP1-7.GPJ SECOR INTL_GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227.00**

WELL / PROBEHOLE / BOREHOLE NO:

DP-6 PAGE 1 OF 1



DRILLING: STARTED **9/29/05** COMPLETED: **9/29/05**
 INSTALLATION: STARTED **9/29/05** COMPLETED: **9/29/05**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT:
 DRILLING METHOD:
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **13.5 9/29/06**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **8**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **20.2**
 WELL DEPTH (ft): **---**
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
0800			ASPHALT GRAVEL FILL						0	6" Above Ground
5									5	Blank PVC Grout Hydrated Bentonite
0825		CL	SANDY CLAY ; CL; dark brown; medium plasticity; moist; slight petroleum odor; (0,20,0,80)						10	0.020" Slotted PVC
0835		CL	SANDY CLAY WITH GRAVEL ; CL; medium to dark brown; 1/2" angular gravel; very fine sand; moist; (15,5,0,80)						15	#3 Sand Blank PVC Hydrated Bentonite
0841		CL	SANDY CLAY SOME GRAVEL ; CL; dark brown; high plasticity; wet; small gravel; dard to drill; (10,5,0,85)						20	Cap
0841			Hole terminated at 20.2 feet.						20.2	

GEO FORM 304 BOHANNON-SAN LORENZO_DP1-7.GPJ SECOR INTL_GDT 5/7/07

PROJECT: **Bohannon Development Company**
 LOCATION: **575 Paseo Grande, San Lorenzo, CA**
 PROJECT NUMBER: **05OT.50227.00**

WELL / PROBEHOLE / BOREHOLE NO:

DP-7 PAGE 1 OF 1



DRILLING: STARTED **9/28/05** COMPLETED: **9/29/05**
 INSTALLATION: STARTED **9/28/05** COMPLETED: **9/29/05**
 DRILLING COMPANY: **Gregg Drilling**
 DRILLING EQUIPMENT:
 DRILLING METHOD:
 SAMPLING EQUIPMENT:

NORTHING (ft):
 LATITUDE:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **14 9/28/05**
 STATIC DTW (ft): **NE**
 WELL CASING DIAMETER (in): **8**
 LOGGED BY:
 EASTING (ft):
 LONGITUDE:
 TOC ELEV (ft):
 BOREHOLE DEPTH (ft): **21.0**
 WELL DEPTH (ft): ---
 BOREHOLE DIAMETER (in):
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Borehole Backfill
1340		CL	ASPHALT SANDY CLAY ; CL; dark brown; dry; (0,40,0,60)						6" Above Ground	
1410		CL	SANDY CLAY ; CL; black; medium plasticity; moist; angular; trace very fine sand; trace gravel; slight oil odor; (5,10,0,85)						Blank PVC	
1440		CL	SANDY CLAY ; CL; greenish gray; moist; medium to high plasticity; trace very fine sand; (0,3,0,97)						Grout	
1500		CL	SANDY CLAY TRACE GRAVEL ; CL; dark brown; medium plasticity; moist; (5,10,0,85)						Hydrated Bentonite	
1500		SM	SILTY SAND ; SM; light brown; wet; moderate petroleum odor; poorly sorted medium to fine; (0,90,10,0)						0.020" Slotted PVC	
1500			Hole terminated at 21 feet.						#3 Sand	
									Blank PVC	
									Hydrated Bentonite	
									Cap	

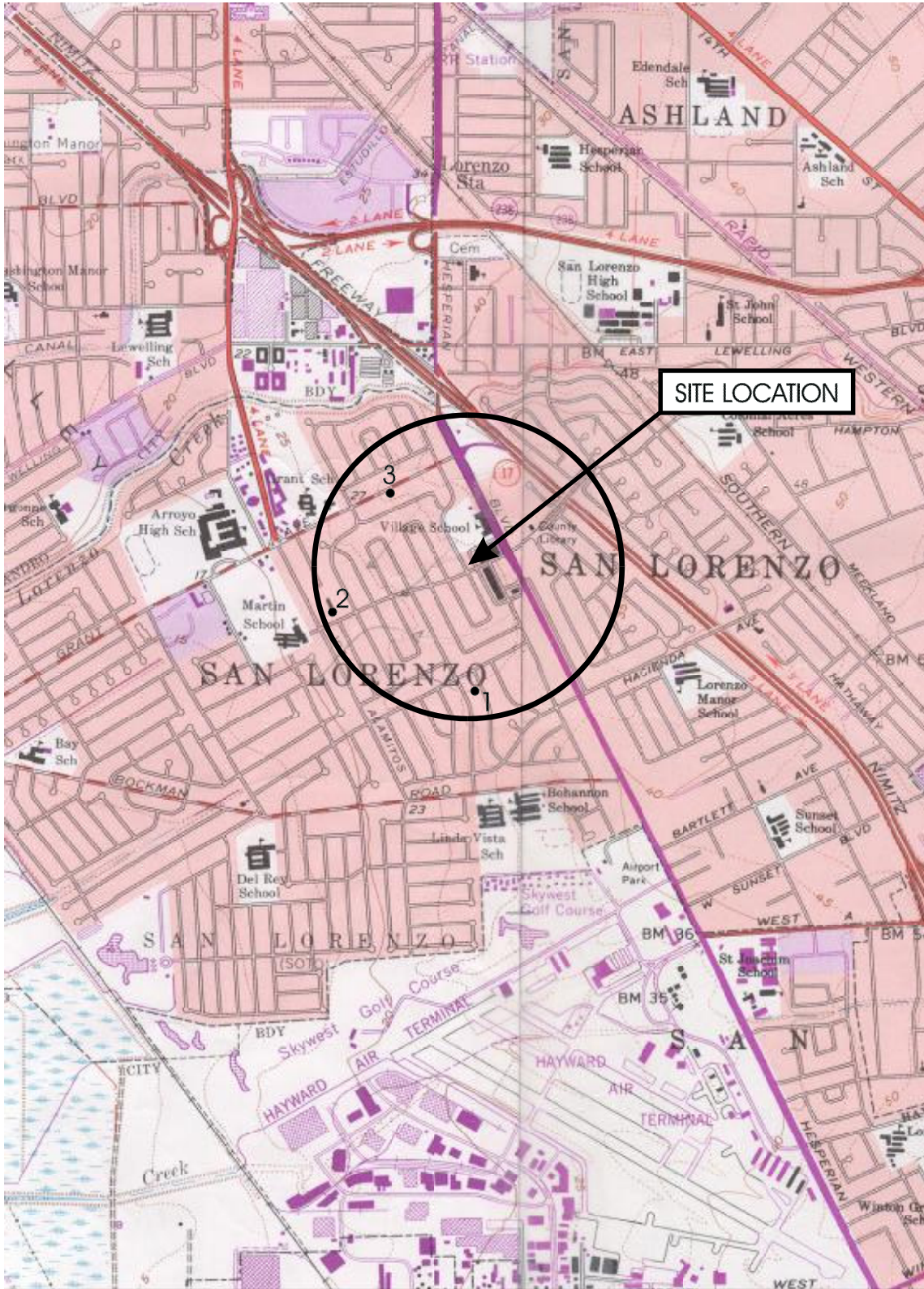
GEO FORM 304 BOHANNON-SAN LORENZO_DP1-7.GPJ SECOR INTL_GDT 5/7/07

Stantec

**SITE CONCEPTUAL MODEL AND WORK PLAN TO EVALUATE POST-REMEDATION SITE
CONDITIONS
DAVID D. BOHANNON ORGANIZATION**

**APPENDIX C
Receptor Survey Maps**

Site Conceptual Model and Work Plan to Evaluate Post-Remediation
Site Conditions
David D. Bohannon Organization
575 Paseo Grande
San Lorenzo, California
Stantec PN: 185702534.200.0005
December 21, 2012



REFERENCE:
 SAN LEANDRO AND HAYWARD QUADRANGLES
 7.5-MINUTE SERIES (TOPOGRAPHIC)
 SAN LEANDRO AND HAYWARD, CALIFORNIA, 1995
 PHOTOREVISED 1980



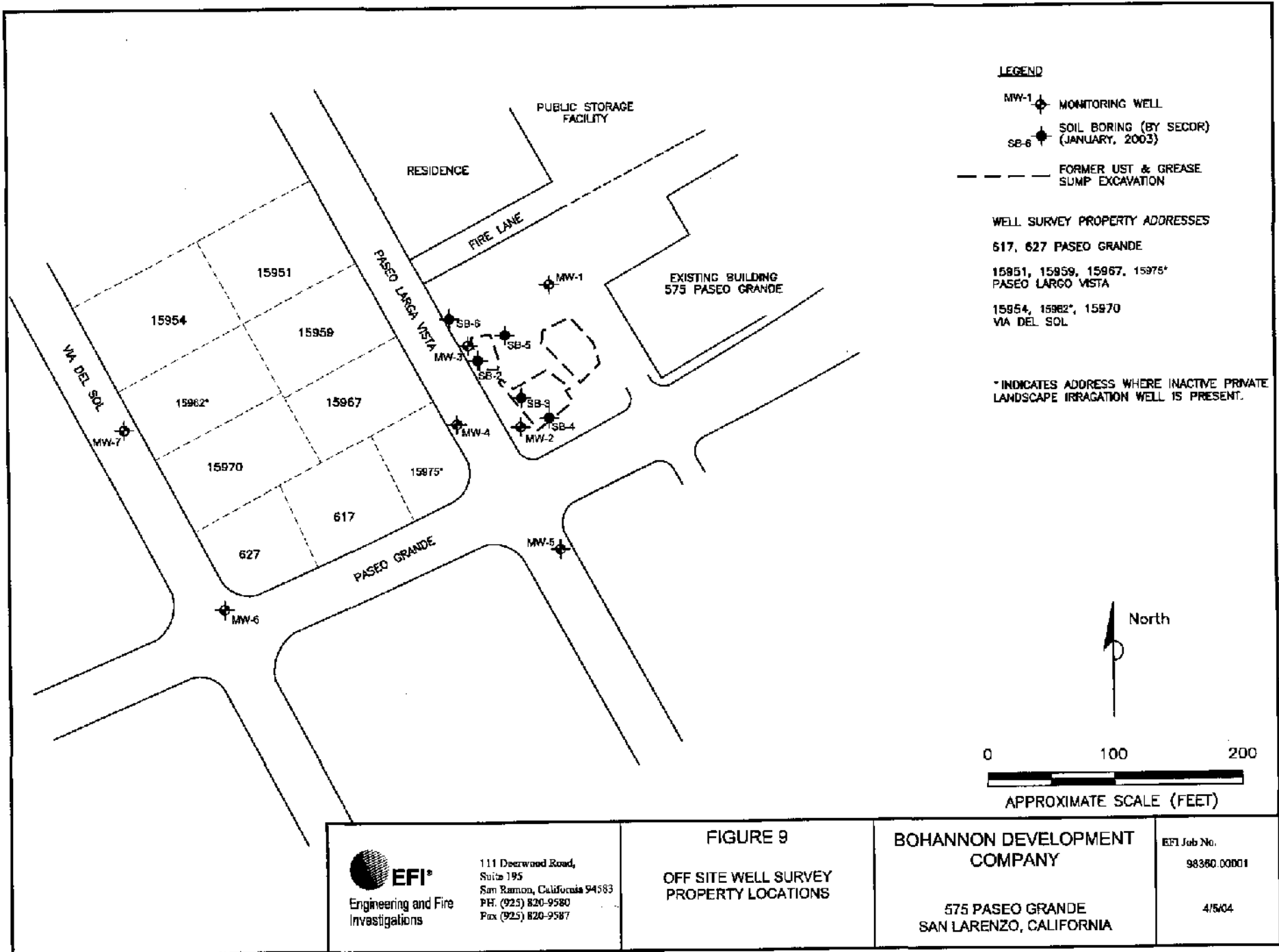
DESIGNED BY	ND
DRAWN BY	RRR
CHECKED BY	
APPROVED BY	
DATE	13 JUNE 2003

SECOR
 57 Lafayette Circle, 2ND Floor
 Lafayette, California 94549
 Phone Number: (925) 299-9300 Fax Number: (925) 299-9302

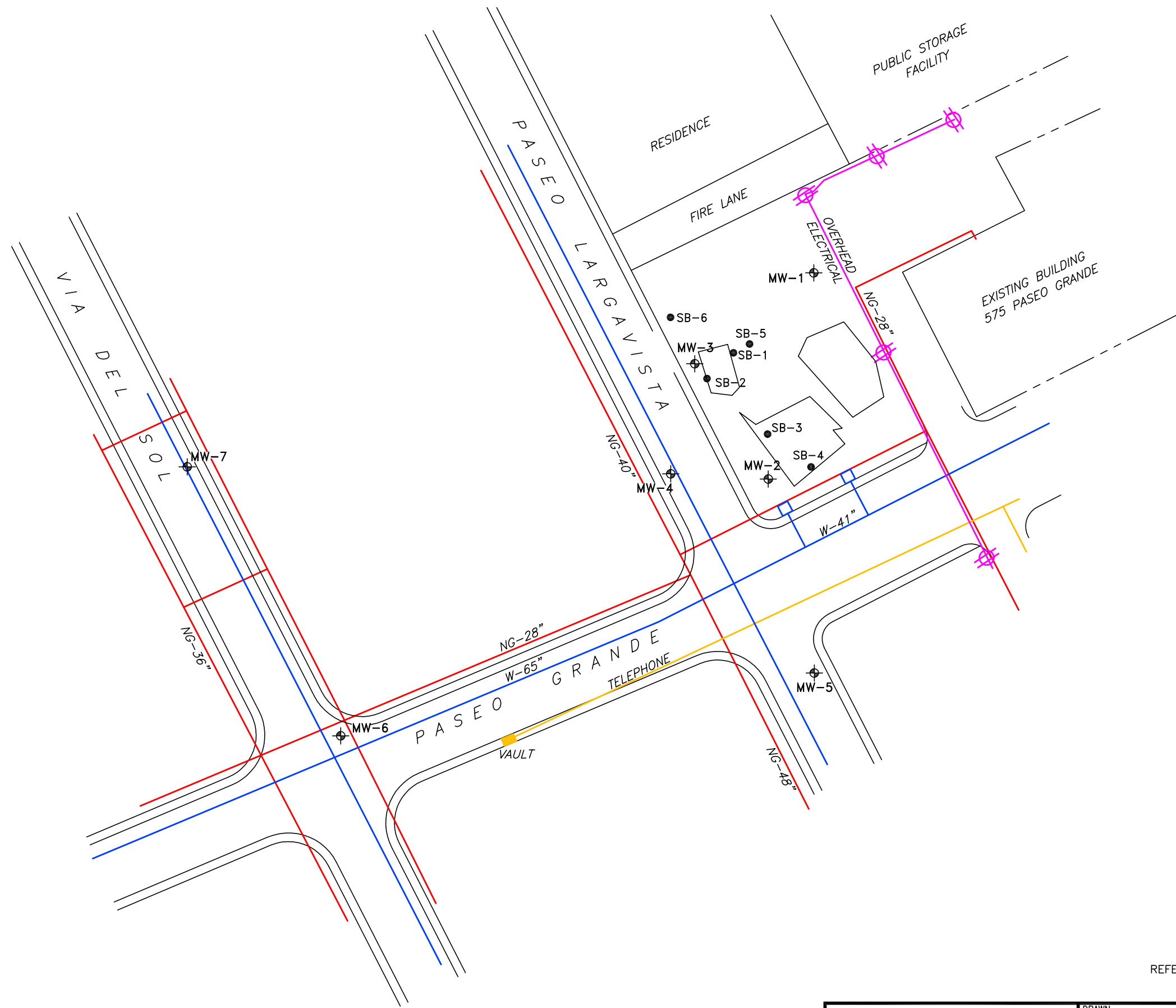
DAVID D. BOHANNON ORGANIZATION
 575 PASEO GRANDE
 SAN LORENZO, CALIFORNIA
**RADIUS MAP AND
 WELL LOCATIONS**

SCALE
 1" = 2000'
 PROJECT NO.
 05OT.50063.02.0002
 DRAWING

FIGURE 1



20030618.11502669 K:\BOH\2003 work plan\BOH-SD and Sewer Figure 3.dwg

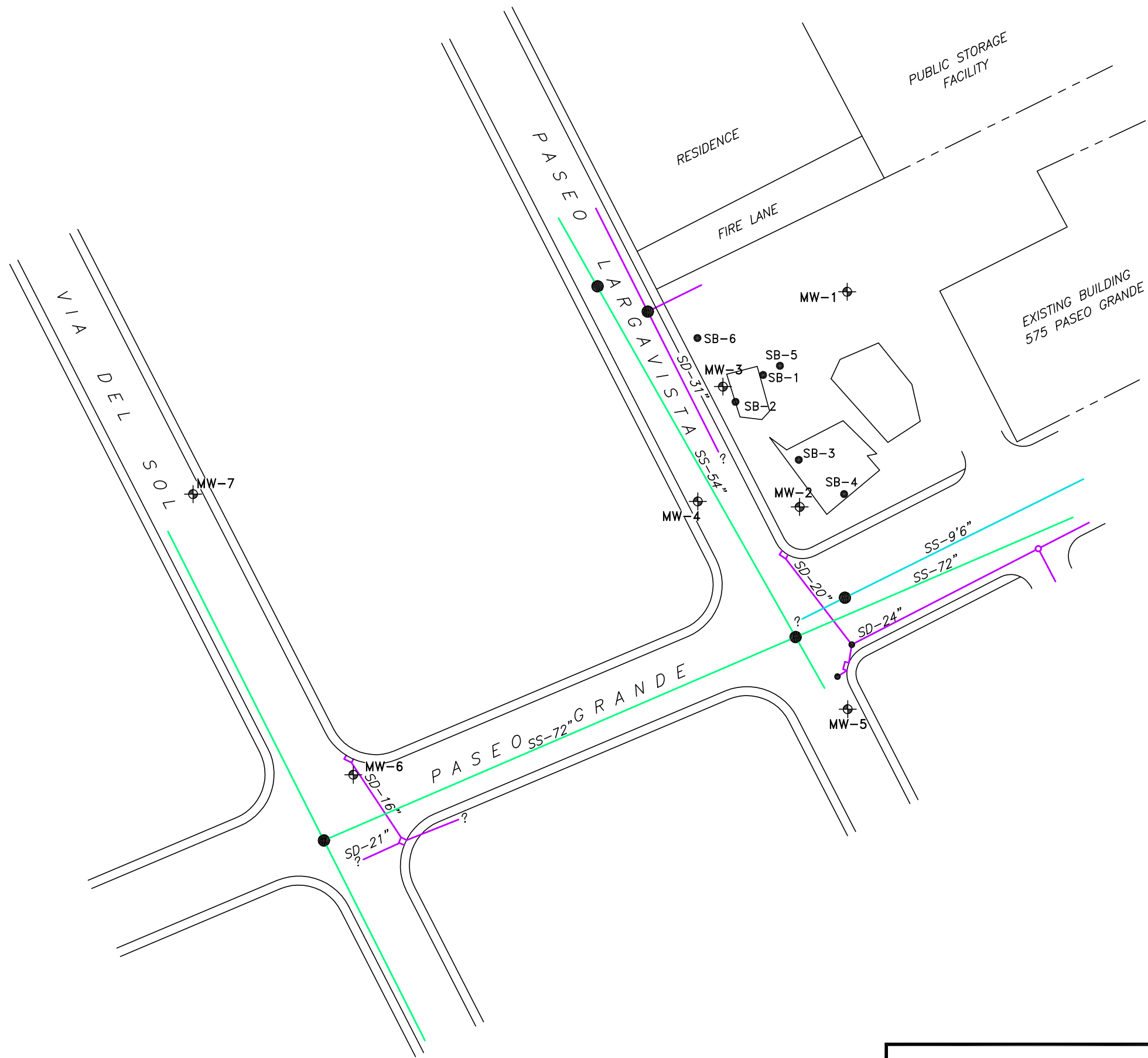


- LEGEND:**
- MW-1 EXISTING WELL LOCATION
 - APPROXIMATE PROPERTY BOUNDARY
 - OVERHEAD ELECTRICAL (WITH POWER POLES)
 - NATURAL GAS (28"-48" bgs)
 - WATER (41"-65" bgs)
 - TELEPHONE (UNKNOWN DEPTH)
 - FORMER UST AND GREASE SUMP EXCAVATIONS
 - A1 SECOR SOIL BORING LOCATION (JANUARY 2003)

REFERENCE: THIS FIGURE IS TAKEN FROM NOLTE AND ASSOCIATES, INC. AND IS INTENDED FOR ILLUSTRATION ONLY.

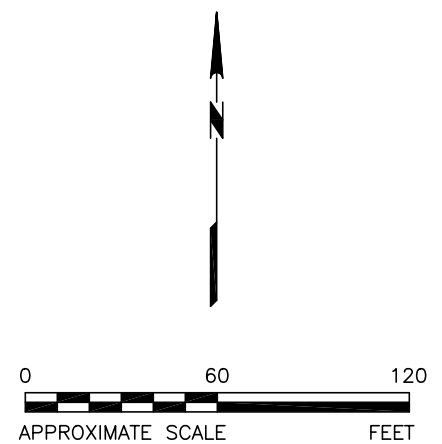
	DRAWN	RRR	FIGURE 2 DAVID D. BOHANNON ORGANIZATION 575 PASEO GRANDE SAN LORENZO, CALIFORNIA WATER, NATURAL GAS, TELEPHONE AND OVERHEAD ELECTRIC UTILITIES MAP
	APPR	ND	
	DATE	11 JUNE 2003	
	JOB NO.	050T.500063.02	

20030618.11452488 K:\BOH\2003 work plan\BOH-SD and Sewer Figure 3.dwg



LEGEND:

- MW-1 EXISTING WELL LOCATION
- APPROXIMATE PROPERTY BOUNDARY
- SHALLOW SANITARY SEWER (54"-72" bgs)
- DEEP SANITARY SEWER (9'6" bgs)
- STORM DRAIN (20"-31" bgs)
- MANWAY
- FORMER UST AND GREASE SUMP EXCAVATIONS
- SB-1 SECOR SOIL BORING LOCATION (JANUARY 2003)



REFERENCE: THIS FIGURE IS TAKEN FROM NOLTE AND ASSOCIATES, INC. AND IS INTENDED FOR ILLUSTRATION ONLY.

	DRAWN	RRR	FIGURE 3 DAVID D. BOHANNON ORGANIZATION 575 PASEO GRANDE SAN LORENZO, CALIFORNIA STORM DRAIN AND SEWER UTILITIES MAP
	APPR	ND	
	DATE	11 JUNE 2003	
	JOB NO.	050T.500063.02	

Stantec

**SITE CONCEPTUAL MODEL AND WORK PLAN TO EVALUATE POST-REMEDIATION SITE
CONDITIONS
DAVID D. BOHANNON ORGANIZATION**

APPENDIX D
**Petroleum Hydrocarbon Concentration Trends in
Groundwater**

Site Conceptual Model and Work Plan to Evaluate Post-Remediation
Site Conditions

David D. Bohannon Organization

575 Paseo Grande

San Lorenzo, California

Stantec PN: 185702534.200.0005

December 21, 2012

