Equity Enterprises
Real Estate Brokerage
and Development

RECEIVED
By Alameda County Environmental Health 3:39 pm, Apr 14, 2017

April 14, 2017

Ms. Anne Jurek, M.S.
Professional Technical Specialist II (Geology)
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Subject: Soil and Groundwater Investigation Work Plan
Main Street Property
927 Main Street
Pleasanton, California 94566
ACEH Fuel Leak Case No. RO0003199
GeoTracker Global ID No. T10000008158

Dear Ms. Jurek:

Equity Enterprises is pleased to present the enclosed work plan, prepared by Environmental Risk Assessors. The work plan presents the scope of work for a soil and groundwater investigation of the property located at 927 Main Street in Pleasanton, California. This work plan is submitted pursuant to the requirements specified in the directive issued by Alameda County Department of Environmental Health (ACDEH) dated February 14, 2017.

I have read and acknowledge the content, recommendations, and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the State Water Resource Control Board's GeoTracker website.

Please feel free to call me at 925-484-3636 if you have any questions.

Sincerely,

Brad Hirst
Equity Enterprises

(925) 484-3636 Email: ~~brad@equity-enterprises.net~~ brad@equityenterprises.net ~~Fax (925) 484-3923~~

~~1811 SANTA RITA ROAD • SUITE 128~~ • PLEASANTON, CA 94566
4460 Black Ave., Ste. L

Environmental Risk Assessors

Soil and Groundwater Investigation Work Plan

Main Street Property
927 Main Street
Pleasanton, California 94566

April 14, 2017

Prepared for:
Equity Enterprises
4460 Black Avenue, Suite L
Pleasanton, CA 94566

Prepared by:
Environmental Risk Assessors
1420 East Roseville Parkway
#140-262
Roseville, CA 95661

ACDEH Fuel Leak Case No. RO0003199

GeoTracker Global ID No. T10000008158

ERA Project No. 01-2016-1300-001

Environmental Risk Assessors

April 14, 2017

Mr. Bradley Hirst
Equity Enterprises
4460 Black Avenue, Suite L
Pleasanton, CA 94566

SUBJECT: Soil and Groundwater Investigation Work Plan
Main Street Property
927 Main Street
Pleasanton, California 94566
ACDEH Fuel Leak Case No. RO0003199
GeoTracker Global ID No. T10000008158
ERA Project No. 01-2016-1300-001

Dear Mr. Hirst,

The attached *Soil and Water Investigation Work Plan* ("the Work Plan") has been prepared by Environmental Risk Assessors (ERA) on behalf of Equity Enterprises for the above-referenced property (the Site). The Work Plan was prepared in accordance with a request from the Alameda County Health Care Services, Department of Environmental Health (ACDEH) as noted in their letter dated February 14, 2017. The proposed scope of work is presented in the attached work plan.

Please do not hesitate to contact me at (916) 677-9897 and via email at litafreeman@gmail.com if you have any questions or comments regarding this work plan.

Sincerely,

Environmental Risk Assessors

Lita D. Freeman

Lita D. Freeman, PG #7368
Professional Geologist

Tel 916-677-9897
litafreeman@gmail.com

1420 East Roseville Parkway
Suite 140-262
Roseville, California 95661

Table of Contents

Table of Contents

Tables

Figures

Appendices

CERTIFICATIONS

Report Prepared By:

April 14, 2017

Lita D. Freeman, P.G. Date
Principal Geologist
California Professional Geologist No. 7368

* All information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by a California Professional Geologist of Environmental Risk Assessors.

A professional geologist's certification of conditions comprises a declaration of his or her professional judgment. It does not constitute a warranty or guarantee, expressed or implied, nor does it relieve any other party of its responsibility to abide by contract documents, applicable codes, standards, regulations, and ordinances.

1. INTRODUCTION

Environmental Risk Assessors (ERA) has prepared this *Soil and Groundwater Investigation Work Plan* (the "Work Plan") on behalf of Equity Enterprises for the property located at 927 Main Street in Pleasanton, Alameda County, California (the "Site"; Figure 1). This Work Plan was prepared in accordance with a request from Alameda County Health Care Services Agency, Department of Environmental Health (ACDEH) as noted in the letter dated February 14, 2017 (see Appendix A).

Background information in this Work Plan is based on information presented in Basics Environmental's (Basics Environmental) Phase I Environmental Site Assessment (Phase I ESA) report (Basics Environmental, 2013) and ERA's site investigation reports (ERA, 2015 and ERA, 2016). This Work Plan is focused on investigating petroleum hydrocarbons-impacted soil and groundwater. The Site has been listed as a case with the ACDEH and the California Environmental Protection Agency (Cal-EPA), State Water Resources Control Board (SWRCB). The following identification numbers have been assigned to the Site:

- ACDEH Fuel Leak Case No. RO0003199; and
- GeoTracker Global ID No. T10000008158.

1.1 Objective and Purpose

The ultimate objective for the Site is to obtain regulatory case closure. The purpose of the proposed work, as described in this Work Plan, is summarized as follows:

- Assess the source(s) of the petroleum hydrocarbons detected in soil and groundwater beneath the Site;
- Assess the lateral and vertical extent of petroleum hydrocarbons in soil;
- Assess the lateral extent of petroleum hydrocarbons in groundwater; and
- Evaluate site conditions with respect to SWRCB's *Low-Threat Underground Storage Tank Case Closure Policy* (LTCP) (SWRCB 2012).

1.2 Site Description

The Site is addressed 927 Main Street in Pleasanton, Alameda County, California, and consists of one approximately 8,115-square-foot parcel (see Figure 2). The Site is currently developed with one commercial building occupied by two tenants. Site-specific information is presented in Table 1.

Table 1. General Site Information

Project Name: Main Street Property	**Current Development:** One 2,340-square-foot building
Address: 927 Main Street, Pleasanton, Alameda County	**Assessor Parcel Number (APN):** 946-3370-22
Location: Western side of Main Street	**Occupants:** Subway sandwiches and Hanadi Sushi restaurant

2. BACKGROUND

2.1 Site History

The Alameda County Assessor's records indicated that a large parcel, identified as Alameda County APN 946-3370-7, was divided into five separate parcels in 1978. Two of these five parcels are currently identified as Alameda County APNs 946-3370-22 (927 Main Street; the Site) and 946-3370-19 (915 Main Street; the south and west adjoining property).

Historical information (including 1943 and 1953 Sanborn Fire Insurance Maps and 1951 aerial photograph) obtained by Basics Environmental during their Phase I ESA indicated that a portion of the Site was formerly occupied by a large rectangular building with an attached canopy on the building's southeastern corner prior to construction of the current on-site building. The former building was addressed 40 Santa Rita Road and was used as an auto repair facility from at least the late 1930s until the late 1960s. A gas and oil facility was present at the southeastern corner of the building from the late 1930s or early 1940s to the early 1950s. No specific information on former operations (i.e., capacity, type, and location of former underground storage tanks [USTs], pump island locations, auto maintenance areas, and use of hazardous materials, etc.) was obtained from the local regulatory agency files by Basics Environmental. In addition, no information regarding the removal of the USTs or associated sampling was contained within the local regulatory agency files reviewed by Basics Environmental. Anomalies indicative of USTs, backfilled tank excavations, etc. were not identified during a geophysical survey conducted in 2016 by CBRE, Inc. (CBRE, 2016) at the Site, the south and west adjoining property (915 Main Street), or the north adjoining property (929 Main Street) (CBRE, 2016).

A small rectangular building with an attached canopy was formerly located on the south adjacent property (915 Main Street), as shown in the 1951 aerial photograph and the 1953 Sanborn Fire Insurance Map. The building extended onto the southern portion of the Site. This building was addressed 40A Santa Rita Road and was used as a gas and oil facility.

The approximate footprints of the former large building (addressed 40 Santa Rita Road) and small building (addressed 40A Santa Rita Road) are shown on Figure 3 (see Appendix B) of ERA's *Soil and Groundwater Investigation Report* dated October 10, 2016 (ERA, 2016).

2.2 Previous Investigations

ERA conducted subsurface investigations at the Site in 2015 and 2016. The objective of the investigations was to evaluate current subsurface conditions in select on-site areas. To meet this objective, soil gas, soil, and/or groundwater samples were collected from five sampling locations, designated SB-1 through SB-5 on Figure 3, for analysis. As shown in Table 2, the analytical results for the samples collected during the investigations were compared to the Tier 1 Environmental Screening Levels (ESLs) as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, 2016). Figures from ERA's 2015 (ERA, 2015) and 2016 (ERA, 2016) site investigation reports are presented in Appendix B.

2.2.1 Soil Gas

One soil gas sample has been collected from the Site to date. This sample was collected in 2016 from boring SB-3 which was advanced just south of the on-site building to evaluate the potential presence of volatile organic compounds (VOCs), in particular naphthalene because this compound was reported in the groundwater sample collected from boring SB-2 in 2015. Analysis of the soil gas sample revealed naphthalene at 11 micrograms per cubic meter ($\mu g/m^3$), which is

below the Tier 1 ESL of 41 µg/m^3. Methane was also reported in this sample at 0.0009 percent (%), which is below the lower explosive limit of 5%.

2.2.2 Soil

Soil samples were collected from the five borings at the following depths:

- The surface to 5- to 5.5-foot below ground surface (bgs) depth interval from each boring;
- The 5-foot to 10-foot depth interval from borings SB-3 through SB-5; and
- Deeper depth intervals (32 to 36 feet bgs) from borings SB-3 and SB-5.

These samples were analyzed for total petroleum hydrocarbons (TPH) quantified as gasoline (TPHg); TPH quantified as diesel (TPHd); TPH quantified as Stoddard solvent (TPHss); VOCs including benzene, methyl tert-butyl ether (MTBE), and naphthalene, and/or Leaking Underground Fuel Tank (LUFT) Manual 5 metals (cadmium, chromium, lead, nickel, and zinc). Petroleum hydrocarbons and VOCs were not reported in soil samples at concentrations at or above their respective laboratory reporting limit except as follows:

- TPHd in sample SB-2-2 at a concentration of 16 milligrams per kilogram (mg/kg) which is below the Tier 1 ESL of 240 mg/kg;
- TPHg in sample SB-3-32 at a concentration of 0.990 mg/kg which is below the Tier 1 ESL of 100 mg/kg; and
- Naphthalene in sample SB-5-36 at a concentration of 0.026 mg/kg which is slightly above the Tier 1 ESL of 0.023 mg/kg.

Soil samples SB-3-32 and SB-5-36 were collected from intervals exhibiting petroleum hydrocarbon staining (between 31 and 33 feet bgs in boring SB-3 and between 34 and 39 feet bgs in boring SB-5) and near the water table (soil was moist at a depth of 34 feet bgs and wet at a depth of 38 feet bgs in boring SB-3 and soil was moist at a depth of 29 feet bgs and wet at a depth of 37 feet bgs in boring SB-5). The petroleum hydrocarbons reported in these deeper soil samples (32 to 36 feet bgs) are likely related to migration of petroleum hydrocarbons in groundwater because shallow soil in these borings were not stained and the sample depths were at or just above the water table.

The concentrations of metals reported were below their respective Tier 1 ESLs and/or regional background levels.

2.2.3 Groundwater

Groundwater samples collected from each boring were submitted for analyses as follows: TPHg; TPHd; TPHss; VOCs including benzene, MTBE, and naphthalene; and/or LUFT 5 metals.

Petroleum hydrocarbons and constituents were reported in the groundwater samples as follows:

- TPHg in samples SB-2-W (at a concentration of 1,400 micrograms per liter [µg/L]) and SB-5-W (at 230 µg/L) which are above the Tier 1 ESL of 100 µg/L; TPHg was not reported in samples SB-1-W, SB-3-W, or SB-4-W at concentrations at or above the laboratory reporting limit of 50 µg/L;
- TPHd in samples SB-1-W (at 120 µg/L) and SB-2-W (at 1,000 µg/L) which are above the Tier 1 ESL of 100 µg/L; TPHd was not reported in samples SB-3-W, SB-4-W, or SB-5-W at concentrations at or above the laboratory reporting limit of 50 µg/L;

- TPHss in samples SB-2-W (at 1,400 µg/L) and SB-5-W (at 940 µg/L) which are above the Tier 1 ESL of 100 µg/L; TPHss was not reported in samples SB-1-W, SB-3-W, or SB-4-W at concentrations at or above the laboratory reporting limit of 50 µg/L; and
- Naphthalene in samples SB-2-W (at 5.3 µg/L) and SB-5-W (at 19 µg/L) which are above the Tier 1 ESL of 0.12 µg/L; naphthalene was not reported at concentrations at or above the laboratory reporting limit of 0.5 µg/L for SB-1-W and 1 µg/L for SB-3-W and SB-4-W.

Various VOCs, including ethylbenzene and toluene, were detected in groundwater samples SB-2-W, SB-3-W, and SB-5-W. The concentrations of VOCs were below their respective Tier 1 ESL (see Table 2) with the exception of total xylenes reported in groundwater sample SB-5-W at a concentration of 40 µg/L, which is above its ESL of 20 µg/L. Analysis of the groundwater samples collected from borings SB-1 and SB-2 for metals revealed chromium in sample SB-1-W at a concentration of 0.63 µg/L and nickel in samples SB-1-W and SB-2-W at concentrations of 1.8 µg/L and 4.8 µg/L, respectively.

3. PRELIMINARY CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) documents the physical setting, chemicals of potential concern (COPCs), COPC sources, COPC distribution in soil gas, soil, and/or groundwater (including plume stability), potential migration pathways, and potential receptors/exposure pathways. Data collected during the investigations conducted to date, which indicate a release of petroleum hydrocarbons has impacted the Site, have been used to develop a site-specific preliminary CSM. The purpose of the preliminary CSM is to help identify data gaps and to aid in the evaluation of the data collected to date from the Site.

The site-specific preliminary CSM is presented in ERA's soil and groundwater investigation report (ERA, 2016). Portions of the preliminary CSM are presented below to address ACDEH's comments as noted in the letter dated February 14, 2017 (ACDEH, 2017).

3.1 Site-Specific Geology and Hydrogeology

During ERA's subsurface investigations at the Site in 2015 (ERA, 2015) and 2016 (ERA, 2016), silt and silty clay were encountered from below the asphalt/baserock in boring SB-1 (located north of the on-site building) to the maximum depth explored of 40 feet bgs, and from below the topsoil in boring SB-5 (located east of the on-site building) to the maximum depth explored of 39 feet bgs.

Coarse-grained sediments were encountered in borings SB-2, SB-3, and SB-4, located south of the on-site building. In boring SB-2, sandy gravel was encountered from a depth of approximately 10 to 20 feet bgs; silt with gravel was present above this sandy gravel and silty clay was present from 20 feet bgs to the maximum depth explored of 36 feet bgs. Sandy gravel was encountered in borings SB-3 and SB-4 from below the asphalt/baserock to depths of approximately 14 feet bgs and 8 feet bgs, respectively; silty clay was generally present below the sandy gravel.

The upper 20 feet of soil in boring SB-2 was identified as fill material during the 2015 investigation (ERA, 2015) based on the differences in soil types between borings SB-1 and SB-2 and heterogeneity of the silt with gravel and sandy gravel in boring SB-2. Silt was present beneath asphalt in both borings; however, the sandy gravel encountered in boring SB-2 was not encountered in boring SB-1. The heterogeneity of the sandy gravel, lack of coarse-grained sediments in boring SB-1, and limited site-specific data on geologic material (only borings SB-1 and SB-2 had been advanced at that time) led to the conclusion that near-surface sediments in boring SB-2 were fill material. Data collected from subsequent borings (SB-3, -4, and -5) advanced by

ERA resulted in the conclusion that the near-surface soil, including the coarse-grained sediments, in borings SB-2 and SB-3 was not fill material.

In addition, no anomalies indicative of backfilled excavations were identified during the geophysical survey conducted by CBRE in 2016 at the Site, the adjoining property (915 Main Street) to the south and west, or the adjoining property (929 Main Street) to the north (CBRE, 2016).

Similar sediments were encountered in borings advanced on the former Unocal property located to the east of the Site across Main Street. Soils encountered in borehole MW-3, located approximately 115 feet east of the Site's eastern border, reportedly consisted of sandy silt and silt from below the asphalt to a depth of approximately 15 feet bgs; sandy gravel from approximately 15 to 17 feet bgs; silt, clayey silt, and sandy silt between approximately 17 to 49 feet bgs; and silty sand between approximately 49 to 50 feet bgs. Soil with coarse-grained sediments, including silt with gravel, silty sand, sandy silt, sandy gravel, and sand with gravel, were encountered in boreholes MW-1 (below the asphalt to approximately 30 feet bgs), MW-2 (approximately 47 to 50 feet bgs), and MW-4 (below the asphalt to 50 feet bgs). Copies of boring logs from Unocal's case closure summary dated September 12, 1997, are presented in Appendix C.

ERA concludes that native soil rather than fill material is present in borings SB-2 and SB-3 based on the available data, including observations of soil types in borings SB-3, -4, and -5, the results of CBRE's geophysical survey, and review of borings logs for boreholes advanced on the Unocal property. These sediments are possibly stream-laid deposits by the ancestral Arroyo Del Valle, located approximately 325 feet south of the Site. Stream-laid deposits can present a heterogeneous appearance which can appear to be fill material in the absence of sufficient data.

3.2 Nearby Wells

A water well survey was conducted by ETIC Engineering, Inc. (ETIC) in 2010 for the former Mobil-branded gasoline service station located to the northeast of the Site across Main Street at 1024 Main Street. To update the data collected by ETIC (ETIC, 2010), ERA contacted the California Department of Water Resources (DWR) and Zone 7 Water Agency (Zone 7) for water-supply wells within an approximately 2,000-foot radius of the Site. Alameda County Public Works Agency (ACPWA) was also contacted by ERA for information on water-supply wells in site vicinity as directed in ACDEH's letter dated February 14, 2017. According to Mr. James Yoo of the ACPWA, information on water-supply wells for the site vicinity is maintained by Zone 7.

The approximate locations of the wells identified within the search radius are shown in Figure 4. Table 3 presents the data provided to ERA by DWR and Zone 7 and obtained from ETIC's report (ETIC, 2010). Information provided by DWR and Zone 7 is included in Appendix D.

One well, identified as 3S-1E-16-N80 by DWR, would be within the same section as the Site (3S-1E-16-N); however, the exact location of this well could not be established by DWR based on the data presented in the log. In addition, the use and current status of this well was not available. The log provided by DWR did not list a drilling date but indicates that this well was included in the Spring Valley Water Company 1912 report. The well was reportedly drilled to depth of 178 feet bgs. A map provided by Zone 7 presented symbols indicating various types of water wells (water-supply, monitoring, etc.) within the search area. An open red diamond symbol was on the north adjoining property which indicates that a destroyed water well was present at that location, according to Mr. Wyman Hong of Zone 7. Mr. Bradley Hirst and Mr. Darrick Sun had no information on a water well having been located on the property adjacent to the north of their parcels. No records were found during the Phase I ESA by Basics Environmental regarding the presence of a water-supply well on

the Site or the adjoining parcels, no further information on well 3S-1E-16-N80 was available from the DWR or Zone, and no anomalies indicative of a water well were identified during a geophysical survey conducted in 2016 by CBRE at the Site, the adjoining property (915 Main Street) to the south and west, or the adjoining property (929 Main Street) to the north.

As noted in Table 3, seven wells identified within the search area are reported as active:

- two privately owned water-supply wells located approximately 410 feet south of the Site in an upgradient direction (identified as C1 and C3 on Figure 4);
- two privately owned water-supply wells located approximately 1,450 feet east of the Site in a crossgradient direction (identified as B2 and B3 on Figure 4); and
- three municipal water-supply wells are located approximately 2,150 feet north of the Site in a downgradient direction (identified as L1, L5, and L7 on Figure 4).

One water-supply well (identified as C4 in Table 3) located approximately 410 feet south of the Site in a upgradient direction and one municipal water-supply well (identified as L2 in Table 3) located approximately 2,150 feet north of the Site in a downgradient direction are not reported as active.

The logs for seven wells provided by DWR and Zone 7 did not include the exact locations, owners, use, and status of the wells. However, these wells were identified as being within the search area based on the township, range, section, subsection information. These wells are identified as 3S-1E-16-L80, 3S-1E-16-L81, 3S-1E-16-L82, 3S-1E-16-L, 3S-1E-16-M80, 3S-1E-16-M81, and 3S-1E-17-J1 in Table 3 and would be at least 1,000 feet north to northwest of the Site based on the distance of the Site to the borders of the subsections L, M, and J.

Nine wells were reported by DWR and/or Zone 7 as destroyed. These wells are identified as 3S-1E-16-P1, 3S-1E-16-P2, 3S-1E-17-J2, 3S-1E-16-M2, 3S-1E-16-M3, 3S-1E-16-M1, 3S-1E-16-Q1, 3S-1E-16-L11, and 3S-1E-16-L10 in Table 3.

Based on the available information, the nearest active well is more than 400 feet south and upgradient of the Site with respect to the site location and inferred local groundwater flow direction. The nearest active or possibly active well located in a downgradient direction was more than 1,000 feet north to northwest from the Site.

3.3 Potential Sources: On-site, Off-site

As noted above in Section 2.1, a former on-site building was used as an auto repair facility from at least the late 1930s until the late 1960s with a gas and oil facility present from the late 1930s or early 1940s to the early 1950s. A small rectangular building, used as a gas and oil facility, extended onto the Site's southern portion from the south adjacent property in the 1950s. The primary sources of petroleum hydrocarbons would likely be fuel tanks or other storage containers associated with gas and oil facilities. As previously indicated, the buildings occupied by gas and oil facilities were removed before construction of the existing building on the Site and the adjoining property to the south and west. No documentation on the USTs removal was obtained by Basics Environmental.

Secondary sources at the Site would be residual mass of petroleum hydrocarbons in soil and groundwater beneath the Site. To date, nine soil samples from five borings have been collected and analyzed for petroleum hydrocarbons. TPHd was reported in one shallow sample (SB-2-2) and TPHg was reported in one deep sample (SB-3-32). Petroleum hydrocarbons staining was not observed in borings SB-1 and SB-4 or in soil above a depth of 30 feet in borings SB-2, SB-3, and SB-5. No significant secondary or residual sources of petroleum hydrocarbons in soil have been

identified on site, based on the data obtained to date, including: 1) lack of petroleum hydrocarbons detections in soil above a depth of 30 feet except for TPHd in one sample, and 2) lack of petroleum hydrocarbons staining in soil above a depth of 30 feet. Based on the available data, the residual mass of petroleum hydrocarbons in groundwater appears localized to the southeastern corner of the on-site building.

4. POTENTIAL DATA GAPS

Based on a review of available data and the preliminary CSM prepared for the Site, the potential data gaps identified include the following:

- Secondary/residual sources in soil beneath the Site have not been adequately defined to evaluate potential direct contact and outdoor air exposure. Collection and analysis of additional soil samples from the Site is proposed to address this data gap.
- Secondary/residual sources and the extent of the petroleum hydrocarbons in groundwater beneath the Site have not been defined adequately. Collection and analysis of additional groundwater samples from the Site is proposed to address this data gap.
- The potential for vapor intrusion to indoor air from residual subsurface sources has not been adequately assessed in the area of the gasoline plume. As noted in Section 2.2.3, naphthalene was reported in the groundwater and soil gas samples from boring SB-2 at concentrations of 5.3 µg/L and 11 $\mu g/m^3$, respectively. Analysis of the groundwater sample from boring SB-5 revealed naphthalene at a concentration of 19 µg/L. Although naphthalene is present in the soil gas and groundwater beneath the Site, the potential for a vapor intrusion concern is low based on the thickness (from 26 feet to 40 feet) of fine-grained sediments in the area of the on-site building. However, lack of soil gas data from the area of boring SB-5 has been identified as a data gap since the concentration of naphthalene in groundwater at boring SB-5 was approximately 4 times more than at boring SB-2. Collection and analysis of a soil gas sample from the area of boring SB-5 is proposed to address this data gap.

5. PROPOSED SUPPLEMENTAL SITE INVESTIGATION ACTIVITIES

To further evaluate the current subsurface conditions and address data gaps noted in Section 4, ERA will perform further investigations at the Site. The scope of work was designed in general accordance with the SWRCB's *Leaking Underground Fuel Tank Guidance Manual* (LUFT Manual) dated September 2012 and revised December 2015 (SWRCB, 2015).

At this time, borings are proposed at the locations shown on Figure 3; sample collection, rationale, and analysis are presented in Table 4.

ACDEH noted a discrepancy in gasoline concentrations in groundwater samples collected from these borings (1,400 µg/L in SB-2) and (<50 µg/L in SB-3). ACDEH suggested advancing a boring in this area to collect another groundwater sample for analysis to help address this discrepancy. In ERA's opinion, this discrepancy may be related to various factors. For example, changes in TPHg concentrations were documented in groundwater monitoring well MW-4 formerly located approximately 100 feet east of the Site across Main Street on the former Unocal property. TPHg was not reported in groundwater samples collected from this well between 1993 and 1997 except one time (August 1995) when TPHg was reported at a concentration of 63 µg/L. The changes in TPHg concentrations in this well may have been related to seasonal variations (TPHg was not reported in groundwater samples collected in January 1995 or February 1996) and/or changes in

groundwater levels (a 5-foot fluctuation in depth to groundwater was documented in well MW-4 between November 1995 and February 1997). Based on the available information, the changes in TPHg concentrations in on-site borings SB-2 and SB-3 could be related to the following:

- Seasonal variations; SB-2 was sampled in November 2015 (4Q15) and SB-3 was sampled in August 2016 (3Q16);
- Changes in groundwater levels; the soil at 34 feet bgs in boring SB-2 was noted as “moist” while soil at 38 feet bgs in boring SB-3 was “wet”;
- Petroleum hydrocarbon staining noted in these borings; moist soil present in boring SB-2 corresponded to the depth interval where petroleum hydrocarbon staining was observed (from approximately 30 to 34 feet bgs) while unsaturated soil present in boring SB-3 corresponded to the depth intervals where petroleum hydrocarbon staining was observed (from approximately 31 to 33 feet bgs and 34 to 36 feet bgs); and
- Nature of the sample collection method (grab samples) with higher levels of sediments.

Based on the above-noted information, the discrepancy in petroleum hydrocarbons concentrations in borings SB-2 and SB-3 may be due to collecting the groundwater sample from boring SB-2 when groundwater was in contact with stained soil and the groundwater sample from boring SB-3 when groundwater was not in contact with stained soil. ERA proposes advancing a boring (designated boring SB-2A on Figure 3) in the area of borings SB-2 and SB-3 to collect a groundwater sample for analysis to obtain data that will help further evaluate this discrepancy.

Additionally, ACDEH suggested advancing a boring to the east of boring SB-5 to define the east extent of the TPHg plume. Boring SB-5 was advanced in a narrow landscaping area adjacent to the east exterior wall of the on-site building. Immediately east of this landscaping area is an approximately 5-foot wide concrete sidewalk with Main Street located east of the sidewalk. The groundwater plume is unlikely to extend a significant distance east of boring SB-5 based on the low concentrations reported in the groundwater sample from this boring and lack of petroleum hydrocarbons in groundwater samples collected between August 1995 and February 1997 from groundwater monitoring well MW-4 (formerly located approximately 100 feet east of the Site across Main Street on the former Unocal property) except TPHg which was reported at a concentration of 63 µg/L in August 1995. Well MW-4 was destroyed after Unocal received case closure in late 1997. Eastward migration of the petroleum hydrocarbons plume from the Site would likely have impacted well MW-4 based on the timeframe when the gas and oil facilities were located on the west side of Main Street (prior to 1980) and monitoring events that included well MW-4 (early to mid-1990s). In lieu of advancing a boring within Main Street, ERA proposes to advance boring SB-6 near the northeastern corner of the on-site building to help define the east-northeast extent of the plume.

The proposed scope of work is presented below.

5.1 Pre-Field Activities

Before field activities associated with the proposed assessment are conducted, the pre-field tasks described below will be completed.

5.1.1 Health and Safety

ERA will prepare a site-specific *Health and Safety Plan* for the scope of work as required by the Occupational Health and Safety Administration (OSHA) Standard "Hazardous Waste Operations

and Emergency Response" guidelines (29 CFR 1910.120). The document will be reviewed and signed by ERA personnel and contractors performing work at the Site.

5.1.2 Permitting

ERA will obtain an encroachment permit from the City of Pleasanton, if necessary, to advance boring SB-5A for collecting a soil gas sample.

ERA will obtain a soil boring permit from Zone 7 before commencing intrusive field activities. ERA will coordinate field activities with Zone 7 and schedule a Zone 7 inspector to document compliance with permit requirements.

5.2 Field Activities

5.2.1 Utility Clearance

Before subsurface work is conducted at the Site, the proposed sampling locations will be cleared for underground utilities by notifying Underground Services Alert North (USA North) at least 48 hours prior to intrusive field activities. In addition, a private utility locating contractor will clear each proposed sampling location before the start of intrusive field activities. Proposed sampling locations will be adjusted, as necessary, to maintain a distance of at least 3 feet from identified underground utilities/structures.

5.2.2 Drilling and Sampling

ERA personnel will oversee a California licensed driller using a Geoprobe direct-push drilling rig during soil gas, soil, and groundwater sampling activities. The borings will be advanced to the proposed maximum depth (5 feet bgs for soil gas sampling and 40 feet bgs for soil and groundwater sampling), boring refusal, or groundwater, whichever is shallower. The proposed location, matrix, sample depth, and rationale for each sample are presented in Table 4.

The indoor air and ambient air samples will be collected in Summa canisters placed inside the building and in the area near the southeastern corner of the on-site building, respectively, over an 8-hour period. The valve of the Summa canisters will be located at a height of approximately 3 to 4 feet above the floor or ground surface to collect air samples from within the breathing zone.

The soil gas sample will be collected in general accordance with the protocols presented in the *Advisory Active Soil Gas Investigations* prepared by the Cal-EPA DTSC, LARWQCB, and RWQCB-SFB (DTSC, LARWQCB, and SFBRWQCB, 2015).

The soil gas sample will be collected from a temporary soil gas probe advanced to a depth of approximately 5 feet bgs. The soil gas probe will be placed outside the building footprint rather than inside the building because of access constraints. Concrete sidewalks and pavements extend from the perimeter of the buildings to the soil gas sampling location. Samples will be collected approximately 2 hours following installation of the soil gas probe. The soil gas well installation method and equilibration time will be recorded in the field log book.

Prior to purging or soil gas sampling, a shut-in test will be conducted to check for leaks in the above-ground sampling system. A leak test will be used to evaluate whether ambient air is introduced into the soil gas sample during the collection process. Helium, a gaseous tracer compound, will be used along with a shroud placed over the sampling equipment. The tracer gas that will be used during this project is 1,1-difluoroethane (1,1-DFA), which is the propellant found in duster spray. The leak test consists of sealing a cloth soaked in 1,1-DFA in a plastic bag,

placing the bag adjacent to the sampling train, and opening the bag after the valve on the Summa canister is opened to allow collection of the soil gas sample into the canister.

An ambient air leak of up to 5 percent will be deemed acceptable. Purging of three purge volumes will be performed to remove stagnant air from the sampling system so that representative samples can be collected from the subsurface. Flow rates between 100 to 200 milliliters per minute (mL/min) and vacuums less than 100 inches of water will be maintained during purging and sampling to minimize stripping (partitioning of vapors from pore water to soil gas), to prevent ambient air from diluting the soil gas samples, and to reduce variability between contractors.

The indoor air, ambient, and soil gas samples will be collected in evacuated 1-liter stainless steel Summa canisters equipped with regulators to control sample collection flow rate. Beginning and ending vacuum readings will be recorded for each canister.

A direct-push unit will be used to drive a steel probe equipped with a hardened, reverse-threaded steel driving point into the subsurface to allow collection of soil and groundwater samples.

Soil samples will be screened in the field at approximately 5-foot depth intervals with a photoionization detector (PID) and observed for evidence of chemical staining. As noted in Table 4, soil samples will be collected from borings SB-6 through SB-10 in new acetate sleeves at depths of approximately 2.0 to 2.5 feet and 7.0 to 7.5 feet and at depths where soil samples exhibited elevated PID readings and/or evidence of chemical staining. The acetate sleeves will be cut at the above noted depths to obtain samples for submittal to the analytical laboratory.

New polyvinyl chloride (PVC) casing (with slotted casing in the lower 10 feet and blank casing from above the slotted casing to the ground surface) will be placed in the boreholes and groundwater will be allowed to flow into the casing. ERA assumes that a sufficient quantity of groundwater will be collected in the PVC casing to fill the laboratory-provided containers appropriate for the requested analysis. Groundwater samples will be collected using a peristaltic pump. After the groundwater sampling activities are completed, the PVC casing will be removed and the boring will be backfilled in accordance with Zone 7 requirements. ERA anticipates that the groundwater sampling activities will be completed by the end of each field day and that the boreholes will not remain open overnight.

The soil and groundwater samples will be placed on ice and transported under chain-of-custody protocols to the project laboratory.

After the sampling activities are complete, each boring will be backfilled with cement grout and bentonite and sealed at grade with asphalt or soil, as appropriate. The investigation-derived waste (IDW), including soil cuttings and rinsate, produced during sampling activities will be containerized using appropriate containers, and disposal options will be evaluated after review of analytical data.

5.3 Analysis

The samples will be analyzed on a normal 5-business-day laboratory response time by a laboratory certified by the State of California to perform the requested analyses.

The indoor air, ambient, and soil gas samples will be analyzed for VOCs, including naphthalene, 1,2-dichloroethane (EDC [or 1,2-DCA]), and 1,2-dibromoethane (EDB), using U.S. Environmental

Protection Agency (U.S. EPA) Method TO-15. The ambient air sample will be collected for comparison to VOC concentrations, if any, reported in the indoor air sample.

The soil and groundwater samples will be analyzed for the following analytes:

- VOCs, including TPHg, benzene, toluene, ethylbenzene, xylenes (collectively BTEX), methyl tert-butyl ether (MTBE), tert-Butyl Alcohol (TBA), EDC (1,2-DCA), EDB, and naphthalene using U.S. EPA Method 8260B; and
- TPHd and TPHmo using U.S. EPA Method 8015B.

ACDEH noted that soil samples should be analyzed for VOCs using U.S. EPA Method 8260 with the full list of compounds reported by the laboratory. ERA notes that soil sample SB-2-2 was collected on November 13, 2015 and analyzed by U.S. EPA Method 8260 with the full list of compounds reported; VOCs were not reported at concentrations at or above their respective laboratory reporting limit. Soil sample SB-3-10 was collected on August 5, 2016 from boring SB-3 (located within approximately 3 feet of boring SB-2) and analyzed by U.S. EPA Method 8260 with a limited list of compounds reported (BTEX, MTBE, and naphthalene); VOCs were not reported at concentrations at or above their respective laboratory reporting limit. ERA proposes to analyze soil samples collected from the Site for the limited list of VOCs based on the following: 1) VOCs have not been reported at concentrations at or above their respective laboratory reporting limits in the seven shallow soil samples collected from a depth of less than 10 feet; 2) two samples (SB-1-5.5 and SB-2-2) of the seven shallow soil samples collected from the Site were analyzed by U.S. EPA Method 8260 with the full list of compounds reported and VOCs were not reported at concentrations at or above their respective laboratory reporting limit; and 3) compounds listed in Table 1 of the SWRCB's LTCP for evaluation of Direct Contact and Outdoor Air Criteria are limited to benzene, ethylbenzene, naphthalene, and poly-aromatic hydrocarbons (PAH; sampling and analysis for PAH is only necessary where soil has been affected by either waste oil or Bunker C fuel).

TPH analysis will be used as a site characterization tool to help establish the extent of petroleum hydrocarbons in the subsurface. The lead scavengers 1,2-DCA and EDB have been included in the analytical suite because the on-site gasoline service station operated before 1992. Although the on-site gasoline service operated before addition of MTBE and TBA to gasoline, these fuel oxygenates will be analyzed for to help establish if a "newer" release could have migrated onto the Site from an off-site source.

5.4 Report

The report of findings will present a summary of the previous investigations, as appropriate, and regulatory status, the procedures and results for this investigation, figures showing sampling locations, and tables presenting analytical results compared to published screening levels. Copies of the analytical laboratory report will be included in an appendix.

The report will be uploaded to ACDEH and SWRCB's GeoTracker websites. In addition, as required by the drilling permit, a copy of the report will be submitted to Zone 7 within 60 days of permit approval.

6. SCHEDULE

Work for the site investigation will begin immediately upon receipt of ACDEH's approval of the Work Plan. The report will be issued within 6 to 7 weeks from receipt of written authorization based

on the assumption that Zone 7 approves the drilling permit application and schedules and inspector within 10 business days and the driller has availability within the requested time frame.

7. LIMITATIONS

The opinions and recommendations presented in this workplan are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by ERA and the party for whom this workplan was originally prepared. This workplan is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, express or implied, is intended or given. To the extent that ERA relied upon any information prepared by other parties not under contract to ERA, ERA makes no representation as to the accuracy or completeness of such information.

This workplan is expressly for the sole and exclusive use of the parties for which this workplan was originally prepared for a particular purpose. Only the parties for which this workplan was originally prepared and/or other specifically named parties, may make use of and rely upon the information in this workplan. Reuse of this SSI Workplan or any portion thereof for other than its intended purpose, or if modified, or if used by third parties without proper authorization, shall be at the user's sole risk.

The results of any investigations or testing and any findings presented in this workplan apply solely to conditions existing at the time when the assessment was performed. It must be recognized, however, that any such investigation or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. ERA's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100 percent confidence in environmental investigation conclusions cannot reasonably be achieved.

ERA, therefore, does not provide any guarantees, certifications, or warranties regarding any conclusions regarding environmental contamination of any such property. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.

8. REFERENCES

Alameda County Health Care Services Agency, Department of Environmental Health (ACDEH). 2017. *Work Plan Request for Fuel Leak Case No. RO0003199 and GeoTracker Global ID T10000008158, Main Street Property, 927 Main Street, Pleasanton, CA 94566*. February 14.

Basics Environmental, Inc. 2013. *Phase I Environmental Site Assessment, 927 Main Street, Pleasanton, California.* December 5.

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), Los Angeles Regional Water Quality Control Board (LARWQCB), San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). 2015. *Advisory Active Soil Gas Investigations*. July.

California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). 2016. *Environmental Screening Levels, Tier 1 ESLs.* February.

California Environmental Protection Agency, State Water Resources Control Board (SWRCB). 2012. *Low-Threat Underground Storage Tank Case Closure Policy*.

--------. 2015. *Leaking Underground Fuel Tank Guidance Manual.* September. Rev. December.

CBRE, Inc. 2016. *Geophysical Survey, 915 Main Street, Pleasanton, California.* March 30.

Environmental Risk Assessors. 2015. *Limited Phase II Environmental Site Assessment Report, Main Street Property, 927 Main Street, Pleasanton, California 94566.* November 27.

--------. 2016. *Soil and Groundwater Investigation, Main Street Property, 927 Main Street, Pleasanton, California 94566.* October 10.

ETIC Engineering, Inc. (ETIC). 2010. *Detailed Well Survey Report, Former Mobil Station 04H6J, 1024 Main Street, Pleasanton, California.* January 29.

Tables

Table 2
Soil and Groundwater Samples Organics Analytical Summary
Main Street Property
927 Main Street
Pleasanton, California

On-Site Location/ Comments	Sample ID	Sample Date	Sample Depth (feet bgs)[1]	Matrix	Petroleum Hydrocarbons[2] Soil: mg/kg; Groundwater: µg/L			VOCs[3] Soil: mg/kg; Groundwater: µg/L					
Analytes					**TPHg[3]**	**TPHd[3]**	**TPHss[3]**	**Benzene**	**MTBE**	**Naphthalene**	**Toluene**	**Ethylbenzene**	**Xylenes**
ESL for Shallow Soil					100	240	100	0.044	0.023	0.023	2.9	1.4	2.3
North of Former Gas Station Building	SB-1-5.5	11/13/2015	5.0 - 5.5	Soil	<1	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
South of Former Gas Station Building	SB-2-2	11/13/2015	1.5 - 2.0	Soil	<1	**16**	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
South of Former Gas Station Building	SB-3-10	8/5/2016	9.5 - 10.0	Soil	<0.5	<10	<10	<0.005	<0.020	<0.005	<0.005	<0.005	<0.005
South of Former Gas Station Building	SB-3-32	8/5/2016	31.5 - 32.0	Soil	**0.99**	<10	<10	<0.005	<0.020	<0.005	<0.005	**0.022**	**0.137**
Area of Former Southern Canopy	SB-4-3	7/22/2016	2.5 - 3.0	Soil	<0.5	<10	<10	<0.005	NA	<0.005	<0.005	<0.005	<0.005
Area of Former Southern Canopy	SB-4-7.5	7/22/2016	7.0 - 7.5	Soil	<0.5	<10	<10	<0.005	NA	<0.005	<0.005	<0.005	<0.005
Area of Former Northern Canopy	SB-5-4.5	8/5/2016	4.0 - 4.5	Soil	<0.5	<10	<10	<0.005	<0.020	<0.005	<0.005	<0.005	<0.005
Area of Former Northern Canopy	SB-5-8	8/5/2016	7.5 - 8.0	Soil	<0.5	<10	<10	<0.005	<0.020	<0.005	<0.005	<0.005	<0.005
Area of Former Northern Canopy	SB-5-36	8/5/2016	35.5 - 36.0	Soil	<0.5	<10	<10	<0.005	<0.020	**0.026**	<0.005	<0.005	**0.022**
ESL for Groundwater					100	100	100	1	5	0.12	40	13	20
North of Former Gas Station Building	SB-1-W	11/13/2015	NA	Ground-water	<50	**120**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
South of Former Gas Station Building	SB-2-W	11/13/2015	NA	Ground-water	**1,400**	**1,000**	**1,400**	<0.5	<0.5	**5.3**	<0.5	**6.1**	**19**
South of Former Gas Station Building	SB-3-W	8/5/2016	NA	Ground-water	<50	<50	<50	<0.5	<1	<1	**0.57**	**1.7**	**6.6**
Area of Former Southern Canopy	SB-4-W	7/22/2016	NA	Ground-water	<50	<50	<50	<0.5	NA	<1	<0.5	<0.5	<0.5
Area of Former Northern Canopy	SB-5-W	8/5/2016	NA	Ground-water	**230**	<50	**940**	<0.5	<1	**19**	<0.5	**2.8**	**40**

Notes:

Units: Soil: mg/kg = milligrams per kilogram, Groundwater: µg/L = micrograms per liter

1. bgs = below ground surface

2. TPHg, TPHd, TPHss = Total petroleum hydrocarbons (TPH) quantified as gasoline, quantified as diesel, and TPH quantified as Stoddard solvent were analyzed using U.S. EPA Method 8015B/C.

3. Volatile organic compounds (VOCs) were analyzed using U.S. EPA Method 8260B.

ESL = Environmental Screening Levels as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Tier 1 ESLs, February 2016.

SFBRWQCB Tier 1 Environmental Screening Levels (SFBRWQCB, 2016) Note 2 states: TPH motor oil is not soluble. TPH motor oil detections in water most likely are petroleum degradates or less likely NAPL. If the detections are degradates, add TPH motor oil and TPH diesel results and compare to TPH diesel criterion. The noted ESL was established for TPH-d.

MTBE = Methyl tert-butyl ether

NE = Not established

<1 = Not detected at stated concentration

Bold = Compound detected

Bold = Compound detected above ESL

Table 3. Well Survey Results
Main Street Property
927 Main Street
Pleasanton, California

Well ID No.	Address/Distance-Direction	Owner	Purpose	Status
3S-1E-16-N80	**NA[2]/ within same section as Site**	**NA**	**NA**	**NA**
3S-1E-21-C1	NA / 410 feet south	Private	Water-supply	Active
3S-1E-21-C3	NA / 410 feet south	Private	Water-supply	Active
3S-1E-16-B2	NA / 1,450 feet east	Private	Water-supply	Active
3S-1E-16-B3	NA / 1,450 feet east	Private	Water-supply	Active
3S-1E-16-L1	NA / 2,150 feet north	City of Pleasanton	Municipal water-supply	Active
3S-1E-16-L5	NA / 2,150 feet north	City of Pleasanton	Municipal water-supply	Active
3S-1E-16-L7	NA / 2,150 feet north	City of Pleasanton	Municipal water-supply	Active
3S-1E-21-C4	NA / 410 feet south	NA	Water-supply	NA
3S-1E-16-L2	NA / 2,150 feet north	City of Pleasanton	Municipal water-supply	NA
3S-1E-16-L80	NA[1]/ at least 1,000 feet north	NA	NA	NA
3S-1E-16-L81	NA[1]/ at least 1,000 feet north	NA	NA	NA
3S-1E-16-L82	NA[1]/ at least 1,000 feet north	NA	NA	NA
3S-1E-16-L	NA[1]/ at least 1,000 feet north	NA	NA	Test Well
3S-1E-16-M80	NA[2]/ at least 1,000 feet north	NA	NA	NA
3S-1E-16-M81	NA[2]/ at least 1,000 feet north	NA	NA	NA
3S-1E-17-J1	NA[1]/ at least 1,000 feet northwest	NA	NA	NA
3S-1E-16-P1	Versais Ave / 265 feet southeast	NA	Irrigation	Destroyed
3S-1E-16-P2	Versais Ave / 265 feet southeast	NA	Irrigation	Destroyed
3S-1E-17-J2	1155 Santa Rita Rd / 1,100 feet northeast	Amador High School	Water-supply	Destroyed
3S-1E-16-M2	NA / 1,400 feet north	NA	Water-supply	Destroyed
3S-1E-16-M3	NA / 1,400 feet north	NA	Water-supply	Destroyed
3S-1E-16-M1	NA / 1,600 feet north	NA	Water-supply	Destroyed
3S-1E-16-Q1	3963 Stanley Blvd / 1,690 feet east	Callahan	Water-supply	Destroyed
3S-1E-16-L11	NA / 1,875 feet north-northeast	NA	Water-supply	Destroyed
3S-1E-16-L10	NA / 1,925 feet north-northeast	NA	Water-supply	Destroyed

NA = Not Available

Groundwater monitoring and extraction wells installed during investigations and remedial actions at properties within the search area (2,000-foot radius of the Site) are not included in this table.

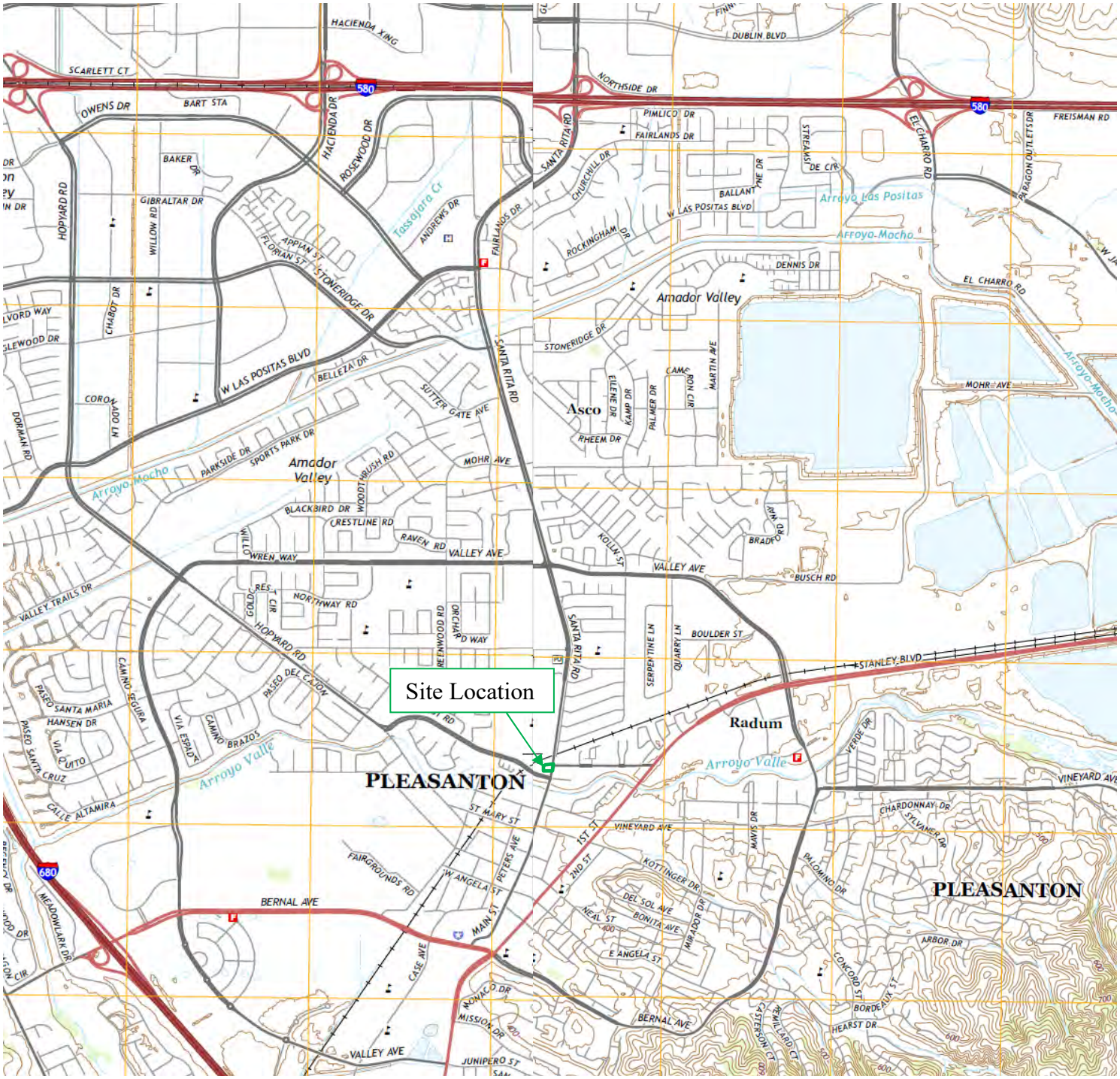
1. Information regarding well limited to total depth and geology.
2. Listed in 1912 Spring Valley Water Company report per California Department of Water Resources data.

Table 4. Proposed Sampling Summary
Main Street Property
927 Main Street
Pleasanton, California

Sample ID No.	Matrix	Sample Depth (feet)	Sample Location	Rationale	Analysis
927-IA	Indoor Air	-	Inside on-site building	Evaluate indoor air for presence of VOCs	VOCs[2]
1-AA	Ambient	-	Near southeast corner of on-site building	Evaluate ambient air for presence of VOCs	VOCs[2]
SB-5A-SG	Soil Gas	5.0–5.5	Landscape area east side of on-site building	Evaluate presence of VOCs including naphthalene in soil gas since naphthalene reported in groundwater at SB-5 in 2016	VOCs[2]
SB-2A	GW	-	Near boring SB-2 to south of on-site building	Evaluate presence of petroleum hydrocarbons in groundwater at this location; petroleum hydrocarbons reported in groundwater sample collected from boring SB-2 in November 2015 but not in groundwater sample collected from boring SB-3 in August 2016	VOCs[3] TPHg, TPHd, TPHmo[3]
SB-6-2.5[1]	Soil	2.0–2.5	Northeast of on-site building	Evaluate northeast extent of petroleum hydrocarbons plume and secondary/residual sources for Direct Contact and Outdoor Air Criteria assessment	VOCs[3] TPHg, TPHd, TPHmo[3]
SB-6-7.5	Soil	7.0–7.5			
SB-6-W	GW	-			
SB-7-2.5	Soil	2.0–2.5	Southeast of on-site building	Evaluate southeast extent of petroleum hydrocarbons plume and secondary/residual sources for Direct Contact and Outdoor Air Criteria assessment	VOCs[3] TPHg, TPHd, TPHmo[3]
SB-7-7.5	Soil	7.0–7.5			
SB-7-W	GW	-			
SB-8-2.5	Soil	2.0–2.5	Southwest of on-site building	Evaluate southwest extent of petroleum hydrocarbons plume and secondary/residual sources for Direct Contact and Outdoor Air Criteria assessment	VOCs[3] TPHg, TPHd, TPHmo[3]
SB-8-7.5	Soil	7.0–7.5			
SB-8-W	GW	-			
SB-9-2.5	Soil	2.0–2.5	Northwest of on-site building; within footprint of former building	Evaluate northwest extent of petroleum hydrocarbons plume; evaluate secondary/ residual sources for Direct Contact and Outdoor Air Criteria assessment	VOCs[3] TPHg, TPHd, TPHmo[3]
SB-9-7.5	Soil	7.0–7.5			
SB-9-W	GW	-			
SB-10-2.5	Soil	2.0–2.5	South side of parking lot to south of on-site building	Evaluate secondary/residual sources for Direct Contact and Outdoor Air Criteria assessment and potential impacts to Site from potential off-site upgradient sources	VOCs[3] TPHg, TPHd, TPHmo[3]
SB-10-7.5	Soil	7.0–7.5			
SB-10-W	GW	-			

1. Soil samples will also be collected from intervals above the water table that exhibit staining, discoloration, and/or elevated photoionization detector (PID) readings, if any.
2. Soil gas and ambient air samples to be analyzed for volatile organic compounds (VOCs) by Method TO-15.
3. At least one soil sample collected within the 0 to 5-foot depth interval and at least one soil sample collected within the 5-foot to 10-foot depth interval from borings SB-6 through SB-10 will be submitted for the following analysis: VOCs by U.S. EPA Method 8260 with only benzene, toluene, ethylbenzene, xylenes (collectively BTEX), methyl tert-butyl ether (MTBE), naphthalene, and Total Petroleum Hydrocarbons (TPH) quantified as gasoline (TPHg) reported; and TPH quantified as diesel (TPHd) and TPH quantified as motor oil (TPHmo) by U.S. EPA Method 8015. Soil samples with elevated PID readings documented and/or evidence of chemical staining observed will also be submitted for the same analysis as the other soil samples. Groundwater samples will be analyzed for VOCs by U.S. EPA Method 8260 with only BTEX, MTBE, naphthalene, and TPHg reported; and TPHd and TPHmo by U.S. EPA Method 8015.

Figures



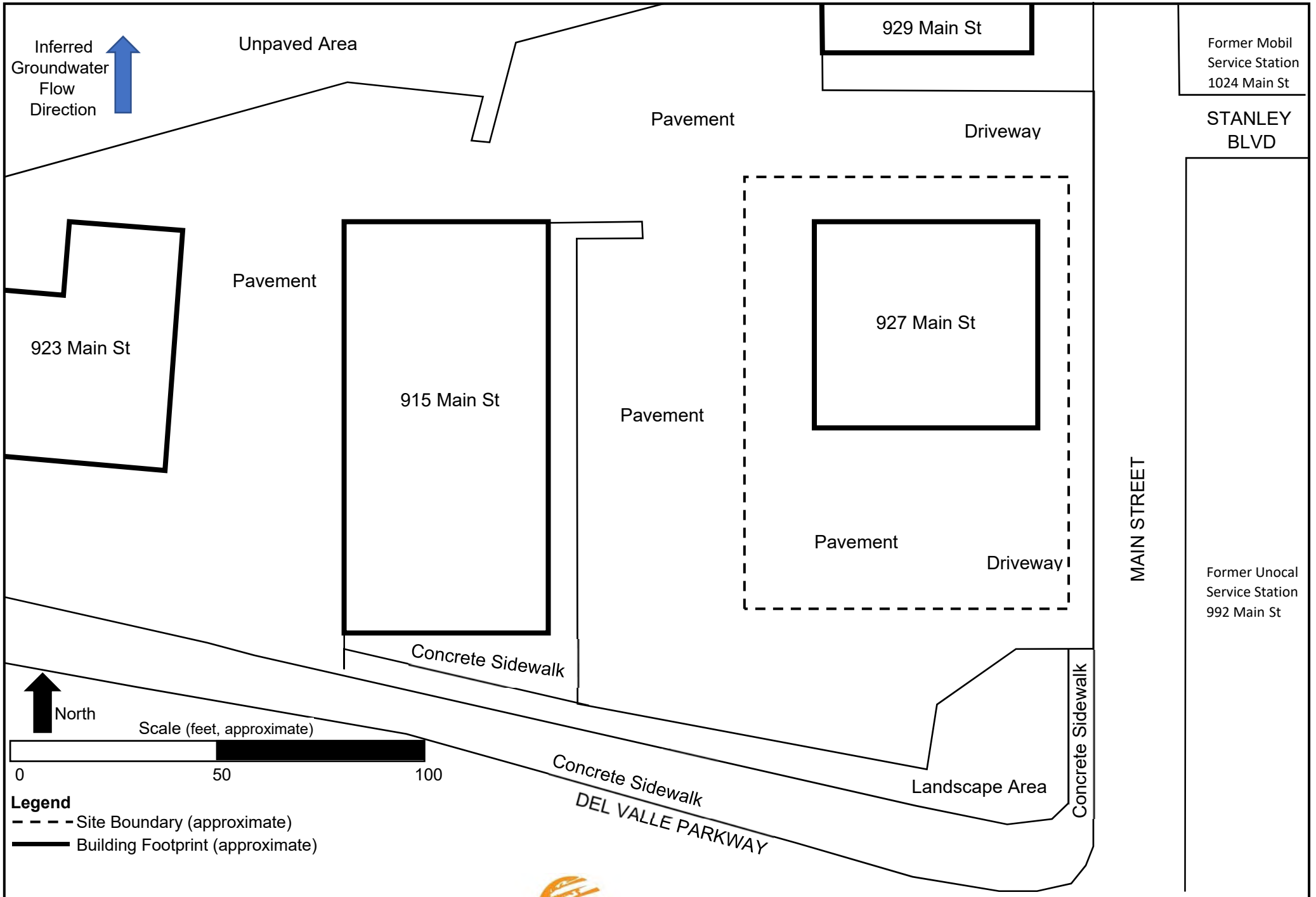
USGS Dublin and Livermore, California Quadrangle Topographic Maps, 2015

Legend
Site (boundaries approximate)

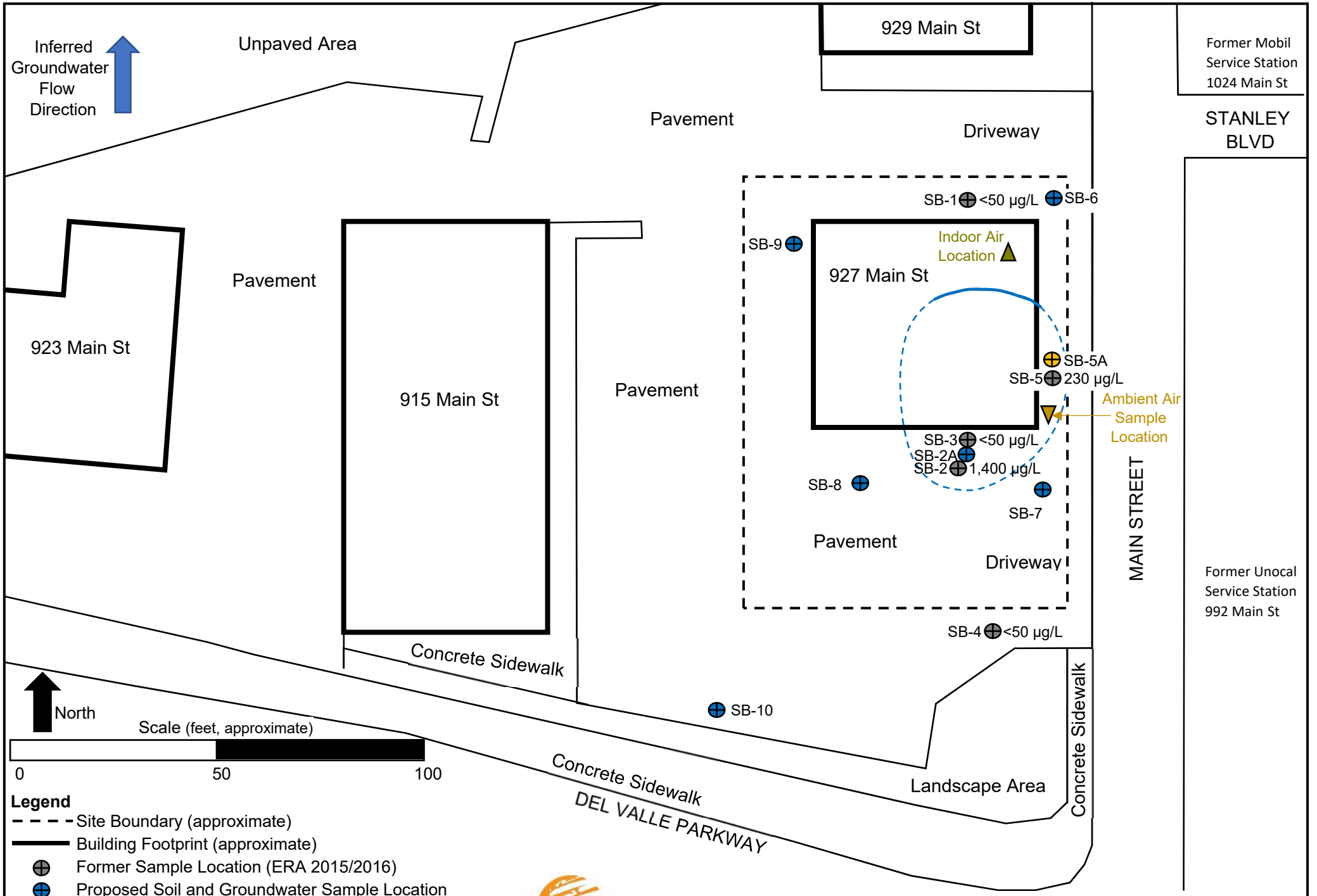
Scale
feet (approximate)
0 2000 4000

North

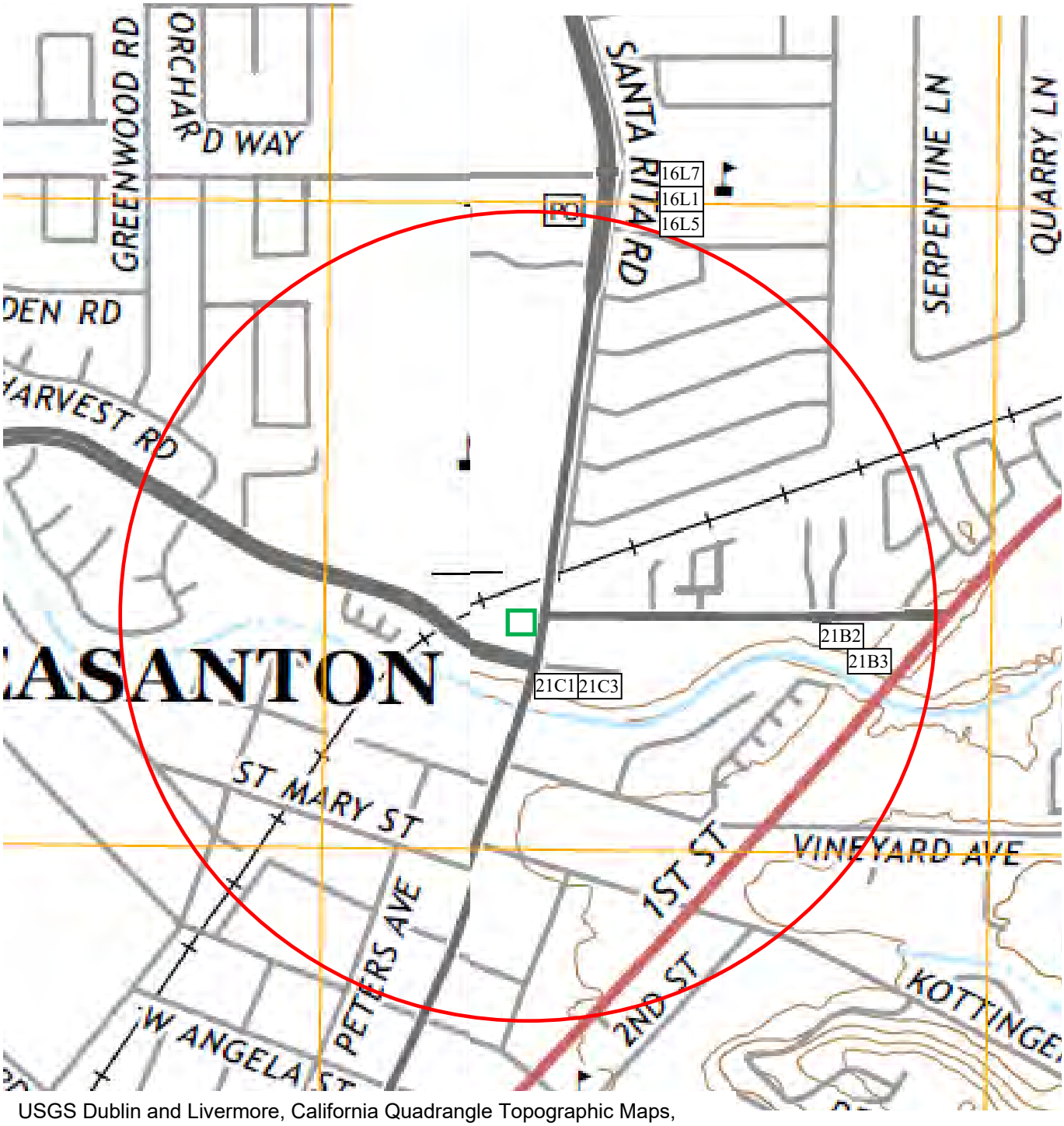
ERA soil-water-vapor	**Site Location Map**	PN: 01-2016-1300-001
		Date: April 14, 2017
	Soil and Groundwater Investigation Work Plan	EP: Lita Freeman
	927 Main Street, Pleasanton, Alameda County, California	**Figure 1**



Site Plan	PN: 01-2016-1300-001
	Date: April 14, 2017
Soil and Groundwater Investigation Work Plan	EP: Lita Freeman
927 Main Street, Pleasanton, Alameda County, California	**Figure 2**



Site Plan with Proposed Sampling Locations	PN: 01-2016-1300-001
	Date: April 14, 2017
Soil and Groundwater Investigation Work Plan	EP: Lita Freeman
927 Main Street, Pleasanton, Alameda County, California	**Figure 3**



USGS Dublin and Livermore, California Quadrangle Topographic Maps,

Legend

Site Boundary (approximate)

21C1	3S-1E-21-C1
21C3	3S-1E-21-C3
21B2	3S-1E-21-B2
21B3	3S-1E-21-B3
16L1	3S-1E-21-L1
16L5	3S-1E-21-L5
16L7	3S-1E-21-L7

North

Scale
feet (approximate)

0 1000 2000

Well Survey Results – Active Water-Supply Wells	PN: 01-2016-1300-001
	Date: April 14, 2017
Soil and Groundwater Investigation Work Plan	EP: Lita Freeman
927 Main Street, Pleasanton, Alameda County, California	**Figure 4**

Appendix A
Alameda County Environmental Health
Letter, February 14, 2017

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
REBECCA GEBHART, Interim Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
LOCAL OVERSIGHT PROGRAM (LOP)
For Hazardous Materials Releases
1131 HARBOR BAY PARKWAY, SUITE 250
ALAMEDA, CA 94502
(510) 567-6700
FAX (510) 337-9335

February 14, 2017

Bradley A & Sandra L Hirst, Trustees
& Bradley Hirst et al.
c/o Equity Enterprises
4460 Black Avenue, Suite L
Pleasanton, CA 94566-6142
(Sent via email to brad@equityenterprises.net)

Paul C and Alice T Sun, Trustees
PO Box 117941
Burlingame, CA 94011-7941
(Sent via email to dsun@dsunlaw.com)

C & H Development Co
43 Panoramic Way
Walnut Creek, CA 94566-8218

Morey and Ethel Gross and Peggy Lane
915 Main Street
Pleasanton, CA 94566-8218

David B. Wheeler
927 Main Street
Pleasanton, CA 94566-6072

Santa Rita Investment Company
915 Main Street
Pleasanton, CA 94566-8218

C & H Development Co
Bradley A. and Sandra L Hirst, Trustees
43 Panoramic Way
Walnut Creek, CA 94595-1605

Autogal, Inc.
Agent: The Prentice-Hall Corporation System, Inc.
2711 Centerville Road Suite 400
Wilmington, DE 19808

Subject: Work Plan Request for Fuel Leak Case No. RO0003199 and GeoTracker Global ID T10000008158, Main Street Property, 927 Main Street, Pleasanton, CA 94566

Dear Responsible Parties:

Alameda County Department of Environmental Health (ACDEH) has reviewed the case file, including the October 10, 2016, report titled *"Soil and Groundwater Investigation Report,"* (Report) submitted by Environmental Risk Assessors. The Report documents the following: the advancement of two soil borings at the site from which a total of five soil samples and two grab groundwater samples were collected; the advancement of one soil gas sampling point at the site; and the advancement of one soil boring at 915 Main Street, Pleasanton, the property that adjoins the subject site to the south and the west. The soil and groundwater samples were analyzed for the following: Total Petroleum Hydrocarbons as gasoline (TPH-g), diesel (TPH-d), and Stoddard Solvent (TPH-ss); benzene, toluene, ethylbenzene, and total xylenes (BTEX); methyl *tert*-butyl ether (MtBE); and naphthalene. The soil gas sample was analyzed for oxygen, methane, and naphthalene. The Report also presents in Appendix H the results of a geophysical survey that was performed using ground penetrating radar (GPR) on March 25, 2016, and discussed in a report titled *"Geophysical Survey,"* dated March 30, 2016, and submitted by CBRE, Inc. The results of the survey, in which the GPR achieved depths between 3.5 feet and 4 feet bgs, appear to indicate that underground storage tanks (USTs) are not present at the subject site, the property at 915 Main Street that adjoins the subject site to the south and the west, and the property that adjoins the subject site to north extending to the northern railroad tracks. The Report also includes a preliminary Site Conceptual Model (SCM) and a comparison of the site data to the criteria under the State Water Resources Control Board's Low-Threat Underground

Storage Tank Case Closure Policy (LTCP). The Report recommends additional groundwater sampling from the area south and southwest of the Site to evaluate the potential source(s) for TPH in groundwater beneath the Site, and additional soil gas sampling at boring SB-5 due to the detection of naphthalene in groundwater at a concentration of 19 µg/L.

ACDEH has evaluated the data presented in the report. Further work is required to determine the extent of the contamination to help facilitate closure of site under the LTCP. We request the submittal of a site investigation Work Plan that addresses the technical comments discussed below.

TECHNICAL COMMENTS

1) **LTCP General Criteria Compliance**

   a. **General Criteria f (Secondary Source).** The Report states that the likelihood of the presence of significant petroleum hydrocarbon secondary source in soil appears low and that TPH in groundwater appears localized to the southeastern corner of the building that is onsite. However, based on ACDEH's review of the case file, secondary source as petroleum-impacted soil and groundwater has not been adequately delineated at the site. In addition, further investigation to identify secondary sources and residual contamination is appropriate due to the presence of the historic gas and oil facility at the site and the other gas and oil facility straddling both the site and the adjacent property at 915 Main Street, as indicated on the 1943 and 1953 Sanborn maps.

   b. **General Criteria e (Site Conceptual Model).** The Report references a water well survey that was performed in 2010 by the consultant for the former Mobile gasoline service station located approximately 200 feet northeast of the site. The survey used records from the California Department of Water Resources (DWR) and Alameda County Public Works Agency (ACPWA). ACDEH recommends that an updated well survey be performed in order to capture more potential recently installed water wells in the area of concern.

2) **LTCP Media-Specific Criteria Compliance**

   a. **Groundwater.** As stated in the Report, benzene and MtBE have not been detected in groundwater at the site, and it appears based on available data so far that there are not plumes of these constituents. However, the TPH-g plume boundary, which is discussed in the Report, has not been adequately defined at its northwest, southwest, east and southeast extent. As above, we recommend further groundwater investigation. The site cannot meet the media-specific criteria until secondary source areas have been defined and it has been verified to have been removed to the extent practicable. Also, as discussed above, we request an updated well survey to better determine whether or not the site meets the LTCP criteria for groundwater.

   b. **Vapor Intrusion to Indoor Air.** The Report recommends that an additional soil gas sample be collected at boring SB-5 to evaluate the potential for vapor intrusion due to naphthalene detection in groundwater at this boring. Because depth to water is deep at this site, ACDEH does not determine this to be necessary at this time. Because secondary source in soil and groundwater has not yet been adequately defined, we recommend instead, as discussed above, that further soil and groundwater investigation be performed to better define the extent of secondary source and determine the potential need for vapor sampling at these locations before performing additional soil gas sampling at this time.

c. **Direct Contact and Outdoor Air Criteria for Soil.** Because secondary source or residual sources have not been adequately defined, it cannot be determined at this time whether or not the site meets this criteria. As discussed above, we recommend further soil sampling which, in addition to defining secondary source, will also help to provide additional data to determine if the site meets the media-specific criteria for direct contact and outdoor air exposure to soil.

3) **Other Comments**

a. **Figures.** ACDEH requests that the site map figures in the requested Work Plan and subsequent reports present a perpendicular overhead view of the site to enable more accurate interpretation of sampling locations in relation to the building footprints and site boundary. In addition, please include scales on all maps.

b. **Logs of Borings.** ACDEH reviewed the logs for borings SB-2 and SB-3, which according to figures in the Report, are immediately adjacent to each other. We note a discrepancy between both logs in the geological material documented for approximately the upper 20 feet. In contrast to the boring log for SB-3, the log for SB-2 identifies the upper 20 feet as "fill". Please address the discrepancy. The additional advancement of boring(s) in this area may be necessary to provide clarification of the type of geological material. Additional boring(s) would also help to clarify the discrepancies between SB-2 and SB-3 in the concentrations of TPH found in groundwater. Given that soil was sampled shallowly at SB-2, ACDEH recommends, in addition to TPH-g. TPH-d, TPH-mo, BTEX, MtBE, and naphthalene, that soil samples be analyzed for volatile organic compounds (VOCs) using Method 8260.

4) **GeoTracker Compliance.** A review of the State Water Resources Control Board's (State Water Board) GeoTracker website indicates that required files, including electronic data files for laboratory analytical data, boring logs, and site maps for investigative work performed for this site have not been uploaded onto GeoTracker. Because this is a state requirement, ACDEH requests that all the above requested data be uploaded to GeoTracker by **March 15, 2017.**

Pursuant to California Code of Regulations, Title 23, Division 3, Chapter 16, Article 12,Sections 2729 and 2729.1, beginning September 1, 2001, all analytical data, including monitoring well samples, submitted in a report to a regulatory agency as part of the UST or LUST program, must be transmitted electronically to the State Water Board GeoTracker system via the internet. Also, beginning January 1, 2002, all permanent monitoring points utilized to collect groundwater samples (i.e. monitoring wells) and submitted in a report to a regulatory agency, must be surveyed (top of casing) to mean sea level and latitude and longitude to sub-meter accuracy using NAD 83. A California licensed surveyor may be required to perform this work. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs, including SCP programs. Additionally, pursuant to California Code of Regulations, Title 23, Division 3, Chapter 30, Articles 1 and 2, Sections 3893, 3894, and 3895, beginning July 1, 2005, the successful submittal of electronic information (i.e. report in PDF format) shall replace the requirement for the submittal of a paper copy. Please upload all required submittals to GeoTracker. Electronic reporting is described below on the attachments.

SUBMITTAL ACKNOWLEDGEMENT STATEMENT

Please note that ACDEH has updated its Attachment 1 with regard to report submittals to ACDEH. ACDEH will now be requiring a Submittal Acknowledgement Statement, replacing the Perjury Statement, as a cover

letter that is to be signed by the Responsible Party (RP). The language for the Submittal Acknowledgement Statement is as follows:

"I have read and acknowledge the content, recommendations, and and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the State Water Resource Control Board's GeoTracker website."

Please include this in your submittals to ACDEH.

TECHNICAL REPORT REQUEST

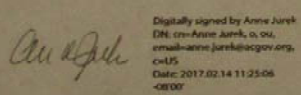
Please upload the work plan to the ACDEH ftp site (Attention: Anne Jurek), and to the State Water Resources Control Board's GeoTracker website according to the following schedule and file-naming convention:

- **March 15, 2017 (30 days)**– GeoTracker Compliance
- **April 14, 2017 (60 days)**– Site Investigation Work Plan
  File to be named: WP_R_yyyy-mm-dd RO3199

This report is being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

If you have any questions, please call me at (510) 567-6721 or send me an electronic mail message at anne.jurek@acgov.org. Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm

Sincerely,



Anne Jurek, MS, California GIT 731
Professional Technical Specialist II

Attachment: Responsible Party(ies) Legal Requirements/Obligations
Enclosure: ACDEH Electronic Report Upload (ftp) Instructions

cc: Lita Freeman, Environmental Risk Assessors, 1420 East Roseville Parkway, Roseville, CA 95661 (*Sent via E-mail to: litafreeman@gmail.com)*

Anne Jurek, ACDEH (*Sent via E-mail to:* anne.jurek@acgov.org)

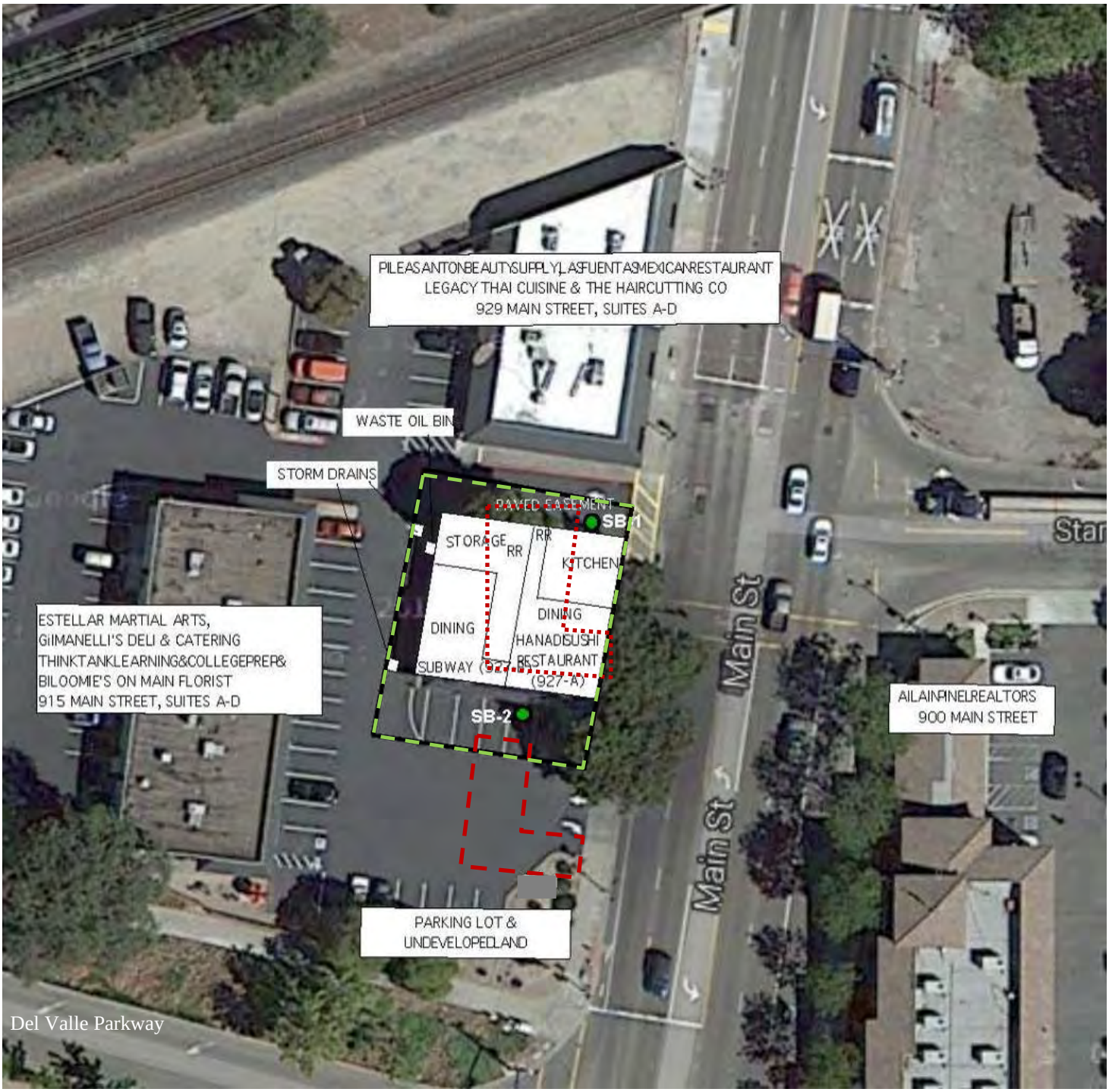
Dilan Roe, ACDEH (*Sent via E-mail to:* dilan.roe@acgov.org)

Paresh Khatri, ACDEH (*Sent via E-mail to:* paresh.khatri@acgov.org)

GeoTracker, eFile

Appendix B
Figures and Boring Logs from Environmental Risk Assessor's Limited Phase II ESA Report (November 27, 2015) and Soil and Groundwater Investigation Report (October 10, 2016)

Figures and Boring Logs From ERA 2015 Limited Environmental Site Assessment Report



Approximate Property Boundary
Former Gas Station Building
Former Canopy Over Dispensers
Sampling Location

North

0 _____ 75

Scale (feet, approximate)

ERA soil-water-vapor	**Site Plan**	PN: 01-2015-500-007
		Date: November 27, 2015
	LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT	EP: Lita Freeman
	927 Main Street, Pleasanton, California	**Figure 2**

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-1

Boring location: See Figure 2

Date started: 11/13/15 Date finished: 11/13/15

Drilling method: Direct Push

Hammer weight/drop: NA Hammer type: NA

Sampler: Fernando-Cascade/Lita Freeman-ERA

Logged by: Lita Freeman

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Ground Surface Elevation: --__ feet[2]						
						Asphalt (8 inches) / Baserock (4 inches)						
1						Silt (ML), Brown (7.5 YR 4/6), low plasticity, stiff, dry						
2												
3												
4												
5	184											
6												
7												
8												
9												
10	225											
11						Silty Clay (CL/CH), Brown (7.5 YR 4/6), moderate plasticity, stiff, dry						
12												
13												
14												
15	269											
16												
17												
18												
19												
20	241											
21												
22												
23												
24												
25												
26												
27												
28						- color change to Light Brown (7.5 YR 6/4) at 28 feet bgs						
29												
30												

Boring terminated at a depth of 40 feet below ground surface.

Boring backfilled with cement grout.

Groundwater encountered at a depth of NA feet during drilling.

Environmental Risk Assessors

Project No.: 01-2015-500-007

Figure: C-1

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-1

Boring location: See Figure 2

Date started: 11/13/15 Date finished: 11/13/15

Drilling method: Direct Push

Hammer weight/drop: NA Hammer type: NA

Sampler: Fernando-Cascade/Lita Freeman-ERA

Logged by: Lita Freeman

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Ground Surface Elevation: -- feet[2]						
31						- moist at 30 feet bgs						
32												
33												
34						- very moist at 34 feet bgs						
35												
36												
37												
38												
39												
40						Bottom of Boring = 40 feet						
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

Boring terminated at a depth of 40 feet below ground surface.

Boring backfilled with cement grout.

Groundwater encountered at a depth of NA feet during drilling.

Environmental Risk Assessors

Project No.: 01-2015-500-007

Figure: C-1

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-2

Boring location: See Figure 2

Logged by: Lita Freeman

Date started: 11/13/15 | Date finished: 11/13/15

Drilling method: Direct Push

Hammer weight/drop: NA | Hammer type: NA

Sampler: Fernando-Cascade/Lita Freeman-ERA

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Ground Surface Elevation: --__ feet[2]						
						Asphalt (6 inches) / Baserock (4 inches)						
1–9	264					FILL MATERIAL, Silt (ML), Brown (7.5 YR 4/6), some medium-grained to coarse-grained gravel with increasing gravel with depth, low plasticity, stiff, dry - fine-grained sand with medium-grained to coarse-grained gravel at 7 feet bgs						
10–19	209 267					FILL MATERIAL, Sandy Gravel (GP), Brown (7.5 YR 4/6), coarse-grained gravel, fine-grained to coarse-grained sand, dry						
20–29	298 376					Silty Clay (CL/CH), Brown (7.5 YR 4/6), moderate plasticity, stiff, dry -moist at 28 feet bgs						
30												

Boring terminated at a depth of 36 feet below ground surface.

Boring backfilled with cement grout.

Groundwater encountered at a depth of NA feet during drilling.

Environmental Risk Assessors

Project No.: 01-2015-500-007

Figure: C-2

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-2

Boring location: See Figure 2

Logged by: Lita Freeman

Date started: 11/13/15 Date finished: 11/13/15

Drilling method: Direct Push

Hammer weight/drop: NA Hammer type: NA

Sampler: Fernando-Cascade/Lita Freeman-ERA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Ground Surface Elevation: -- feet[2]						
31						-color change to green with petroleum hydrocarbon odor from 30 feet bgs to 34 feet bgs						
32												
33												
34						-very moist at 34 feet bgs						
35												
36						Bottom of Boring = 36 feet						
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

Boring terminated at a depth of 36 feet below ground surface.

Boring backfilled with cement grout.

Groundwater encountered at a depth of NA feet during drilling.

Environmental Risk Assessors

Project No.: 01-2015-500-007

Figure: C-2

Figures and Boring Logs from ERA 2016 Soil and Water Investigation Report

Property Boundary (approximate)

Former Building Footprint (approximate)

Former Dispenser Canopy Location (approximate)

Soil/Groundwater Sampling Location (ERA 2015)

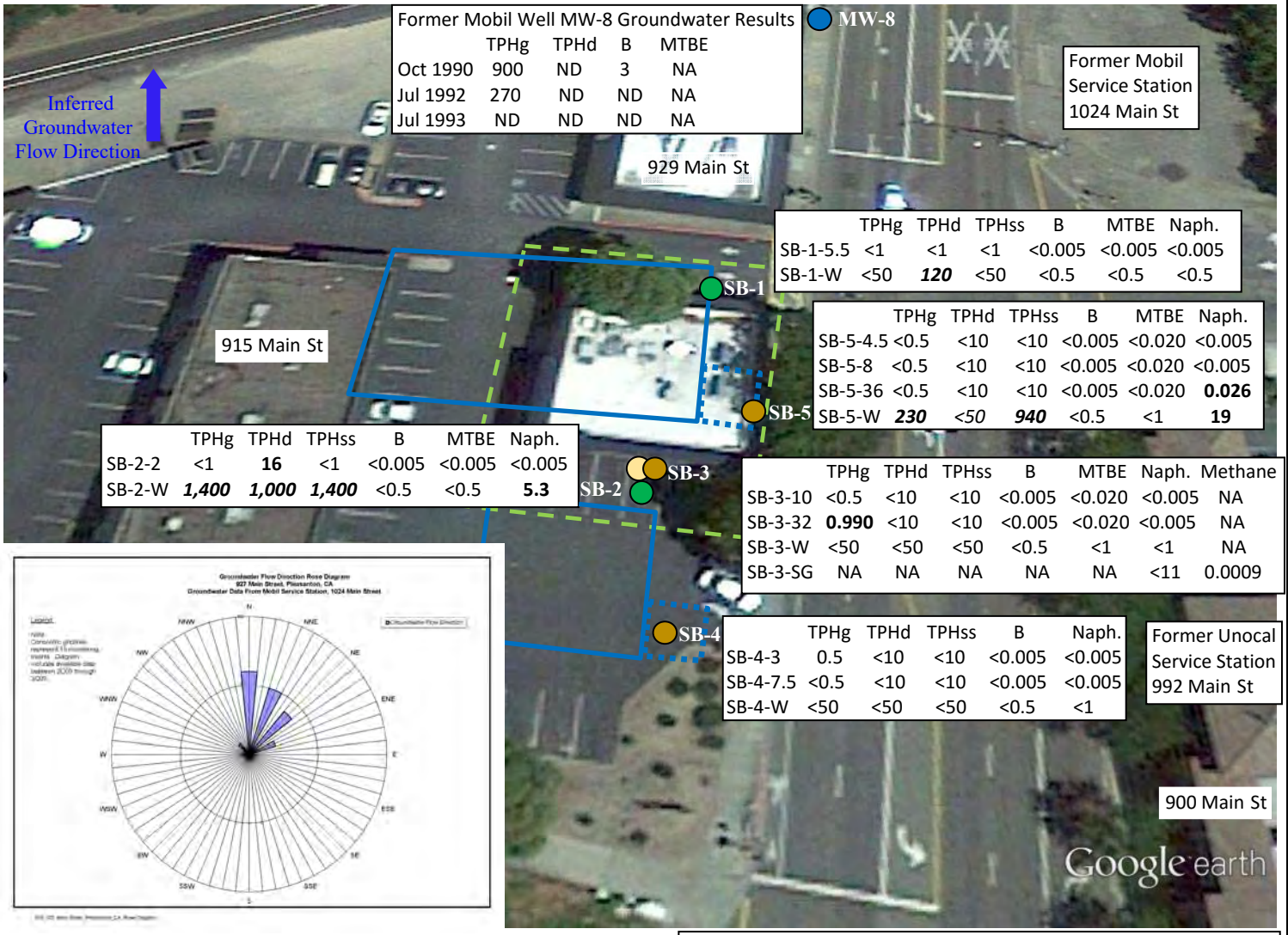
Soil/Groundwater/Soil Gas Sampling Location (ERA 2016)

North

0 55

Scale (feet, approximate)

ERA soil-water-vapor	**Site Plan**	PN: 01-2016-1300-001
		Date: October 10, 2016
	SOIL AND GROUNDWATER INVESTIGATION	EP: Lita Freeman
	927 Main Street, Pleasanton, California	**Figure 2**



TPHg = Total Petroleum Hydrocarbons quantified as gasoline
TPHd = TPH quantified as diesel
TPHss = TPH quantified as Stoddard solvent
B = Benzene
MTBE = Methyl tert-butyl ether
Naph. = Napthalene
SB-1-5.5 = Soil sample from boring SB-1 at 5.0-5.5 depth interval
SB-1-W = Groundwater sample from boring SB-1
120 = Noted analyte detected at stated concentration
<1/NA = Noted analyte not detected at concentration at or above stated laboratory reporting limit/Not Analyzed

	TPHg	TPHd	TPHss	B	MTBE	
SB-1-5.5	<1	<1	<1	<0.005	<0.005	Soil in mg/kg
SB-1-W	<50	***120***	<50	<0.5	<0.5	Groundwater in µg/L

units: Soil: mg/kg = milligrams per kilogram
Groundwater: µg/L = micrograms per liter
Soil Gas (Naph.): µg/m^3 = micrograms per cubic meter
Soil Gas (Methane): % = Percent

Property Boundary (approximate)
Former Building Footprint (approximate)
Former Dispenser Canopy Location (approximate)
Soil/Groundwater Sampling Location (ERA 2015)
Soil/Groundwater/Soil Gas Sampling Location (ERA 2016)

North

0 55
Scale (feet, approximate)

ERA soil-water-vapor	**Soil and Groundwater Samples Results Summary**	PN: 01-2016-1300-001
		Date: October 10, 2016
	SOIL AND GROUNDWATER INVESTIGATION	EP: Lita Freeman
	927 Main Street, Pleasanton, California	**Figure 3**

Property Boundary (approximate)

Former Building Footprint (approximate)

Former Dispenser Canopy Location (approximate)

Soil/Groundwater Sampling Location (ERA 2015)

Soil/Groundwater/Soil Gas Sampling Location (ERA 2016)

<0.5 Benzene Concentration (micrograms per liter)

North

0 55

Scale (feet, approximate)

ERA soil-water-vapor	**Benzene Concentrations in Groundwater**	PN: 01-2016-1300-001
		Date: October 10, 2016
	SOIL AND GROUNDWATER INVESTIGATION 927 Main Street, Pleasanton, California	EP: Lita Freeman
		Figure 4

Property Boundary (approximate)

Former Building Footprint (approximate)

Former Dispenser Canopy Location (approximate)

Soil/Groundwater Sampling Location (ERA 2015)

Soil/Groundwater/Soil Gas Sampling Location (ERA 2016)

<0.5 Methyl Tert-Butyl Ether (MTBE) Concentration (micrograms per liter)

(SB-4 groundwater sample not analyzed for MTBE)

North

0 55

Scale (feet, approximate)

ERA soil-water-vapor	**MTBE Concentrations in Groundwater**	PN: 01-2016-1300-001
		Date: October 10, 2016
	SOIL AND GROUNDWATER INVESTIGATION 927 Main Street, Pleasanton, California	EP: Lita Freeman
		Figure 5

Property Boundary (approximate)

Former Building Footprint (approximate)

Former Dispenser Canopy Location (approximate)

Soil/Groundwater Sampling Location (ERA 2015)

Soil/Groundwater/Soil Gas Sampling Location (ERA 2016)

1,400 Total Petroleum Hydrocarbons Quantified as Gasoline (TPHg) Concentration (micrograms per liter [µg/L])

Inferred TPHg Isoconcentration Contour in µg/L

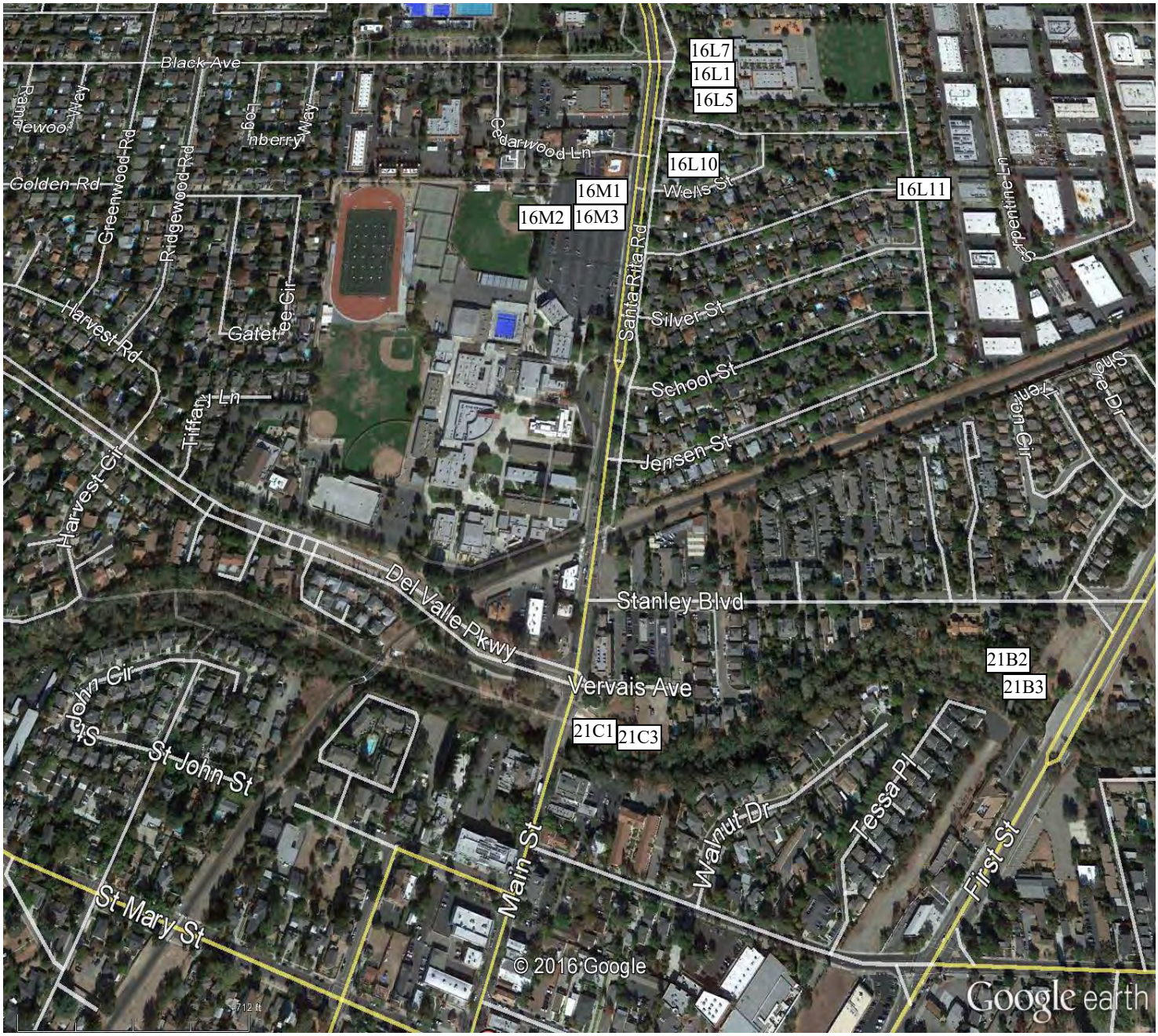
(SB-3 not used for contouring)

North

0 55

Scale (feet, approximate)

ERA soil-water-vapor	**TPHg Groundwater Isoconcentration Contour Map**	PN: 01-2016-1300-001
		Date: October 10, 2016
	SOIL AND GROUNDWATER INVESTIGATION	EP: Lita Freeman
	927 Main Street, Pleasanton, California	**Figure 6**



Well Location Source: ETIC, 2010, Detailed Well Survey Report

ERA soil-water-vapor	**Well Survey Results**	PN: 01-2016-1300-001
		Date: October 10, 2016
	SOIL AND GROUNDWATER INVESTIGATION	EP: Lita Freeman
	927 Main Street, Pleasanton, California	**Figure 7**

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-3

Boring location: See Figure 2

Date started: 8/5/16 Date finished: 8/5/16

Drilling method: Direct Push

Hammer weight/drop: NA Hammer type: NA

Sampler: Arturo-Cascade/Lita Freeman-ERA

Logged by: Lita Freeman

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Ground Surface Elevation: --__ feet[2]						
						Asphalt (6 inches) / Baserock (4 inches)						
1					GW	Sandy Gravel (GW), Brown (7.5 YR 4/6), fine-grained to						
2						to coarse-grained gravel, fine-grained to coarse-grained						
3						sand, sub-angular to sub-rounded gravel, dry						
4	0.0	☒										
5		☒										
6												
7												
8	0.0											
9												
10		☒										
11												
12	0.0											
13												
14					CL/ CH	Silty Clay (CL/CH), Brown (7.5 YR 4/6), moderate plasticity,						
15		☒				stiff, dry						
16	0.0											
17												
18												
19												
20		☒										
21												
22												
23												
24												
25	0.0	☒										
26												
27												
28						-moist at 28 feet bgs						
29												
30	2.5	☒										

Boring terminated at a depth of 40 feet below ground surface. Boring backfilled with cement grout.

Groundwater encountered at a depth of 38 feet during drilling.

Environmental Risk Assessors

Project No.: 01-2016-1300-001

Figure: C-3

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-3

Boring location: See Figure 2

Logged by: Lita Freeman

Date started: 8/5/16 | Date finished: 8/5/16

Drilling method: Direct Push

Hammer weight/drop: NA | Hammer type: NA

Sampler: Arturo-Cascade/Lita Freeman-ERA

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Ground Surface Elevation: -- feet[2]						
31						-color change to green with petroleum hydrocarbon odor at 31 feet bgs						
32	1.8	☒										
33		☒				-color change to brown (7.5 YR 4/6) at 33 feet bgs						
34	0.0					-color change to green with petroleum hydrocarbon odor from 34 feet bgs, very moist at 34 feet bgs						
35		☒										
36	0.0	☒				-color change to brown (7.5 YR 4/6) at 36 feet bgs						
37	0.0											
38					▽	-wet at 38 feet bgs						
39												
40						Bottom of Boring = 40 feet						
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

Boring terminated at a depth of 40 feet below ground surface.

Boring backfilled with cement grout.

Groundwater encountered at a depth of 38 feet during drilling.

Environmental Risk Assessors

Project No.: 01-2016-1300-001

Figure: C-3

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-4

Boring location: See Figure 2

Date started: 7/22/16 Date finished: 7/22/16

Drilling method: Direct Push

Hammer weight/drop: NA Hammer type: NA

Sampler: Ricky-Cascade/Lita Freeman-ERA

Logged by: Lita Freeman

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Asphalt (6 inches) / Baserock (4 inches)						
1–8	0.0 / 0.0 / 0.0	☒			GW	Sandy Gravel (GW), Brown (7.5 YR 4/6), fine-grained to coarse-grained gravel, fine-grained to coarse-grained sand, sub-angular to sub-rounded gravel, dry						
8–30	0.0 / 0.0 / 0.0	☒			CL/ CH	Silty Clay (CL/CH), Dark Reddish Brown (2.5 YR 2.5/4), moderate plasticity, stiff, dry						
28						-moist at 28 feet bgs						

Ground Surface Elevation: -- feet[2]

Boring terminated at a depth of 40 feet below ground surface. Boring backfilled with cement grout.

Groundwater encountered at a depth of 38 feet during drilling.

Environmental Risk Assessors

Project No.: 01-2016-1300-001

Figure: C-4

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-4

Boring location: See Figure 2

Logged by: Lita Freeman

Date started: 7/22/16 Date finished: 7/22/16

Drilling method: Direct Push

Hammer weight/drop: NA Hammer type: NA

Sampler: Ricky-Cascade/Lita Freeman-ERA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION (Ground Surface Elevation: -- feet[2])	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31–37												
38–39						Sandy Gravel (GW), Dark Reddish Brown (2.5 YR 2.5/4), fine-grained to to coarse-grained gravel, fine-grained to coarse-grained sand, rounded gravel, wet at 38 feet bgs						
40						Bottom of Boring = 40 feet						
41–60												

Boring terminated at a depth of 40 feet below ground surface.

Boring backfilled with cement grout.

Groundwater encountered at a depth of 38 feet during drilling.

Environmental Risk Assessors

Project No.: 01-2016-1300-001

Figure: C-4

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-5

Boring location: See Figure 2

Date started: 8/5/16 Date finished: 8/5/16

Drilling method: Direct Push

Hammer weight/drop: NA Hammer type: NA

Sampler: Arturo-Cascade/Lita Freeman-ERA

Logged by: Lita Freeman

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Ground Surface Elevation: --__ feet[2]						
						Landscaping top soil						
1					CL/ CH	Silty Clay (CL/CH), Brown (7.5 YR 4/6), moderate plasticity, stiff, dry						
2												
3												
4		☒										
5	0.0											
6												
7												
8	0.0	☒										
9												
10		☒										
11												
12	0.0											
13												
14												
15		☒										
16	0.0											
17												
18												
19												
20	0.0	☒										
21												
22												
23												
24	0.0											
25		☒										
26												
27												
28	0.0											
29						-moist at 29 feet bgs						
30												

Boring terminated at a depth of 44 feet below ground surface.

Boring backfilled with cement grout.

Groundwater encountered at a depth of 37 .feet during drilling.

Environmental Risk Assessors

Project No.: 01-2016-1300-001

Figure: C-5

PROJECT: 927 Main Street, Pleasanton, California

Log of Boring SB-5

Boring location: See Figure 2

Logged by: Lita Freeman

Date started: 8/5/16 | Date finished: 8/5/16

Drilling method: Direct Push

Hammer weight/drop: NA | Hammer type: NA

Sampler: Arturo-Cascade/Lita Freeman-ERA

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES: PID (ppmv)	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Ground Surface Elevation: --__ feet[2]						
31						-color change to green with petroleum hydrocarbon odor at 31 feet bgs						
32		☒				-color change to brown (7.5 YR 4/6) at 32 feet bgs						
33												
34						-color change to green with petroleum hydrocarbon odor at 34 feet bgs, very moist at 35 feet bgs						
35						-some fine-grained sand at 35 feet bgs to 35.5 feet bgs						
36	1.2	☒										
37					▽	-sand and gravel at 37 feet bgs to 37.5 feet bgs, wet at 37 feet bgs						
38												
39	2.7	☒				-color change to brown (7.5 YR 4/6) at 39 feet bgs						
40	83.9											
41												
42												
43					GW	Sandy Gravel (GW), Brown (7.5 YR 4/6), fine-grained to coarse-grained gravel, fine-grained to coarse-grained sand, sub-angular to sub-rounded gravel, saturated						
44						Bottom of Boring = 44 feet						
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

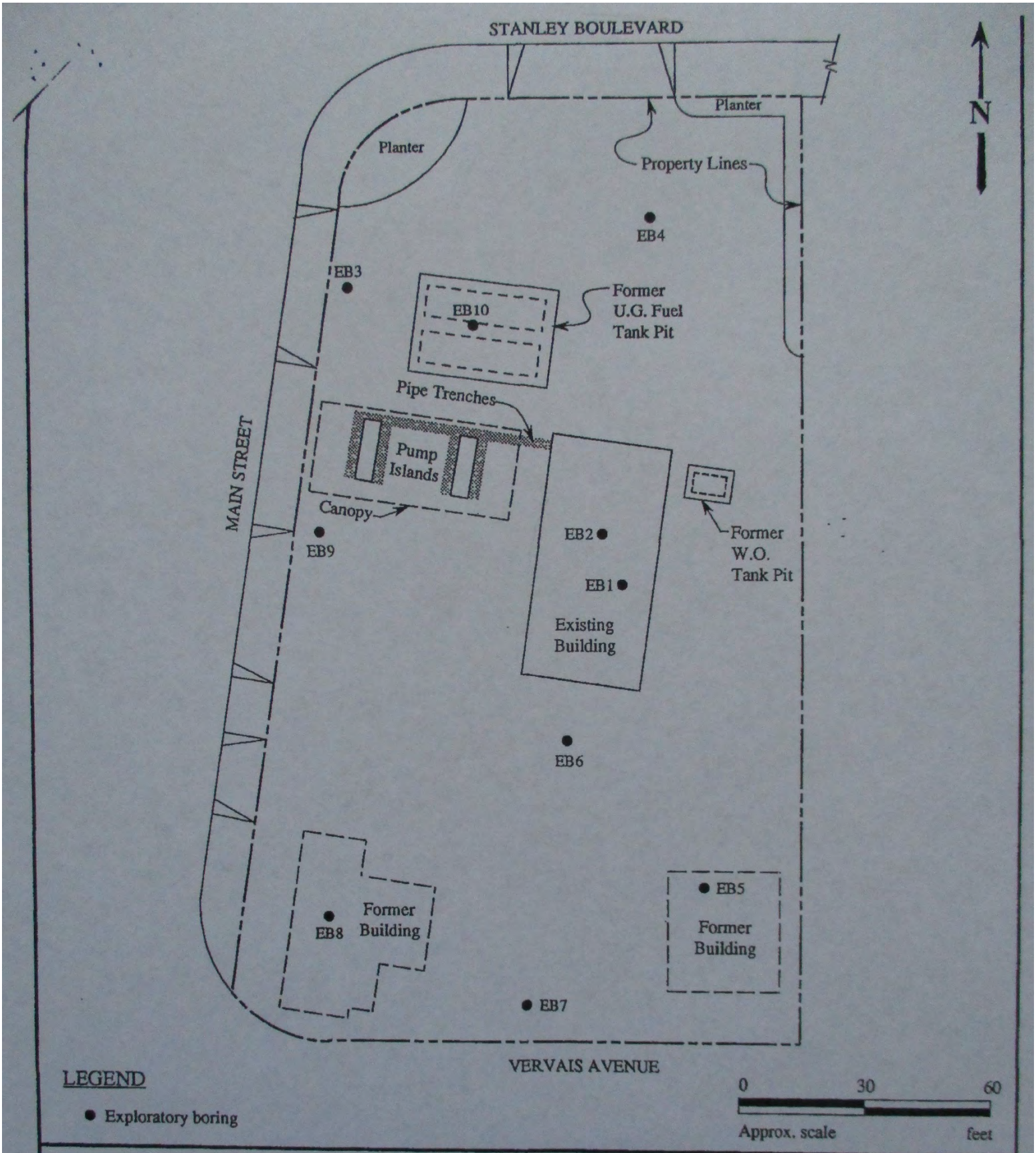
Boring terminated at a depth of 44 feet below ground surface. Boring backfilled with cement grout.
Groundwater encountered at a depth of 37 feet during drilling.

Environmental Risk Assessors

Project No.: 01-2016-1300-001

Figure: C-5

Appendix C
ACDEH Closure Summary, (Former) Unocal Station #0543, 992 Main Street, Pleasanton, California
September 12, 1997



EXPLORATORY BORING LOCATION MAP

KAPREALIAN ENGINEERING INCORPORATED	FORMER UNOCAL S/S #0543 992 MAIN STREET PLEASANTON, CALIFORNIA	FIGURE 5

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG **W.W.** CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB5	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Silty gravel with sand base, angular gravel to 1-1/4 inches in diameter.
				Silt, stiff, moist, brown (10YR 5/3), trace rootlets.
9/12/18		5	ML	Silt, trace sand, very stiff, slightly moist, pale brown (10YR 6/3).
10/16/25		10		Sandy silt, estimated at 15% sand and trace gravel to 1/2 inch in diameter, hard, slightly moist, pale brown (10YR 6/3).
				Silt, estimated at 10% sand and trace clay, very stiff, very moist, brown (10YR 5/3).
10/18/24		15	GW-GM	Sandy gravel with silt, estimated at 30-35% predominantly fine-grained sand, 15% silt, and subangular to subrounded gravel to 1-1/4 inches in diameter, dense, slightly moist, pale brown (10YR 6/3)
			ML	Silt, estimated at 10% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3).
8/11/14		20	GW	Sandy gravel, estimated at 35% sand, 10% silt, and subangular to subrounded gravel to 1-1/4 inches in diameter, medium dense, slightly moist, pale brown (10YR 6/3).

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG **W.W.** CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB5	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
			GW	Sandy gravel, estimated at 35% sand, 10% silt, and subangular to subrounded gravel to 1-1/4 inches in diameter, medium dense, slightly moist, pale brown (10YR 6/3).
7/10/15		25		Silt, estimated at 10% fine-grained sand and 5-10% clay, very stiff, moist, brown (10YR 5/3), trace light brownish gray (2.5Y 6/2) mottling.
4/4/7		30	ML	Silt, estimated at 10% fine-grained sand and 5% clay, stiff, slightly elastic, pale brown (10YR 6/3).
3/4/8		35		Sandy silt, estimated at 15-20% sand and trace gravel to 3/8 inch in diameter, stiff, very moist, brown (10YR 6/3).
6/8/9	▽	40	ML-SM	Sandy silt, estimated at 40% fine-grained sand and trace gravel to 3/8 inch in diameter, very stiff, very moist to saturated, brown (10YR 5/3).
			ML	Silt, very stiff, very moist to saturated, slightly elastic, yellowish brown (10YR 5/4) with slightly light brownish gray (2.5Y 6/2) mottling.
				TOTAL DEPTH 41'

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB6	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Asphalt pavement over sand and gravel, gravel to 3 inches in diameter (fill).
3/5/6		5	ML	Silt, estimated at 5-15% sand and trace gravel to 1 inch in diameter, stiff, moist, brown (10YR 5/3).
5/6/6		10		Silt, estimated at 10% sand and 5-10% gravel to 1 inch in diameter, stiff, moist, brown (10YR 4/3), trace rootlets.
				Silt, estimated at 10% sand and 5% gravel, very stiff, moist, brown (10YR 4/3).
7/10/12		15	SW	Gravelly sand, estimated at 15% gravel to 1 inch in diameter and trace silt, medium dense, moist, pale brown (10YR 6/3), sand is gap-graded.
6/8/11		20	ML	Silt, estimated at 5-10% fine-grained sand, very stiff, moist, brown (10YR 5/3), trace pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** W.W. JGG CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB6	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
5/7/10		25	ML	Silt, estimated at 10-15% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3), trace pores.
5/7/8		30		Silt, estimated at 12% clay and trace sand, stiff, moist, slightly elastic, brown (10YR 5/3), trace pores and caliche.
4/5/6		35		Silt, estimated at 10% sand, 5% clay and trace gravel to 3/8 inch in diameter, stiff, moist to very moist, brown (10YR 5/3), silt is slightly elastic, trace pores.
3/7/10				
4/7/15	▼	40		Silt, estimated at 10-15% sand, very stiff, very moist, brown (10YR 5/3).
			SM-ML	Silty sand/sandy silt and trace gravel to 3/8 inch in diameter, medium dense to very stiff, saturated, brown (10YR 5/3), sand is predominantly fine-grained.
				TOTAL DEPTH 41'

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG **W.W.** CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2/92
Boring No. EB7	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Sandy gravel with silt (fill).
			ML	Silt, trace fine-grained sand, stiff, moist, brown (10YR 5/3), trace rootlets.
7/9/11		5	GP	Sandy gravel, estimated at 40-45% well graded sand, gravel is subrounded to 1/2 inch in diameter, medium dense, moist, light brownish gray (10YR 6/2).
7/22/35		10		Sandy gravel, estimated at 40% sand and 5% silt,very dense, moist, light brownish gray (10YR 6/2), sand is well graded, gap graded gravel to 2-1/2 inches in diameter, gravel is predominantly under 1 inch in diameter.
6/13/26		15	GP-GM	Sandy gravel with silt, estimated at 35-40% sand and 10-20% silt, dense, moist, light brownish gray (10YR 6/2), subrounded gravel to 3/4 inch in diameter.
7/10/14		20	ML	Silt, estimated at 10% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3), silt is slightly elastic.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG **W.W.** CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2/92
Boring No. EB7	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
5/9/15		25	ML	Silt, estimated at 10-15% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3), trace root pores.
5/6/9		30		Silt, estimated at 5-10% clay and 5% fine-grained sand, stiff, moist to very moist, slightly elastic, brown (10YR 5/3), trace root pores, trace organic matter.
4/7/11		35		Silt, estimated at 5-10% clay, 5% fine-grained sand, and trace gravel to 1/2 inch in diameter, very stiff, very moist, brown (10YR 5/3), traces of light brownish gray (10YR 6/2) mottling, silt is more elastic than above.
7/13/14		40	ML-SM	Sandy silt/silty sand, very stiff to medium dense, very moist to saturated, brown (10YR 5/3), sand is fine to medium-grained.
				TOTAL DEPTH 40.5'

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG **W.W.** CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB8	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Silty gravel with sand base.
32/50		5		Sandy gravel with silt, estimated at 30% sand and 10-15% silt, very dense, moist, light brownish gray (10YR 6/2), subrounded gravel to 1 inch in diameter.
50-6"		10	GW-GM	Sandy gravel as above.
8/21/35		15		Sandy gravel with silt as above except subrounded gravel to 1-3/4 inches in diameter.
6/9/13		20	ML	Silt, estimated at 10% very fine-grained sand and 5% clay, very stiff, moist to very moist, brown (10YR 5/3), trace pores with grayish brown (2.5Y 5/2) staining.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG **W.W.** CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB8	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
5/7/14		25	ML	Silt, estimated at 10-15% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3) with slight grayish brown (2.5Y 5/2) staining in pores.
5/8/10		30	SM	Silt, estimated at 10-15% fine-grained sand, 5% clay, and trace gravel to 3/8 inch in diameter, very stiff, moist, brown (10YR 5/3), with slight grayish brown (2.5Y 5/2). Three inch lense of silty sand encountered at 30.5 feet, estimated at 40% silt, sand is fine-grained with an estimated 5% coarse-grained sand and 5% gravel to 3/8 inch in diameter.
5/6/8		35	ML	Silt, estimated at 10-15% very fine to fine-grained sand and trace gravel to 3/8 inch in diameter, stiff, very moist, brown (10YR 5/3), trace pores.
6/9/11	12:30	40		Silt, trace clay, very stiff, very moist, slightly elastic, brown (10YR 5/3) with slight light brownish gray (2.5Y 6/2) mottling.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG **W.W.** CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB8	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/8/9	11:43	45	ML	Clayey silt, estimated at 15% clay, very stiff, moist to very moist, elastic, pale brown (10YR 6/3) with light brownish gray (2.5Y 6/2) mottling.
5/7/12	11:20	50	SM	Sandy silt, estimted at 30% fine-grained sand and trace clay, very stiff, saturated, pale brown (10YR 6/3) with brownish gray (2.5Y 6/2) mottling.
				TOTAL DEPTH 50'
		55		
		60		
		65		

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB9	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Asphalt pavement over sand and gravel base.
3/4/5		5	ML	Silt, estimated at 5-10% sand, stiff, moist, brown (10YR 5/3). trace rootlets.
3/7/9		10		Silt, estimated at 5-10% sand and 5% gravel to 1/2 inch in diameter, stiff, moist, brown (10YR 5/3), trace root pores.
			GW	Sandy gravel, estimated at 30-40% well graded sand, medium dense, slightly moist, light brownish gray (10YR 6/2), subrounded gravel to 1-1/4 inches in diameter.
6/13/22		15	GW-SW	Sandy gravel/gravely sand, dense, moist, light brownish gray. (10YR 6/2), sand is well graded, subrounded gravel to 1/2 inch in diameter.
3/4/6		20	ML	Silt, estimated at 10% fine-grained sand and 5% clay, stiff, moist, slightly elastic, brown (10YR 5/3), trace pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB9	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

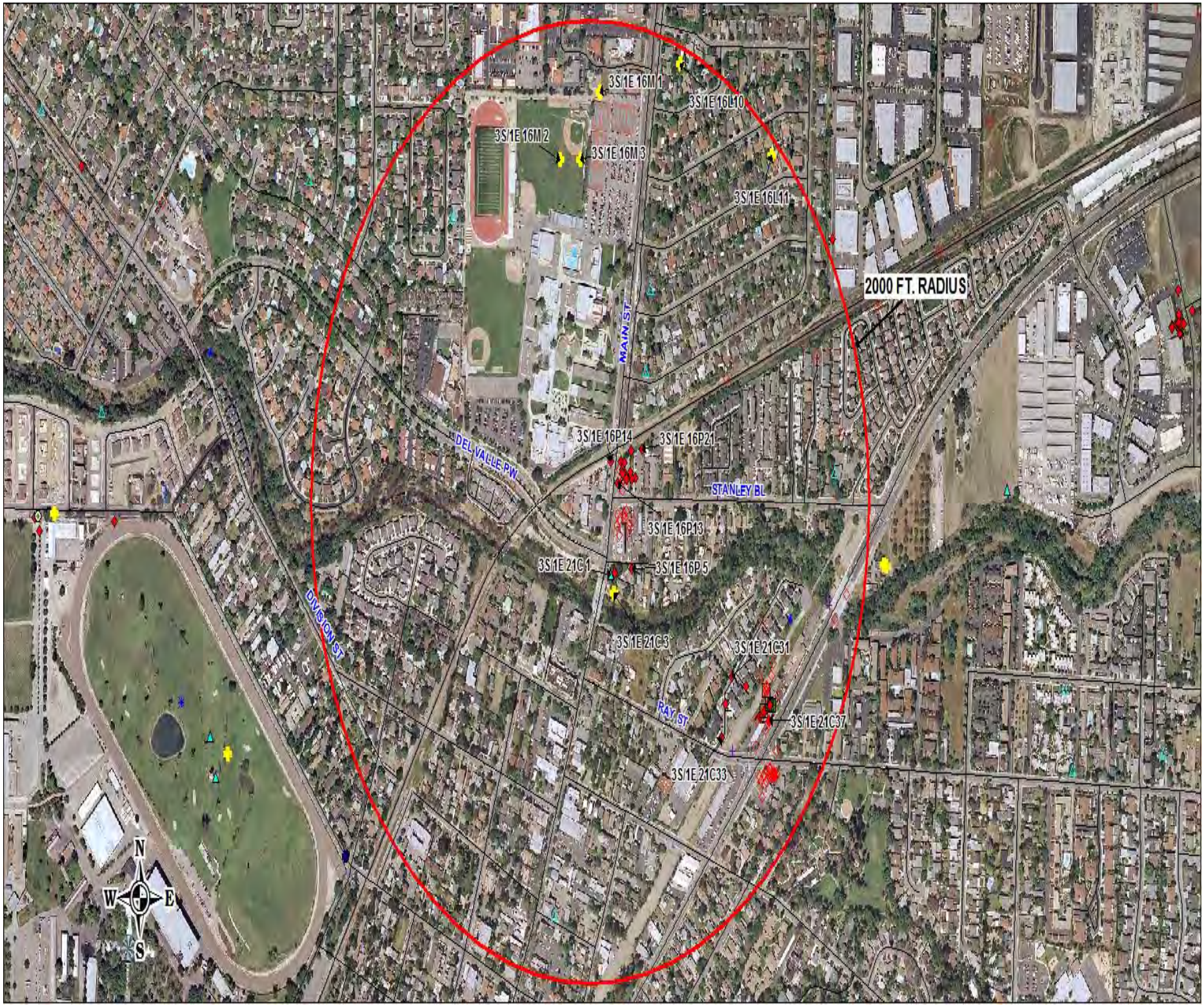
Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/6/9		25	ML	Silt, estimated at 5-10% fine-grained sand and trace gravel to 3/8 inch in diameter, stiff, very moist, pale brown (10YR 6/3), trace root pores.
5/7/8		30		Silt, estimated at 5-10% clay and 5% sand, stiff, moist to very moist, brown (10YR 5/3), trace root pores.
4/5/7		35		Silt, estimated at 10% sand, trace clay, and trace gravel to 3/8 inch in diameter, stiff, very moist, slightly elastic, brown (10YR 5/3), trace organic matter (decayed wood, black).
3/3/6	▽		ML-SM	Sandy silt, estimated at 20-25% fine-grained sand, trace clay, and trace gravel ot 3/8 inch in diameter, stiff, very moist to saturated, pale brown (10YR 6/3), silt is slightly elastic.
		40		TOTAL DEPTH: 39'

Appendix D
Well Survey Data

Township	Section	Log Number	Image Filename	Hyperlink	Well_Address	Communit	CountyCoc	Township	Range	Section	ReceiveDate	CompletionDa	WorkType	DrillMetho	WaterUse	Depth	GravelPacl	Seal
03S01E	16	915998	000010D3_Redacted.pdf	View Log														
03S01E	16	533126	000010D6_Redacted.pdf	View Log		PLEASANTO	Alameda	03S	01E	16	8/13/2004	10/27/2000	Abandonment or des		Unused	730	FALSE	FALSE
03S01E	17	460814	000010EA_Redacted.pdf	View Log	PLEASANTON PARK	PLEASANTO	Alameda	03S	01E	17	8/12/2004	9/15/2004	New Well	Reverse ro	Public sup	934	FALSE	FALSE
03S01E	21	528573	00001111_Redacted.pdf	View Log	RAY STREET (SITE 63, 65, & 73)	PLEASANTO	Alameda	03S	01E	21	8/12/2004	6/2/1998	Abandonment or des		Unused	28	FALSE	FALSE
03S01E	17	936851	001DDCEA_Redacted.pdf	View Log														
03S01E	16	01-560W	00080915_Redacted.pdf	View Log		PLEASANTO	Alameda	03S	01E	16	5/10/1995	9/8/1993	New Well		Monitorin	50	FALSE	FALSE
03S01E	16	01-558W	00080917_Redacted.pdf	View Log		PLEASANTO	Alameda	03S	01E	16	3/10/1995	8/1/1994	Abandonment or des		Unused	56	FALSE	FALSE
03S01E	21	01-560W	00080BB9_Redacted.pdf	View Log		PLEASANTO	Alameda	03S	01E	16	5/10/1995	9/8/1993	New Well		Monitorin	50	FALSE	FALSE

Zone 7

WELL_NUMBE	USE	ADDRESS	OWNER	COMPLDATE	STATUS	DESTRDATE	REMARK	LONGITUDE	LATITUDE	DEPTH	DIAM	LOGCODE	PERF_U	PERF_L	DATE_COMPL
3S/1E 17J 2	supply	1155 SANTA RITA RD	AMADOR HIGH SCHOOL	00000000	destroyed	00000000		-121.877571892	37.669193225	175.00	14.00	0	140.00	180.00	00000000
3S/1E 21C 4	unknown	VERVAIS AVE		00000000	unknown	00000000	ENT'D FR WELL LIST	-121.873128604	37.664506665	0.00	0.00	0	0.00	0.00	00000000
3S/1E 16P 1	irrigation			00000000	destroyed	00000000		-121.872695858	37.668428465	305.00	0.00	2	0.00	0.00	00000000
3S/1E 16P 2	irrigation		SFPUC	00000000	destroyed	00000000		-121.872790150	37.667502349	100.00	0.00	0	0.00	0.00	00000000
3S/1E 16Q 1	supply	3963 STANLEY BLVD	CALLAHAN PROPERTY	00000000	destroyed	00000000		-121.868112364	37.666405004	0.00	84.00	0	0.00	0.00	00000000
3S/1E 21C49	extraction	4191 FIRST ST	CONOCO PHILLIPS	4/6/2010	destroyed	8/15/2013	PRESSURE GROUT W/PORTLAND CEMENT	-121.869614912	37.663743072	55.00	4.00	2	45.00	55.00	4/6/2010
3S/1E 21C50	extraction	4191 FIRST ST	CONOCO PHILLIPS	4/6/2010	destroyed	8/15/2013	PRESSURE GROUT; PORTLAND CEMENT	-121.869598836	37.663714419	55.00	4.00	2	45.00	55.00	4/6/2010
3S/1E 21C51	extraction	4191 FIRST ST	CONOCO PHILLIPS	4/6/2010	destroyed	8/15/2013	PRESSURE GROUT WITH PORTLAND CEMENT	-121.869643885	37.663721586	35.00	4.00	2	30.00	35.00	4/6/2010


3S/1E 16M 1
3S/1E 16L10
3S/1E 16M 2
3S/1E 16M 3
3S/1E 16L11
2000 FT. RADIUS
MAIN ST
DEL VALLE PW
3S/1E 16P14
3S/1E 16P21
STANLEY BL
3S/1E 16P13
3S/1E 21C 1
3S/1E 16P 5
DIVISION ST
3S/1E 21C 3
3S/1E 21C31
RAY ST
3S/1E 21C37
3S/1E 21C33
N
W
E
S

REGION

COUNTY

NEAR

DEPARTMENT OF WATER RESOURCES

DEPARTMENT OF PUBLIC WORKS

STATE OF CALIFORNIA

WELL LOG

BASIN

DWR No. 3S/1E-16N 52 D & M

OTHER Nos. G

01-1660

LOCATION

OWNER ADDRESS

DRILLED BY ADDRESS

DRILLING METHOD GRAVEL PACKED DATE COMPLETED

SIZE OF CASING DEPTH STRUCK WATER AT

PERFORATIONS SIZE No.

WATER LEVEL BEFORE PERFORATING AFTER

TEST DATA: DISCHARGE G. P. M. DRAWDOWN FT. HOURS RUN

OTHER DATA AVAILABLE: WATER LEVEL RECORD ANALYSIS

SURFACE ELEV. DATUM SOURCE OF INFORMATION Spring valley water co. 1912 report

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICK-NESS	SP. YIELD %	
0 - 2		soil			
2 - 42		clay and rocks			
42 - 60		gravel and hard pan			
60 - 150		blue clay			
150 - 153		gravel			
153- 178		soapstone, blue			

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY DATE SHEET 1 OF

FORM 263. 65981 11-57 10M △ SPO

3S/1E-16 L1

01-1652

OH

March, 1945

LOG OF WELL FOR [redacted]
Pleasanton, California

DRILLER: Adolph Hummel 195 Workers

		THICKNESS	
0	2	2 Ft.	Soil
2	54	52	Yellow sandy clay
54	61	7	Gravel and sand
61	63	2	Yellow clay
63	84	21	Gravel, boulders and sand
84	91	7	Yellow sandy clay
91	135	44	Gravel and sand
135	151	16	Yellow clay

CONFIDENTIAL

151 Ft. Total finished well

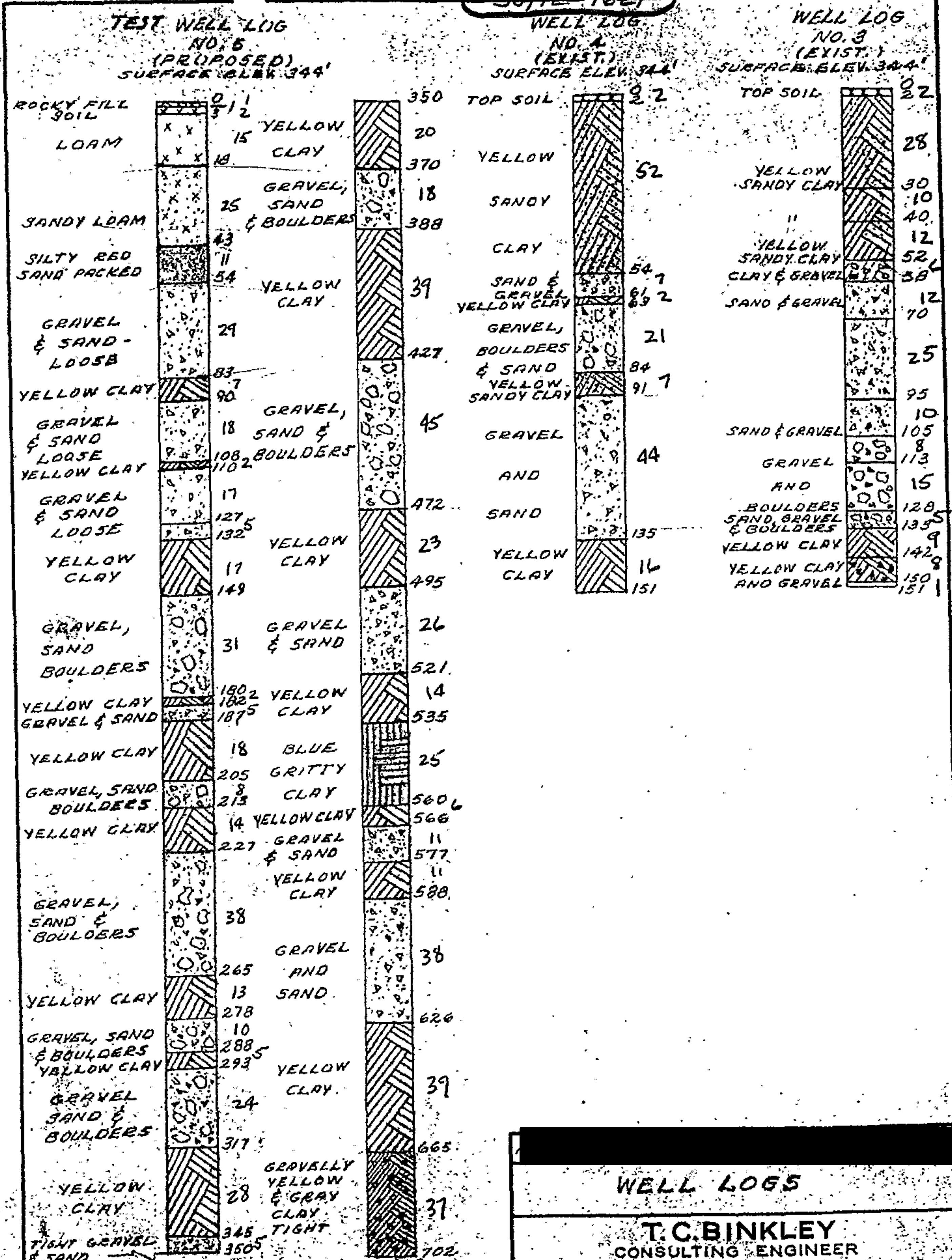
152 Ft. 12" Double 12 Gauge Casing

Water Level 22 Ft.

Perforated 56 to 136 Ft. (80 Ft.)

01-1652

~~3S/1E-16F5~~ 3S/1E-16L1 ~~3S/1E-16L2~~



[redacted]

WELL LOGS

T. C. BINKLEY
CONSULTING ENGINEER
PALO ALTO, CALIFORNIA

DR.	TR.	CH.	REC.	SCALE	DATE
TCB	WR			1" = 40'	12/28/61

APPROVED: T.C.B. DWG. NO. 6201-2

MJH

ORIGINAL

File Original, Duplicate and Triplicate with the REGIONAL WATER POLLUTION CONTROL BOARD No. 2 (Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

Do Not Fill In

No. 40514

State Well No.

Other Well No.

(1) OWNER:

N [redacted]

A

(2) LOCATION OF WELL:

County Alameda Owner's number, if any—

R. F. D. or Street No. Approx. 160' N.E. of Nevis St.; 25' SW of Black Avenue; 100' East of Santa Rita Road - Pleasanton

(3) TYPE OF WORK (*check*):

New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (*check*):

Domestic ☐ Industrial ☐ Municipal ☒

Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☒

Cable ☐

Dug Well ☐

(6) CASING INSTALLED:

SINGLE ☒ DOUBLE ☐ 30

From	ft. to	ft.	Diam.	Gage or Wall
0	135		18	5/16
0	325		18	5/16
325	650		12	1/4

Type and size of shoe or well ring

Describe joint Welded seams - welded joints

If gravel packed

Diameter of Bore	from ft.	to ft.
36	0	135
28½	135	650

Size of gravel: 4 x 1/8

(7) PERFORATIONS:

Type of perforator used Factory - Louvre type

Size of perforations 2½ in., length, by 1/8 in.

From	ft. to	ft.		Rows per ft.
149	180	45 per lin. foot		
201	212	45 per lin. foot		
228	265	45 per lin. foot		
278	288	45 per lin. foot		
293	317	45 per lin. foot		

See over for balance

(8) CONSTRUCTION:

Was a surface sanitary seal provided? ☒ Yes ☐ No To what depth ft.

Were any strata sealed against pollution? ☒ Yes ☐ No If yes, note depth of strata

From 0 ft. to 135 ft.

Method of Sealing 36 to 30" cemented to 135'

(9) WATER LEVELS:

Depth at which water was first found [illegible] ft.

Standing level before perforating [illegible] ft.

Standing level after perforating [illegible] ft.

(10) WELL TESTS:

Was a pump test made? ☒ Yes ☐ No If yes, by whom? C & N Pump & Well

Yield: 2820 gal./min. with 22' ft. draw down after 100 hrs.

Temperature of water Was a chemical analysis made? ☐ Yes ☒ No

Was electric log made of well? ☐ Yes ☐ No

(11) WELL LOG:

Total depth 685 ft. Depth of completed well 650 ft.

Formation: *Describe by color, character, size of material, and structure.*

0	ft. to	1	ft.	Fill - rocky
1	"	3	"	Soil
3	"	18	"	Loam
18	"	43	"	Sandy loam
43	"	54	"	Silty red sand
54	"	83	"	Gravel and sand - loose
83	"	90	"	Yellow clay
90	"	108	"	Gravel & sand
108	"	110	"	Yellow clay
110	"	132	"	Gravel and sand
132	"	149	"	Yellow clay
149	"	180	"	Gravel-sand-boulders
180	"	182	"	Yellow clay
182	"	201	"	Yellow clay
201	"	212	"	Gravel-sand-boulders
212	"	220	"	Yellow clay
220	"	228	"	Blue clay & rotten logs
228	"	265	"	Gravel-sand-boulders
265	"	278	"	Yellow clay
278	"	288	"	Gravel-sand-boulders
288	"	293	"	Yellow clay
293	"	317	"	Gravel-sand-boulders
317	"	342	"	Yellow clay
342	"	348	"	Gravel-boulders
348	"	370	"	Yellow clay
370	"	388	"	Gravel-sand-boulders
388	"	427	"	Yellow clay
427	"	472	"	Gravel-sand-boulders
472	"	495	"	Yellow gravelly clay
495	"	521	"	Gravel-sand
521	"	535	"	Yellow clay
535	"	560	"	Blue clay - gritty
560	"	566	"	Yellow clay
566	"	577	"	Gravel-sand
577	"	588	"	Yellow clay
588	"	595	"	Gravel-sand
595	"	602	"	Yellow gravelly clay
602	"	630	"	Gravel-sand
630	"	652	"	Yellow gravelly clay
652	"	685	"	Tight gravelly yellow and blue clay

FOR OFFICIAL USE ONLY

Work started 2-3 19 62. Completed 4-4- 19 62

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & N Pump and Well Co.
(Person, firm, or corporation) (*Typed or printed*)

Address 1901 Washington Street

Santa Clara, California

[SIGNED] [signature]
Well Driller

License No. 68648 Dated July 1, 19 61

95689 3-54 50M QUIN ⑨ SPO

DUPLICATE
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. 2
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

4a5

Do Not Fill In OH

No 40514

State Well No. 3S/1E-1G5

Other Well No.

(1) OWNER:

[redacted]

(2) LOCATION OF WELL: PLEASANTON WELL NO. 5

County Alameda Owner's number, if any—

R. F. D. or Street No. ~~Approx. 160' N.E. of Nevis St.; 25' SW of Black Avenue; 100' East of Santa Rita Road - Pleasanton~~

Between City Well No. 4 (on the north) & City Well No. 3 (on the South) both 151' Deep.

(3) TYPE OF WORK (check):

New well [x] Deepening [ ] Reconditioning [ ] Abandon [ ]

If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic [ ] Industrial [ ] Municipal [x]
Irrigation [ ] Test Well [ ] Other [ ]

(5) EQUIPMENT:

Rotary [ ]
Cable [x]
Dug Well [ ]

(6) CASING INSTALLED:

SINGLE [x] DOUBLE [ ]

From ft.	to ft.	Diam.	Gage or Wall
0	135	30	1/4
0	325	18	5/16
325	650	12	1/4

If gravel packed

Diameter of Bore	from ft.	to ft.
36	0	135
28½	135	650

Type and size of shoe or well ring

Size of gravel: 1/4 x 1/8

Describe joint ~~Welded seams - welded joints~~

(7) PERFORATIONS:

Type of perforator used ~~Factory - Louvre type~~

Size of perforations 2½ in., length, by 1/8 in.

From ft.	to ft.	Perf. per row	Rows per ft.
149	180	45 per lin. foot	
201	212	45 per lin. foot	
228	265	45 per lin. foot	
278	288	45 per lin. foot	
293	317	45 per lin. foot	

See over for balance

(8) CONSTRUCTION:

Was a surface sanitary seal provided? [x] Yes [ ] No To what depth ft.

Were any strata sealed against pollution? [x] Yes [ ] No If yes, note depth of strata

From 0 ft. to 135 ft.

Method of Sealing ~~36 to 30" cemented to 135'~~

(9) WATER LEVELS:

Static = 100

Depth at which water was first found ft.

Standing level before perforating ft.

Standing level after perforating ft.

RECEIVED MAY 10 1962 REGIONAL WATER POLLUTION CONTROL BOARD

(10) WELL TESTS:

Was a pump test made? [x] Yes [ ] No If yes, by whom? C & N Pump & Well

Yield: 2820 gal./min. with 22' ft. draw down after 100 hrs.

Temperature of water Was a chemical analysis made? [ ] Yes [x] No

Was electric log made of well? [ ] Yes [ ] No SPEC. CAN. 0-178

(11) WELL LOG:

Total depth 685 ft. Depth of completed well 650 ft.

Formations: *Describe by color, character, size of material, and structure.*

From ft.	to ft.	Formation
0	1	Fill - rocky
1	3	Soil
3	18	Loam
18	43	Sandy loam
43	54	Silty red sand
54	83	Gravel and sand - loose
83	90	Yellow clay
90	108	Gravel & sand
108	110	Yellow clay
110	132	Gravel and sand
132	149	Yellow clay
149	180	Gravel-sand-boulders
180	182	Yellow clay
182	201	Yellow clay
201	212	Gravel-sand-boulders
212	220	Yellow clay
220	228	Blue clay & rotten logs
228	265	Gravel-sand-boulders
265	278	Yellow clay
278	288	Gravel-sand-boulders
288	293	Yellow clay
293	317	Gravel-sand-boulders
317	342	Yellow clay
342	348	Gravel-boulders
348	370	Yellow clay
370	388	Gravel-sand-boulders
388	427	Yellow clay
427	472	Gravel-sand-boulders
472	495	Yellow gravelly clay
495	521	Gravel-sand
521	535	Yellow clay
535	560	Blue clay - gritty
560	566	Yellow clay
566	577	Gravel-sand
577	588	Yellow clay
588	595	Gravel-sand
595	602	Yellow gravelly clay
602	630	Gravel-sand
630	652	Yellow gravelly clay
652	685	Tight gravelly yellow and blue clay

Work started 2-3 1962, Completed 4-4- 1962

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & N Pump and Well Co. (Person, firm, or corporation) (Typed or printed)

Address 1901 Washington Street

Santa Clara, California

[SIGNED] [signature] Well Driller

License No. 68648 Dated July 1, 1961

93888 3-54 20M QUIN SPO

DWR FORM NO. 246 (REV. 3-54)

3S/1E-1G5

NO. 40514

CONFIDENTIAL

1n. 12"

Additional perforations: 32½

348-362.....[illegible] holes per lineal foot

378-388....[illegible]"

457-472.... "

495-521.... "

535-550.... "

566-577.... "

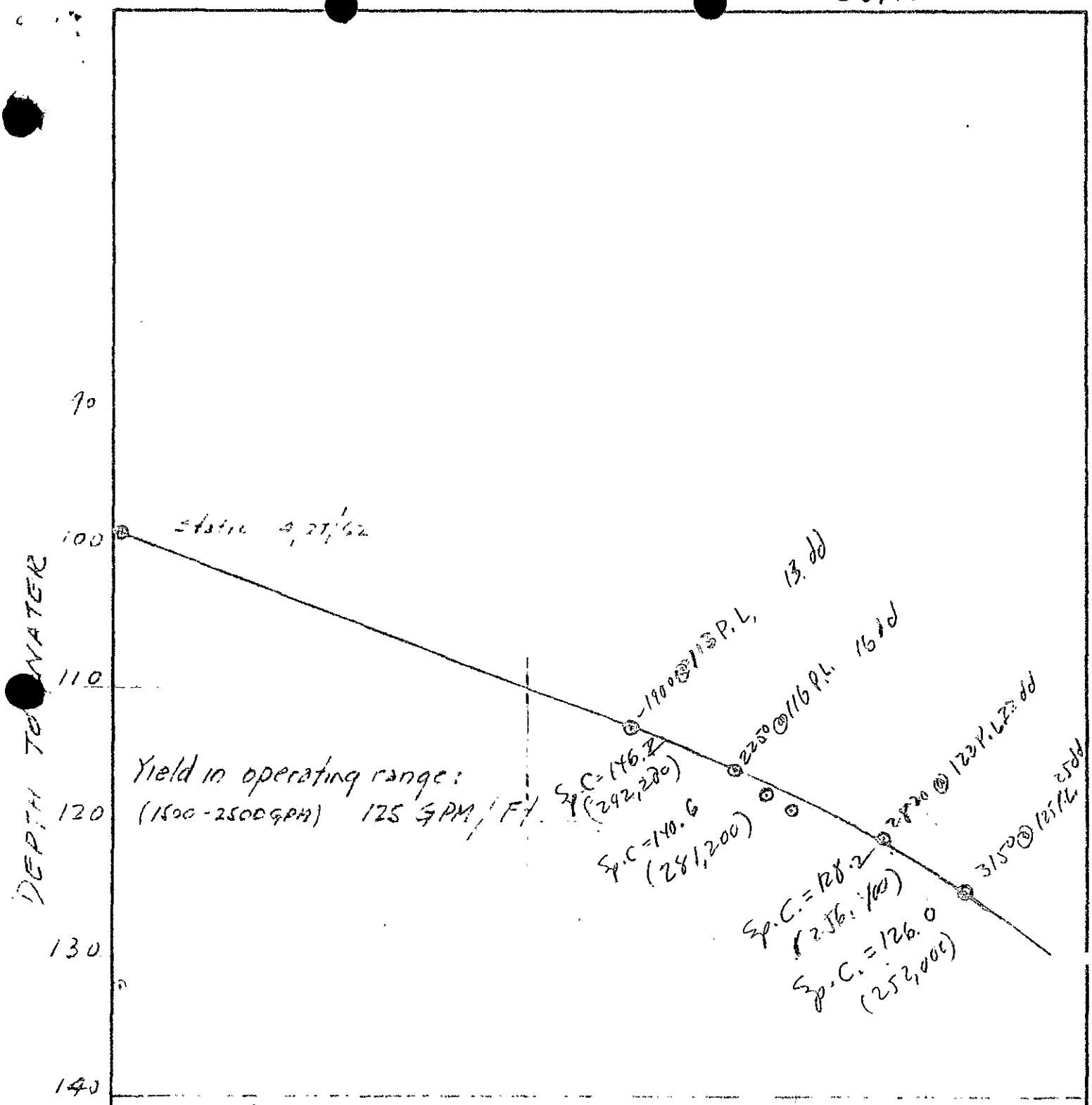
583-593.... "

602-620.... "

640-690.... "

3S/1E-16L5

35/1E-16L5



Production test
4/27/62 by C.A. Pump & Well Co.

[redacted]

WELL NO. 5
DRAWDOWN CURVE

T. C. BINKLEY
CONSULTING ENGINEER
PALO ALTO, CALIFORNIA

DR.	TR.	CH.	REC.	SCALE	DATE
					5/10/62

16L5

3S/1E-16G5

40514

~~3S/1E-16G7~~

3S/1E-16G2

TEST WELL LOG NO. 5 (PROPOSED)

SURFACE ELEV. 344'

ROCKY FILL SOIL	0	1		
	1	2		
LOAM	2	15	YELLOW CLAY	350
	15	18		20
	18			370
		25	GRAVEL, SAND & BOULDERS	18
SANDY LOAM	25	43		388
SILTY RED SAND PACKED	43	11		
	54		YELLOW CLAY	39
GRAVEL & SAND - LOOSE	29			
	83			427
YELLOW CLAY	7	90		
GRAVEL & SAND LOOSE	18		GRAVEL, SAND & BOULDERS	45
YELLOW CLAY	108	110	2	
GRAVEL & SAND LOOSE	17			
	127			472
YELLOW CLAY	5	132		
	17		YELLOW CLAY	23
	149			495
GRAVEL, SAND BOULDERS	31		GRAVEL & SAND	26
	180			521
YELLOW CLAY	2	182	YELLOW CLAY	14
GRAVEL & SAND	5	187		535
YELLOW CLAY	18		BLUE GRITTY CLAY	25
	205			
GRAVEL, SAND BOULDERS	8	213		560
YELLOW CLAY	14		YELLOW CLAY	566
	227		GRAVEL & SAND	11
				577
			YELLOW CLAY	11
GRAVEL, SAND & BOULDERS	38			588
			GRAVEL AND SAND	38
	265			
YELLOW CLAY	13	278		626
GRAVEL, SAND & BOULDERS	10	288		
YELLOW CLAY	5	293	YELLOW CLAY	39
GRAVEL SAND & BOULDERS	24			
	317			665
YELLOW CLAY	28		GRAVELLY YELLOW & GRAY CLAY TIGHT	37
TIGHT GRAVEL & SAND	345	350	5	702

WELL LOG NO. 4 (EXIST.)

SURFACE ELEV. 344'

TOP SOIL	2	2
YELLOW SANDY CLAY	52	
	54	7
SAND & GRAVEL	61	2
YELLOW CLAY	69	2
GRAVEL, BOULDERS & SAND	21	
	84	
YELLOW SANDY CLAY	91	7
GRAVEL AND SAND	44	
	135	
YELLOW CLAY	16	
	151	

WELL LOG NO. 3 (EXIST.)

SURFACE ELEV. 344'

TOP SOIL	2	2
YELLOW SANDY CLAY	28	
	30	
"	10	
	40	
YELLOW SANDY CLAY	12	
	52	
CLAY & GRAVEL	6	58
SAND & GRAVEL	12	
	70	
	25	
	95	
	10	
SAND & GRAVEL	105	
GRAVEL AND BOULDERS	8	113
	15	
	128	
SAND, GRAVEL & BOULDERS	5	133
YELLOW CLAY	9	142
YELLOW CLAY AND GRAVEL	8	150
	1	151

WELL LOGS

T. C. BINKLEY

CONSULTING ENGINEER

PALO ALTO, CALIFORNIA

DR.	TR.	CH.	REC.	SCALE	DATE
TCB	W.R.			1" = 40'	12/28/61

APPROVED: T.C.B. DWG

5205

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. 2
(Insert appropriate number)

WATER WELL DRILLERS REPORT
(Sections 7076, 7077, 7078, Water Code)

THE RESOURCES AGENCY OF CALIFORNIA

Do Not Fill In
№ 110882
State Well No.
Other Well No. 3/1 1-L7

(1) OWNER:
Name [redacted]
Address [redacted]

(2) LOCATION OF WELL:
County Alameda Owner's number, if any— 6
R. F. D. or Street No.
East side of Santa Rita Road about 80' north of driveway to Alisal Elementary School. About 30' east of frontage road on Lot 54 of Tract 2595, Amador Estates, Unit #1.

(3) TYPE OF WORK (check):
New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☒
Cable ☐
Dug Well ☐

(6) CASING INSTALLED:
SINGLE ☒ DOUBLE ☐

From ft.	to ft.	Diam.	Gage or Wall
Up 2	365	18"	5/16
365	371	18" to 14" taper	
371	625	14"	5/16
625	647	14" OD	1/4

If gravel packed

Diameter of Bore	from ft.	to ft.
36"	0	130
28"	130	647

Type and size of shoe or well ring Band
Size of gravel: 3/8 x 1/8
Describe joint Collars

(7) PERFORATIONS:
Type of perforator used Louvers, except 625-647' were sawed
Size of perforations 2½ in., length, by 1/8 in.

From ft.	to ft.	Perf. per row	Rows per ft.
165	365	12	4
371	625	8	4
625	647	14	4

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☒ Yes ☐ No To what depth 130 ft.
Were any strata sealed against pollution? ☐ Yes ☒ No If yes, note depth of strata
From ft. to ft.
Method of Sealing Cement grout

FOR OFFICIAL USE ONLY

(9) WATER LEVELS:
Depth at which water was first found 78 ft.
Standing level before perforating ft.
Standing level after perforating ft.

(10) WELL TESTS:
Was a pump test made? ☒ Yes ☐ No If yes, by whom? Anderson Pump Co. Chowchilla, Calif.
Yield: 3052 gal./min. with 28' ft. draw down after hrs.
Temperature of water Was a chemical analysis made? ☐ Yes ☒ No
Was electric log made of well? ☐ Yes ☒ No

(11) WELL LOG:
Total depth 647 ft. Depth of completed well 625 ft.
Formation: *Describe by color, character, size of material, and structure.*

ft.	to ft.	Formation
0	4	Soil
4	18	Brown clay
18	21	Brown sand and cobbles
21	47	Gravel, cobbles & boulders
47	54	Yellow clay
54	77	Gravel, cobbles & boulders
77	82	Grey clay
82	92	Blue clay
92	100	Boulders and gravel
100	104	Yellow silt & gravel
104	106	Boulders
106	109	Small gravel
109	112	Cobbles and gravel
112	113	Grey clay and gravel
113	125	Gravel and cobbles
125	141	Red clay
141	189	Cobbles and sand
189	191	Grey clay
191	194	Cobbles and sand
194	199	Brown clay
199	202	Blue clay (joint)
202	209	Brown clay
209	216	Cobbles and sand
216	218	Brown clay and cobbles
218	228	Gravel and cobbles
228	231	Sandy brown clay & cobbles
231	233	Gravel and cobbles
233	239	Yellow-brown clay
239	280	Gravel and cobbles
280	284	Yellow brown clay
284	300	Gravel and cobbles
300	309	Yellow brown clay
309	328	Gravel and cobbles
328	338	Yellow brown clay
338	342	Gravel and cobbles
342	350	Yellow brown clay
350	353	Blue clay
353	354	Gravel and cobbles
354	365	Blue clay
365	369	Brown clay
369	372	Boulders and clay
372	383	Brown clay

(cont. on reverse)

Work started 2/18/65 19 , Completed 5/11/65 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Bill Belknap
(Person, firm, or corporation) *(Typed or printed)*
Address 9274 So. Buttonwillow
Reedley, California
[SIGNED] Bill Belknap vh
Well Driller
License No. 106833 Dated 5/10/65, 19

110882

11. WELL LOG:

383	386	Boulders
386	404	Sand and gravel; some boulders
404	435	Brown clay
435	471	Cobbles
471	474	Yellow brown clay
474	488	Sand and gravel and cobbles
488	508	Yellow brown clay
508	513	Sand and gravel; some cobbles
513	521	Yellow brown clay
521	532	Gravel and cobbles
532	540	Yellow brown clay
540	549	Grey clay (jointy)
549	582	Blue clay
582	584	Gravel
584	586	Yellow brown clay
586	609	Gravel and cobbles
609	611	Grey clay
611	627	Gravel and boulders
627	636	Grey clay
636	640	Gravel
640	647	Brown clay

ORIGINAL

File Original, Duplicate and Triplicate with the REGIONAL WATER POLLUTION CONTROL BOARD No. 2 *(Insert appropriate number)*

RECEIVED REGIONAL WATER POLLUTION CONTROL BOARD #2 SEP 4 1958

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

Do Not Fill In

No. 24321

State Well No. 3/1E-16L2

Other Well No.

(1) OWNER:

Name [redacted]

Address

(2) LOCATION OF WELL:

County Alameda Owner's number, if any— none

R. F. D. or Street No. Black Ave. & Santa Rita Road, Pleasanton

(3) TYPE OF WORK (*check*):

New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐

If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (*check*):

Domestic ☐ Industrial ☐ Municipal ☒

Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐

Cable ☒

Dug Well ☐

(6) CASING INSTALLED:

SINGLE ☒ DOUBLE ☒

					Gage or Wall
From	0 ft. to	42 ft.	18 Diam.	1/4	
"	0 "	151 "	14 "	10	

Type and size of shoe or well ring 3/4 x 10

Describe joint slip

If gravel packed

Diameter of Bore	from ft.	to ft.

Size of gravel:

(7) PERFORATIONS:

Type of perforator used Mills Knife

Size of perforations 2½ in., length, by 5/16 in.

From 65 ft. to 130 ft. 5 Perf. per row 1 Rows per ft.

(8) CONSTRUCTION:

Was a surface sanitary seal provided? ☒ Yes ☐ No To what depth 42 ft.

Were any strata sealed against pollution? ☐ Yes ☒ No If yes, note depth of strata

From ft. to ft.

Method of Sealing

(9) WATER LEVELS:

Depth at which water was first found 65 ft.

Standing level before perforating 52 ft.

Standing level after perforating 52 ft.

(10) WELL TESTS:

Was a pump test made? ☒ Yes ☐ No If yes, by whom? driller

Yield 1200 gal./min. with 53 ft. draw down after 57½ hrs.

Temperature of water Was a chemical analysis made? ☐ Yes ☒ No

Was electric log made of well? ☐ Yes ☒ No

(11) WELL LOG:

Total depth 151 ft. Depth of completed well 151 ft.

Formation: *Describe by color, character, size of material, and structure.*

0	ft. to	2	ft. Top Soil
2	"	52	" Yellow Sandy Clay
52	"	58	" Clay & Gravel
58	"	105	" Sand & Gravel
105	"	128	" Gravel & Boulders
128	"	133	" Sand, Gravel & Boulders
133	"	142	" Yellow Clay
142	"	151	" Yellow Clay & Gravel

FOR OFFICIAL USE ONLY

Work started June 23, 1958 Completed August 13, 1958

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME WESTERN WELL DRILLING CO., LTD.
(Person, firm, or corporation) *(Typed or printed)*

Address P. O. Box 47

San Jose, Calif.

[SIGNED] [redacted]
Well Driller

License No. 25182 Dated Sept. 3, 1958

95689 3-54 50M QUIN ⓐ SPO

DWR FORM NO. 246 (REV. 3-54)

1958

3S/1E-16L2

Pleasanton Town Well No. 3

LOG OF WELL FOR [redacted]

BLACK AVE. AND SANTA RITA ROAD
NEAR PLEASANTON, CALIF.

Driller: Carl Porter: Western P.

Drilled for S.F. water dept. under contract No. WD-837

				THICKNESS	
June	23	0	2	2 Ft.	Top Soil
	23	2	30	28	Yellow Sandy Clay
	24	30	40	10	" " "
	25	40	52	12	" " "
	25	52	58	6	Clay & Gravel
	26	58	70	12	Sand & Gravel (water at 65')
	27	70	95	25	" " "
	30	95	105	10	" " "
	30	105	113	8	Gravel & Boulders
July	1	113	128	15	" " "
	2	128	133	5	Sand, Gravel & Boulders
	2	133	142	9	Yellow Clay
	2	142	150	8	Yellow Clay & Gravel
	3	150	151	1	" " " "

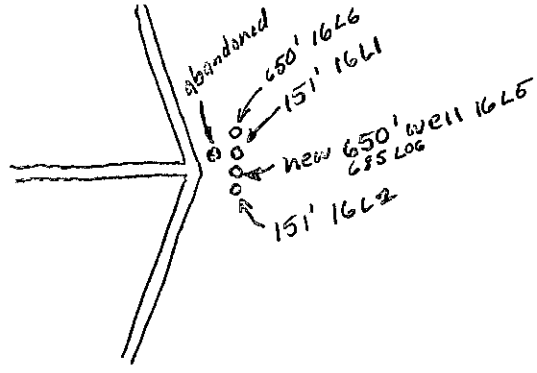
151 Ft. 14" Double 10 Gauge Casing
42 Ft. 18" x 1/4" Control Casing sanitary seal.

Water Level 52 Ft. but encountered @ 65'

Perforated: 65 to 130' - 65 Ft. 6 holes per ft.

Drilled Aug. 13, 1958

1200 GPM WITH 53' drawdown
After 57 1/2 hrs.



3 S/1E-16L2

New Test Well

3/1E-16

November 20, 1961

Log of [redacted]

Well drilled in 1958 by Carl Porter under San Francisco Water Department contract No. WD-837 with Western Well Drilling Company, Ltd. at Black Ave. and Santa Rita Road.

0	2	2'	Top soil
2	30	28	Yellow sandy clay
30	40	10	" " "
40	52	12	" " "
52	58	6	Clay and gravel
58	70	12	Sand " "
70	95	25	" " "
95	105	10	" " "
105	113	8	Gravel " Boulders
113	128	15	" " "
128	133	5	Sand, gravel and boulders
133	142	9	Yellow clay
142	150	8	" " and gravel
150	151	1	" " " "

151 feet of 14" double 10 gauge casing
42 feet of 18" x 1/4" control casing
Water Level 52 feet
Perforated 65' to 130' (65')
6 holes per foot

CONFIDENTIAL LOG

CONFIDENTIAL

35/1E-1645

TEST WELL LOG NO. 5 (PROPOSED)

SURFACE ELEV. 344'

ROCKY FILL SOIL	0	1½		350	
LOAM		15	YELLOW CLAY		20
	18			370	
SANDY LOAM		25	GRAVEL, SAND & BOULDERS		18
	43			388	
SILTY RED SAND PACKED		11			
	54		YELLOW CLAY		39
GRAVEL & SAND - LOOSE		29			
	83			427	
YELLOW CLAY	90	7			
GRAVEL & SAND LOOSE		18	GRAVEL, SAND & BOULDERS		45
YELLOW CLAY	108	2			
	110				
GRAVEL & SAND LOOSE		17			
	127			472	
YELLOW CLAY	132	5	YELLOW CLAY		23
		17		495	
	149				
GRAVEL, SAND BOULDERS		31	GRAVEL & SAND		26
				521	
YELLOW CLAY	180	2	YELLOW CLAY		14
GRAVEL & SAND	182	5		535	
YELLOW CLAY		18	BLUE GRITTY CLAY		25
	205				
GRAVEL, SAND BOULDERS	213	8		560	6
YELLOW CLAY		14	YELLOW CLAY	566	
	227		GRAVEL & SAND	577	11
			YELLOW CLAY	588	11
GRAVEL, SAND & BOULDERS		38			
			GRAVEL AND SAND		38
	265				
YELLOW CLAY		13		626	
	278				
GRAVEL, SAND & BOULDERS		10			
	288				
YELLOW CLAY	293	5	YELLOW CLAY		39
GRAVEL SAND & BOULDERS		24			
	317			665	
YELLOW CLAY		28	GRAVELLY YELLOW & GRAY CLAY TIGHT		37
TIGHT GRAVEL & SAND	345				
	350	5		702	

35/1E-1641

WELL LOG NO. 4 (EXIST.)

SURFACE ELEV. 344'

TOP SOIL	2	2	
YELLOW SANDY CLAY		52	
	54		
SAND & GRAVEL	61	7	
YELLOW CLAY	69	2	
GRAVEL, BOULDERS & SAND		21	
	84		
YELLOW SANDY CLAY	91	7	
GRAVEL AND SAND		44	
	135		
YELLOW CLAY		16	
	151		

35/1E-1642

WELL LOG NO. 3 (EXIST.)

SURFACE ELEV. 344'

TOP SOIL	2	2	
		28	
YELLOW SANDY CLAY	30	10	
"	40		
		12	
YELLOW SANDY CLAY	52	6	
CLAY & GRAVEL	58		
SAND & GRAVEL		12	
	70		
		25	
	95		
		10	
SAND & GRAVEL	105		
		8	
GRAVEL AND	113		
		15	
BOULDERS	128		
SAND, GRAVEL & BOULDERS	135	5	
		9	
YELLOW CLAY	142	8	
YELLOW CLAY AND GRAVEL	150		
	151	1	

WELL LOGS

T. C. BINKLEY
CONSULTING ENGINEER
PALO ALTO, CALIFORNIA

DR.	TR.	CH.	REC.	SCALE	DATE
TCB	WR			1" = 40'	12/28/61

APPROVED: T.C.B. DWG. NO. 6201-2

File in Well Log Record Book

3/1E-16L80

01-1655

Job #7. [redacted] Pleasanton.

LOG OF WELL. 20' South Blackow South Line
150' West Santa Rita Road

Oct 5-1936
T.W.F.

Top soil			6 feet
Clay, yellow sticky	6 to	43	"
Gravel free	43 "	63	"
Gravel & boulders, some clay	63 "	70	"
Gravel free	70 "	75	"
Clay sticky	75 "	78	"
Gravel & boulders, free	78 "	95	"
Gravel & Boulders	95 "	99	"
Boulders, hard	99 "	103	"
Clay, some gravel	103 "	106	"
Boulders, gravel, some clay, hard	106 "	112	"
Clay with some gravel	112 "	124	"
Gravel & boulders, free	124 "	138	"
Sandy clay	138 "	141	"
Gravel & boulders free	141 "	148	"
Gravel, boulders & some clay	148 "	155	"
Clay	155 "	158	"

CONFIDENTIAL LOG

156 ft.
18 ft. top 6' blank, 9' perforated, bottom 3' blank with plain band ½" x 4"

138 ft.
18 ft. all perforated

120 ft.
18 ft. every other 3' perforated

102 ft.
18 ft. all perforated

CONFIDENTIAL

84 ft.
18 ft. top 6' blank, bottom 12' perforated

66 ft.
18 ft. all perforated

48 ft.
18 ft. top 12' blank, bottom 6' perforated

30 ft.
36 ft. blank

6 ft. to set.

CONFIDENTIAL LOG

01-1656

[redacted]

3/1E-16 L8

LOG OF COMMUNITY WELL NO. 1.

From	To	Material
0	4	black loam
4	12	sandy clay
12	20	" "
20	23	sand
23	30	yellow clay
30	36	hard cement
36	45	cement gravel
45	61	hard cement
61	72	yellow sandy clay
72	78	cement gravel & clay
78	83	coarse gravel
83	94	cement gravel
94	98	coarse gravel
98	104	hard cement
104	106	" " & boulders
106	110	" "
125	135	" "
135	150	cement
150	155	" gravel
155	165	yellow sandy clay with blue streaks
165	175	" clay (sticky)
175	177	cement clay
177	180	coarse gravel (loose) -perforated
180	187	" " & sand
187	190	yellow clay
190	198	" sandy clay (sticky)
198	200	hard cement
200	206	cement gravel with soft streaks
206	210	yellow sandy clay (hard)
210	214	cement clay & stones
214	218	" gravel - perforated
218	221	gravel & sand
221	225	yellow sandy clay
225	235	hard clay with gravel
235	240	blue clay
240	246	yellow sandy clay
246	252	loose gravel & sand
252	254	gravel & sand
254	259	yellow cement clay
259	262	fine gravel & sand
262	272	fine gravel & sand (too fine to punch holes in
272	273	gravel & sand
273	282	cement gravel mixed with clay
282	300	" "
300	305	yellow clay

CONFIDENTIAL LOG

CONFIDENTIAL

REGION

COUNTY

NEAR

DEPARTMENT OF WATER RESOURCES
DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

WELL LOG

BASIN

DWR No. 3S/1E-16L 82 B & M

OTHER Nos. 17

01-1657 [redacted]

LOCATION

OWNER ADDRESS

DRILLED BY ADDRESS

DRILLING METHOD GRAVEL PACKED DATE COMPLETED

SIZE OF CASING DEPTH STRUCK WATER AT

PERFORATIONS SIZE NO.

WATER LEVEL BEFORE PERFORATING AFTER

TEST DATA: DISCHARGE G. P. M. DRAWDOWN FT. HOURS RUN

OTHER DATA AVAILABLE: WATER LEVEL RECORD ANALYSIS

SURFACE ELEV. DATUM SOURCE OF INFORMATION Spring valley water co. 1912 report

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICK-NESS	SP. YIELD %	
0 - 6		top soil			
6 - 44		light sandy clay			
44 - 45		hard bed clay and gravel			
		hard pan and coarse gravel			

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY DATE SHEET 1 OF

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. 2
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

Do Not Fill In
No. 40549
State Well No.
Other Well No. 3/1E-16L

(1) OWNER:
N [redacted]
A

(2) LOCATION OF WELL:
County Alameda Owner's number, if any—
R. F. D. or Street No. Approx. 160' N.E. of Nevis St.
25' S.W. of Black Ave.
90' East of Santa Rita Rd.

(3) TYPE OF WORK (*check*): Test Hole
New well ☐ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (*check*):
Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☒ Other ☐

(5) EQUIPMENT:
Rotary ☒
Cable ☐
Dug Well ☐

(6) CASING INSTALLED:
SINGLE ☐ DOUBLE ☐ Test Hole

From	ft. to	ft.	Diam.	Gage or Wall
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"

Type and size of shoe or well ring
Describe joint

If gravel packed

Diameter of Bore	from ft.	to ft.
	"	"
	"	"
	"	"
	"	"
	"	"

Size of gravel:

(7) PERFORATIONS:
Type of perforator used
Size of perforations in., length, by in.

From	ft. to	ft.	Perf. per row	Rows per ft.
"	"	"	" " "	" " "
"	"	"	" " "	" " "
"	"	"	" " "	" " "
"	"	"	" " "	" " "

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☐ Yes ☐ No To what depth ft.
Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata

From	ft. to	ft.
"	"	"

Method of Sealing

(9) WATER LEVELS:
Depth at which water was first found ft.
Standing level before perforating ft.
Standing level after perforating ft.

(10) WELL TESTS:
Was a pump test made? ☐ Yes ☐ No If yes, by whom?
Yield: gal./min. with ft. draw down after hrs.
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No
Was electric log made of well? ☐ Yes ☒ No

(11) WELL LOG:
Total depth 702 ft. Depth of completed well Test Hole ft.
Formation: *Describe by color, character, size of material, and structure.*

0	ft. to	1	ft. Fill - rocky	1
1	"	3	" Soil	2
3	"	18	" Loam	15
18	"	43	" Sandy loam	25
43	"	54	" Silty red sand - packed	11
54	"	83	" Gravel & sand - loose	29
83	"	90	" Yellow clay	7
90	"	108	" Gravel & sand - loose	18
108	"	110	" Yellow clay	2
110	"	127	" Gravel & sand - loose	17
127	"	132	" Gravel & sand - loose	5
132	"	149	" Yellow clay	17
149	"	180	" Gravel-sand-boulders	31
180	"	182	" Yellow clay	2
182	"	187	" Gravel and sand	5
187	"	205	" Yellow clay	18
205	"	213	" Gravel-sand-boulders	8
213	"	227	" Yellow clay	14
227	"	265	" Gravel-sand-boulders	38
265	"	278	" Yellow clay	13
278	"	288	" Gravel-sand-boulders	10
288	"	293	" Yellow clay	5
293	"	317	" Gravel-sand-boulders	24
317	"	345	" Yellow clay	28
345	"	350	" Tight gravel and sand	5
350	"	370	" Yellow clay	20
370	"	388	" Gravel-sand-boulders	18
388	"	427	" Yellow clay	39
427	"	472	" Gravel-sand-boulders	45
472	"	495	" Yellow clay	23
495	"	521	" Gravel and sand	26
521	"	535	" Yellow clay	14
535	"	560	" Blue gritty clay	25
560	"	566	" Yellow clay	6
566	"	577	" Gravel and sand	11
577	"	588	" Yellow clay	11
588	"	626	" Gravel and sand	38
626	"	665	" Yellow clay	39
665	"	702	" Gravelly yellow and grey clay	37
"	"	"	Tight	5

FOR OFFICIAL USE ONLY

Work started 10-26, 1961, Completed 11-8, 1961

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & N Pump and Well Co.
(Person, firm, or corporation) (*Typed or printed*)
Address 1901 Washington Street
Santa Clara, California

[SIGNED] [signature]
Well Driller

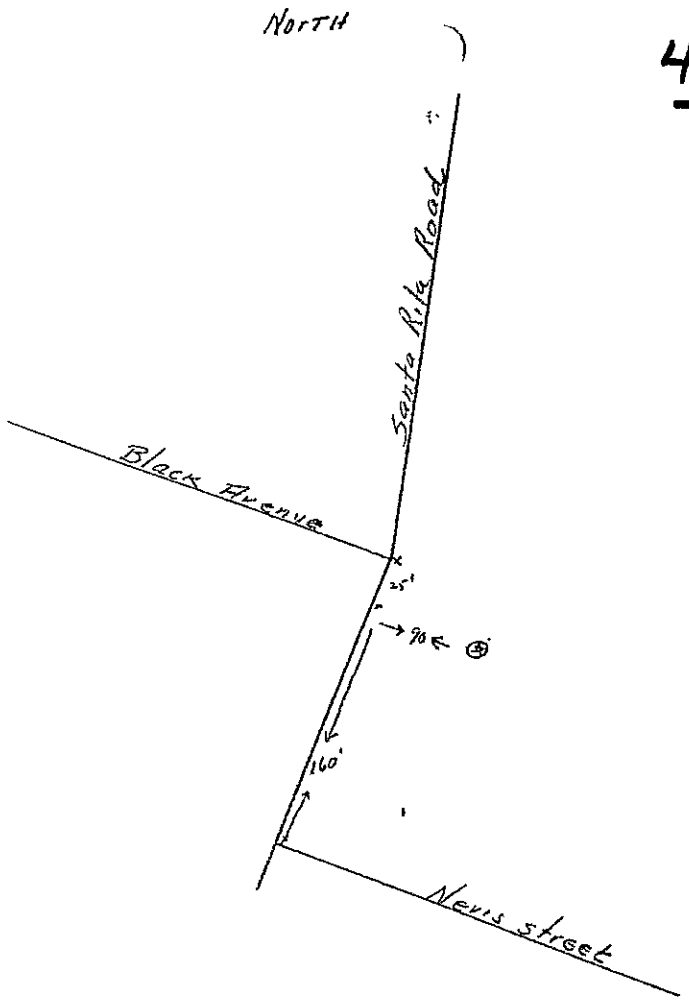
License No. 68648 Dated July 1, 1961

55689 3-54 50M QUIN ® SPG DWR FC [illegible]

40549

[redacted]

Alameda County
Approx. 160' N.E. of Nevis St.
25' S.W. of Black Avenue
90' East of Santa Rita Road



REGION

COUNTY

NEAR

DEPARTMENT OF WATER RESOURCES
DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

WELL LOG

BASIN

DWR No. 3S/1E-16M 30 B & M

OTHER Nos. 13
Lundy Assn
Station No. 3

01-1658

29

LOCATION

OWNER ADDRESS

DRILLED BY ADDRESS

DRILLING METHOD GRAVEL PACKED DATE COMPLETED

SIZE OF CASING DEPTH STRUCK WATER AT

PERFORATIONS SIZE No.

WATER LEVEL BEFORE PERFORATING AFTER

TEST DATA: DISCHARGE G. P. M. DRAWDOWN FT. HOURS RUN

OTHER DATA AVAILABLE: WATER LEVEL RECORD ANALYSIS

SURFACE ELEV. DATUM SOURCE OF INFORMATION Spring Valley Water Co. 1912 report

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICK-NESS	SP. YIELD %
0 -10		top soil- yellowish, sandy	10	
10 - 27		clay	17	
27 - 28		blue clay	1	
28 - 33		gravel	5	

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY DATE SHEET 1 OF

FORM 263. 65981 11-57 10M △ SPO

REGION _____ COUNTY _____ NEAR _____

DEPARTMENT OF WATER RESOURCES
DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

WELL LOG

BASIN _____
DWR No. 3S/1E-16M 2 D & M
OTHER Nos. 14

01-1659

LOCATION _____

OWNER _____ ADDRESS _____

DRILLED BY _____ ADDRESS _____

DRILLING METHOD _____ GRAVEL PACKED _____ DATE COMPLETED _____

SIZE OF CASING DEPTH _____ STRUCK WATER AT _____

PERFORATIONS _____ SIZE _____ No. _____

WATER LEVEL BEFORE PERFORATING _____ AFTER _____

TEST DATA: DISCHARGE G. P. M. _____ DRAWDOWN FT. _____ HOURS RUN _____

OTHER DATA AVAILABLE: WATER LEVEL RECORD _____ ANALYSIS _____

SURFACE ELEV. _____ DATUM _____ SOURCE OF INFORMATION Spring valley water co. 1912 report

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICKNESS	SP. YIELD %	
0 - 9		top soil - hard pan- gravel	9		
9 - 37		sandy clay	28		

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY _____ DATE _____ SHEET 1 OF _____

WELL LOG

01-2124

H

OWNER: [redacted]

035/016 17J1

DRILLED: APRIL 1949

DRILLER: SILVA BROS. 17

CASING: 14" 12 GAUGE d.c.

0-4	SANDY SOIL	4
4-18	Y. SAND	14
18-43	Y. SANDY CL.	25
43-95	GR.	52
95-125	Y. SANDY CL.	30
125-130	GR.	5
130-155	BLUE CL.	25
155-175	Y. CL.	20
175-198	GR.	23
198-214	Y. SANDY CL.	16
214-228	GR.	14
228-236	Y. CL.	8
236-301	GR.	65

[redacted]

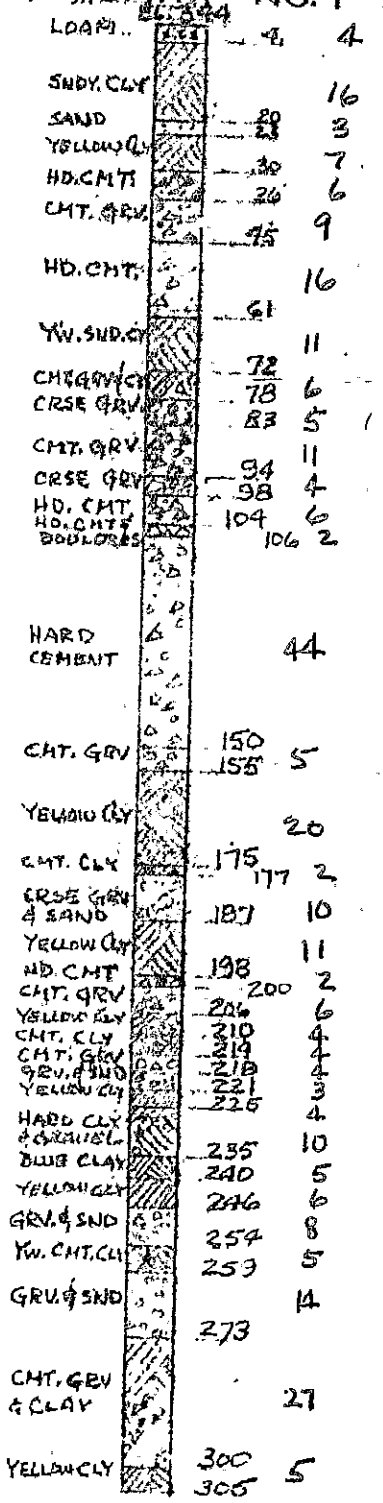
3S/1E 17J1

35/1E-16P1

01-1661

35/1E-16P1

COMMUNITY NO. 1



[redacted]

PLEASANTON, CALIF.

LOGS OF WELLS

IN VICINITY OF PLEASANTON

OCT. 9, 1956 T.C. BINKLEY, ENG.

VERT. SCALE: 1" = 40' J.B.G.

WELL LOG

01-2125

OWNER: [redacted] 03S/01G/17J2

DATE DRILLED: APRIL 9, 1941

DRILLER: SILVA BROS.

CASING 14" 12 GAUGE

0-2	SANDY SOIL	
2-3	DRY GR.	
3-8	DARK SOIL	PERFORATIONS:
8-30	SANDY CL.	140-180
30-45	S Y. CL.	
45-62	GR.	
62-67	Y. CL.	
67-86	GR.	
86-103	Y. CL.	
103-115	GR.	
115-130	Y. CL.	
130-180	GR.	
180-187	DIRTY GR	

03S/01E 17J2

ExxonMobil Environmental Services Company
4096 Piedmont Avenue #194
Oakland, California 94611
510 547 8196 Telephone
510 547 8706 Facsimile

Jennifer C. Sedlachek
Project Manager

ExxonMobil

January 29, 2010

Mr. Jerry T. Wickham
Alameda County Health Care Services Agency
1311 Harbor Bay Parkway
Alameda, California 94502-6577

Subject: Detailed Well Survey Report
Former Mobil Station 04H6J, 1024 Main Street, Pleasanton, California
ACHCSA File No. RO-2427

Dear Mr. Wickham:

Attached for your review and comment is a copy of the *Detailed Well Survey Report* for the above-referenced site. The document, prepared by ETIC Engineering, Inc. of Pleasant Hill, California, is being submitted in response to a letter from the Alameda County Health Care Services Agency dated November 20, 2009.

Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or comments, please contact me at 510.547.8196.

Sincerely,

Jennifer C. Sedlachek
Project Manager

Attachment: ETIC Detailed Well Survey Report

c: w/ attachment:
Mr. Abbas Masjedi - Pleasanton Utility Planning
Mr. Matthew Katen - Alameda County Flood Control and Water Conservation District, Zone 7 Water Agency
Mr. Paul L. Hultne - Pleasanton on Main, LLC
Mount Diablo National Bank

c: w/o attachment:
Mr. Bryan Campbell - ETIC Engineering, Inc.

ETIC ENGINEERING

29 January 2010

Ms. Jennifer C. Sedlachek
ExxonMobil Environmental Services Company
4096 Piedmont Avenue #194
Oakland, California 94611

Subject: Detailed Well Survey Report
Former Mobil Station 04H6J
1024 Main Street, Pleasanton, California

Dear Ms. Sedlachek:

ETIC Engineering, Inc. (ETIC) has prepared this Detailed Well Survey Report for ExxonMobil Environmental Services Company on behalf of ExxonMobil Oil Corporation for former Mobil Station 04H6J. This report was prepared as part of the closure preparation process and in response to a letter from the Alameda County Health Care Services Agency dated 20 November 2009. A copy of the correspondence is provided in Attachment A.

This report summarizes a search conducted with information from various agencies for water supply wells within a 2,000-foot radius of the site.

Background

Former Mobil Station 04H6J is located at 1024 Main Street, Pleasanton, California, on the northeast corner of Main Street and Stanley Boulevard (Figures 1 through 3). The site was used as a gasoline service station until 1989 and is currently a vacant lot. The three underground fuel storage tanks (USTs) and an underground used-oil tank were removed in 1989 (Figure 3).

Residential properties are located to the east across a parking lot; railroad tracks are located to the north and single family homes are located across the railroad tracks to the north. Commercial properties are located across Main Street to the west; across Stanley Boulevard to the south is a former Union 76 service station.

The existing groundwater monitoring wells (MW1 through MW8 and MW10 through MW12) and extraction wells (RW1 through RW4 and VMW1 through VMW4) are screened in two water-bearing zones between 5 and 55 feet below ground surface (bgs). The depths to water in the wells vary depending on the screened intervals. In the upper clay/silt unit, the depth to water can vary (a perched zone), and in the lower sand/gravel unit the depth to water is approximately 37 to 44 feet bgs. The groundwater gradient in the sand/gravel unit is generally to the north.

Well Search

A search was conducted for public and private wells within a 2,000-foot radius of the site. Wells identified as monitoring wells were not included in this search. The results of this search are based on information from the Zone 7 Water Agency (Zone 7), California Department of Water Resources (DWR), and Environmental Data Resources, Inc. (EDR) records. As part of the well search performed for former Mobil Station 04H6J, an offsite reconnaissance was conducted on 3 December 2009 to ascertain the presence of water supply wells identified in the Zone 7, DWR, and EDR records. The locations of the identified wells are shown on Figure 2. Table 1 summarizes the wells identified within the search radius. A compilation of detailed information for the wells located within the search radius is provided below:

- Three municipal wells owned by the City of Pleasanton were identified in the information from Zone 7: 3S/1E-16L1 (16L1), 3S/1E-16L5 (16L5), and 3S/1E-16L7 (16L7). The locations of these wells are shown on Figure 2. The well logs and construction details from the DWR are provided in Attachment B. Given the relative distance of the wells to the site and the placement of screened intervals, numerous clay layers shown in the well logs (Attachment B) these municipal wells are not expected to be affected by remaining hydrocarbons at the site.

- Four private water wells were identified in the information from Zone 7: 3S/1E-21B2 (21B2), 3S/1E-21B3 (21B3), 3S/1E-21C1 (21C1), and 3S/1E-21C3 (21C3). The locations of these wells are shown on Figure 2. Three of the four wells are reported as abandoned (Table 1). No other information was available for these wells from any other source. None of the wells are located downgradient of the site and they are not expected to be affected by the remaining hydrocarbons at the site.

- Five abandoned supply wells were identified in the information from Zone 7: 3S/1E-16M2 (16M2), 3S/1E-16L10 (16L10), 3S/1E-16L11 (16L11), and 3S/IE-16M1 (16M1) through 3S/1E-16M3 (16M3). The locations of these wells are shown on Figure 2. No other information regarding these wells was available from Zone 7 or any other source. Given the relative distance of the wells to the site these wells are not expected to be affected by the remaining hydrocarbons at the site.

Conclusion

Based on the information presented in this well search, the results of the soil vapor sampling, and current site conditions, a review for case closure is requested.

If you have any questions, please contact me at (925) 602-4710 ext. 24.

Sincerely,

Bryan Campbell, P.G. #7724
Senior Geologist

PROFESSIONAL GEOLOGIST
BRYAN CAMPBELL
No. 7724
Exp. 2/28/10
STATE OF CALIFORNIA

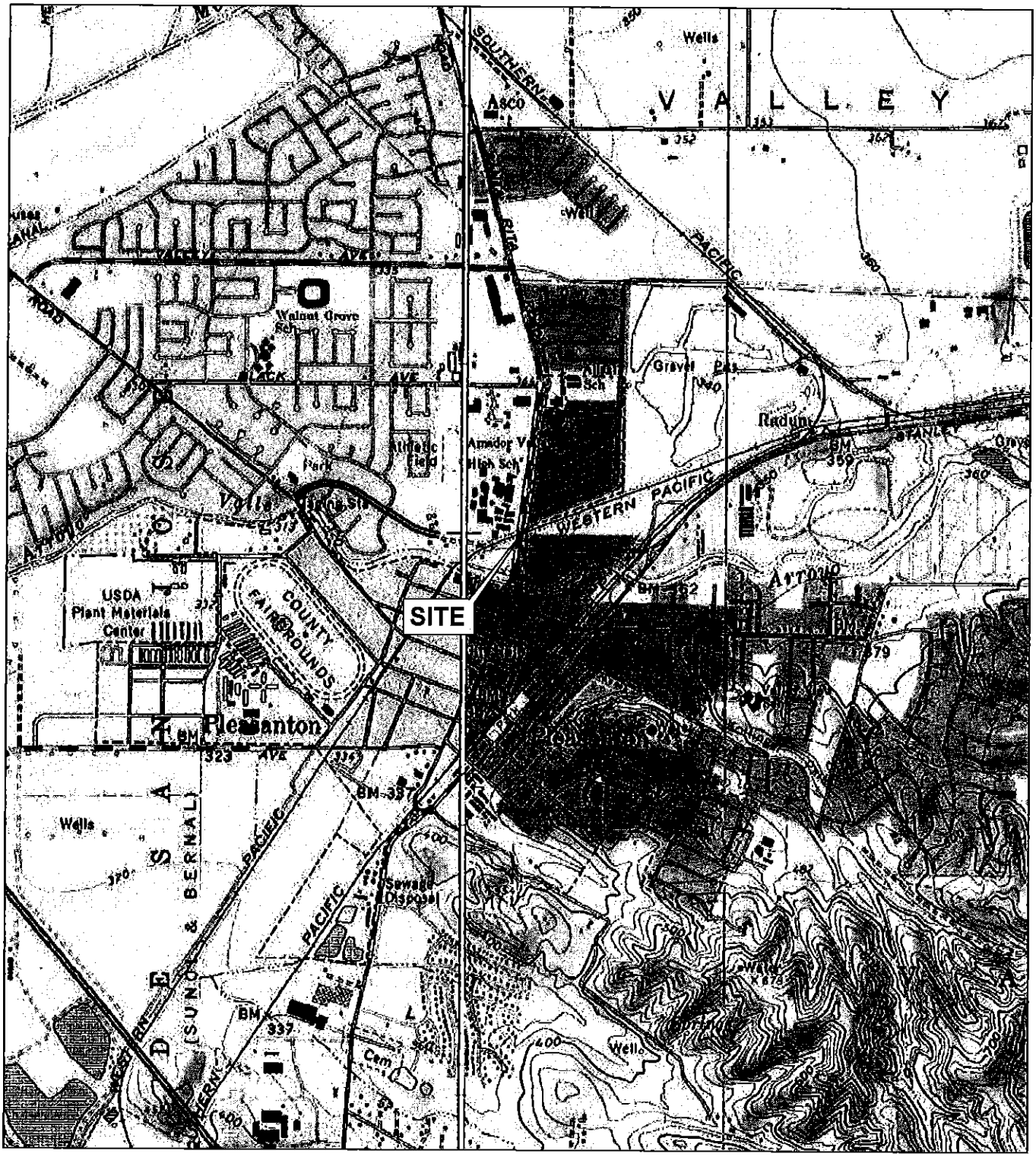
Attachments:

Figure 1: Site Location and Topographic Map
Figure 2: 2,000-Foot Radius Well Search Map
Figure 3: Site Map

Table 1: Water Supply Wells Located within 2,000-foot Radius

Attachments
A: Regulatory Correspondence
B: Wells Logs and Completion Records

Figures



SOURCE: USGS Topographic Map

N

0 2000

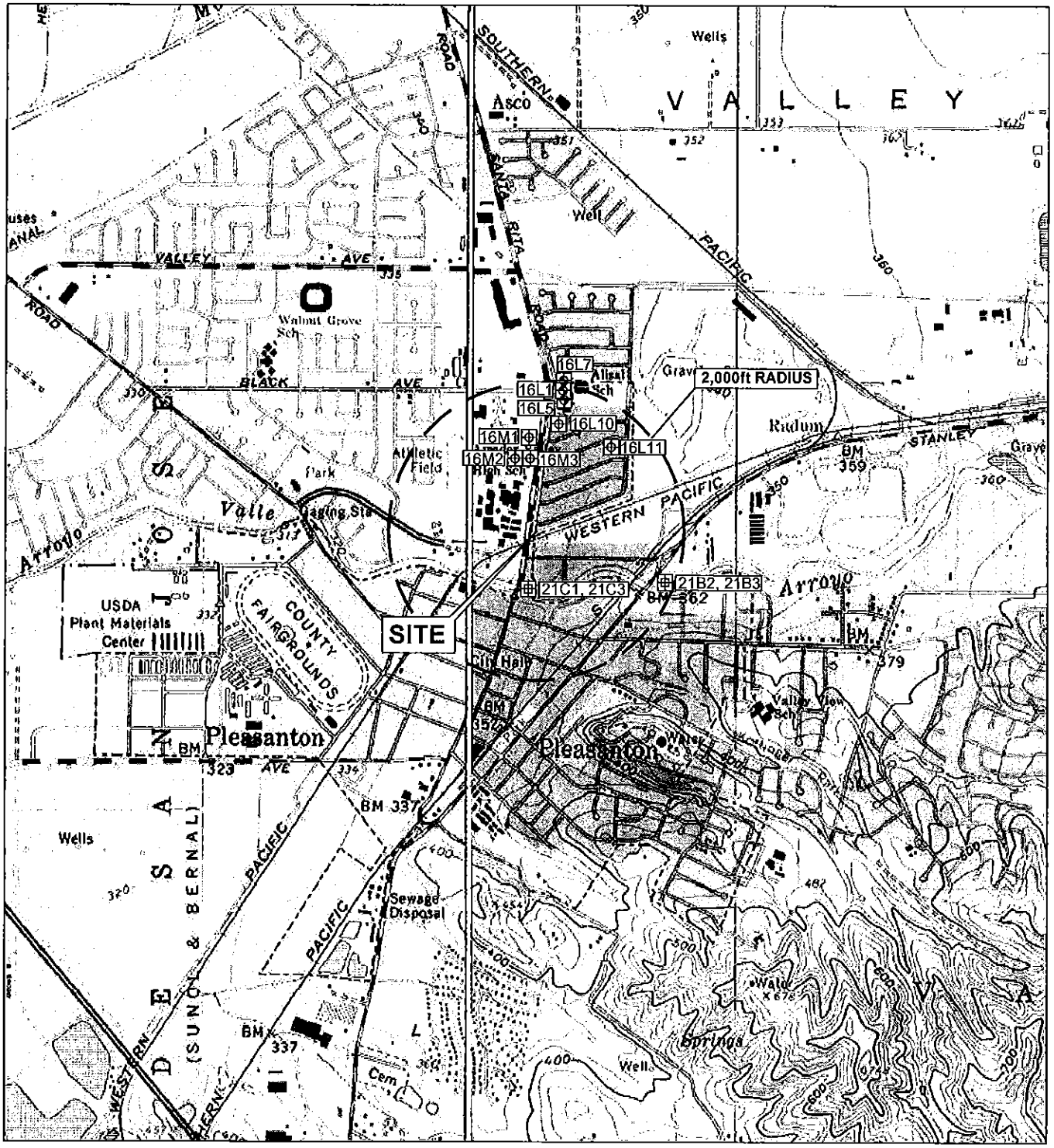
Scale (feet)

ETIC ENGINEERING

SITE LOCATION AND TOPOGRAPHIC MAP
FORMER MOBIL STATION 04H6J
1024 MAIN STREET
PLEASANTON, CALIFORNIA

FIGURE: 1

FILENAME: TOP01005.DWG 10/07/05



LEGEND:

3	⊕	ACTIVE PUBLIC WATER SUPPLY WELL
0	⊠	INACTIVE PUBLIC WATER SUPPLY WELL
5	⊕	UNKNOWN OR OTHER PUBLIC WATER SUPPLY WELL
0	⊕	ACTIVE PRIVATE WELL
0	⊠	INACTIVE PRIVATE WELL
4	⊕	UNKNOWN OR OTHER PRIVATE WELL

N

0 2,000

Scale (feet)

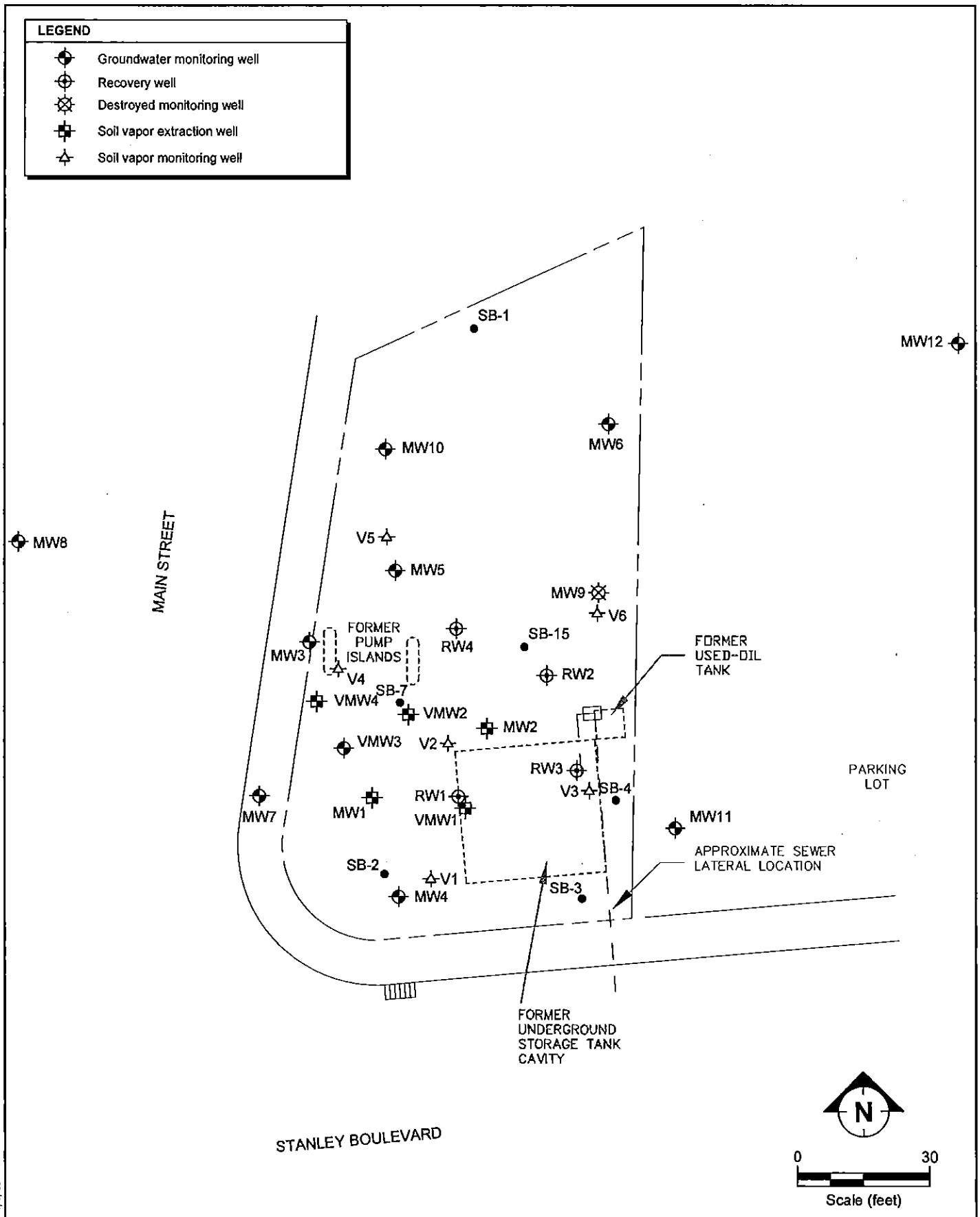
(Map Source: USGS Topographic Map)

ETIC ENGINEERING

2,000-FOOT RADIUS WELL SEARCH MAP
FORMER MOBIL STATION 04H6J
1024 MAIN STREET
PLEASANTON, CALIFORNIA

FIGURE: **2**

FILENAME: SRS0806.DWG 08/16/06



ETIC ENGINEERING

SITE MAP
FORMER MOBIL STATION 04H6J
1024 MAIN STREET
PLEASANTON, CALIFORNIA

FIGURE: **3**

FILENAME: site0409.DWG 4/1/09

Tables

TABLE 1 WATER SUPPLY WELLS LOCATED WITHIN 2,000-FOOT RADIUS
FORMER MOBIL STATION 04H6J, 1024 MAIN STREET PLEASANTON, CALIFORNIA

Well No. on Figure	Well Location (Latitude/Longitude)	State Well No.	Well Owner	Well Depth (feet bgs)	Well Casing Diameter (inches)	Screen Interval (feet bgs)	Year Installed	Well Use	Well Status	Source	Comments
16L5	Santa Rita Road and Black (-121.871977/37.672196)	3S/1E-16L5	City of Pleasanton	650	12, 18, 30	228-265 278-288 293-317 342-348 370-388 427-472 495-521 535-550 566-577 588-595 602-630 640-650	1961	Municipal	Active	Zone 7, DWR, EDR	Verified in the field.
16L1	Santa Rita Road and Black (-121.871994/37.672071)	3S/1E-16L1	City of Pleasanton	152	12	56-136	1945	Municipal	Active	Zone 7, DWR	Verified in the field.
16L7	Santa Rita Road and Black (-121.872327/37.672745)	3S/1E-16L7	City of Pleasanton	647	14, 18	165-365 371-647	1965	Municipal	Active	Zone 7, DWR, EDR	Verified in the field.
21C1	Vervais Avenue (-121.873627/37.665175)	3S/1E-21C1	--	--	--	--	--	Domestic	Active	Zone 7	Not found during 12/3/2009 offsite visit.
21C3	Vervais Avenue (--/--)	3S/1E-21C3	--	--	--	--	--	Domestic	Abandonded	Zone 7	Not found during 12/3/2009 offsite visit.
21B2	3988 First Street (-121.866886/37.665374)	3S/1E-21B2	--	--	--	--	--	Domestic	Abandonded	Zone 7	Not found during 12/3/2009 offsite visit.
21B3	3988 First Street (-121.866833/37.665345)	3S/1E-21B3	--	--	--	--	--	Domestic	Abandonded	Zone 7	Not found during 12/3/2009 offsite visit.
16L10	--	3S/1E-16L10	--	--	--	--	--	Supply	Abandonded	Zone 7	Could not be located.
16L11	--	3S/1E-16L11	--	--	--	--	--	Supply	Abandonded	Zone 7	Could not be located.
16M1	--	3S/1E-16M1	--	--	--	--	--	Supply	Abandonded	Zone 7	Could not be located.
16M2	--	3S/1E-16M2	--	--	--	--	--	Supply	Abandonded	Zone 7	Could not be located.
16M3	--	3S/1E-16M3	--	--	--	--	--	Supply	Abandonded	Zone 7	Could not be located.

Notes:
DWR Department of Water Resources.
EDR Environmental Data Resources, Inc.
Zone 7 Zone 7 Water Agency.
feet bgs Feet below ground surface.
-- Not reported, not available, could not be determined.

Attachment A

Regulatory Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Acting Director

4 H6 J

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

November 20, 2009

Ms. Jennifer Sedlachek
Exxon Mobil
4096 Piedmont, #194
Oakland, CA 94611

Barton and Bonnie Yates
Route 4, Box 320
Bonne Terre, MO 63628

Mr. Jack Hounslow
Mount Diablo National Bank
156 Diablo Road
Danville, CA 94526

Mr. Paul L. Hulme
Pleasanton on Main, LLC
c/o Alain Pinel
12772 Saratoga Sunnyvale Road, Suite 1000
Saratoga, CA 95070

Subject: Fuel Leak Case No. RO0002427 and Geotracker Global ID T0600100909, Mobil #4H6J, 1024 Main Street, Pleasanton, CA 94566

Dear Ms. Sedlachek, Mr. and Ms. Yates, Mr. Hounslow, and Mr. Hulme:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the most recently submitted document entitled, "*Soil Vapor Sampling Report*," dated September 25, 2009 (Report). The Report, which was prepared on your behalf by ETIC Engineering, Inc, presents the results of soil vapor sampling conducted in July 2009. Based on the results of the soil vapor sampling and current conditions, the Report requests that the site be reviewed for case closure.

We have initiated the review for case closure and find one item that is required for closure review missing from the case file. We were not able to find a recent detailed well survey. Although we note that Well Completion Report Release requests for the site were submitted for ACEH approval in 2005 and 2006, the results of any well surveys are not in our case files. Therefore, we request that you submit a detailed well survey for the site that meets the requirements described in technical comment 1 below. Groundwater monitoring may be suspended at this time pending the outcome of closure review. We request that you address the technical comment below, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENT

1. **Detailed Well Survey.** In order to identify potential receptors for the fuel hydrocarbon plume from your site, we request that you locate all water supply wells within a radius of 2,000 feet of the subject site. We recommend that you obtain well information from both Zone 7 Water Agency and the State of California Department of Water Resources, at a minimum. Submittal of maps showing the location of all wells identified in your study, and the use of tables to report the data collected as part of your survey are required. Please provide a table that includes the well designation, location, total depth, diameter, screen interval, date of well installation, current status, historic use, and owner of the wells. In addition, please provide well logs and completion records for wells downgradient from the site that are potential receptors. Please present the results in the Detailed Well Survey Report requested below.

appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Cheryl Dizon, QIC 80201, Zone 7 Water Agency, 100 North Canyons Parkway
Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street,
Pleasanton, CA 94566

Bryan Campbell, ETIC Engineering, Inc., 2285 Morello Avenue, Pleasant Hill, CA 94523

Donna Drogos, ACEH
Jerry Wickham, ACEH
Geotracker, File

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **January 29, 2010** – Detailed Well Survey Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "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." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.** (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

Attachment B

Well Logs and Completion Records
3S/1E-16L1
3S/1E-16L5
3S/1E-16L7

3S/1E-16 L1

01-1652

OH

March, 1945

LOG OF WELL FOR SAN FRANCISCO WATER DEPARTMENT
Pleasanton, California

DRILLER: Adolph Hummel 195 Workers

		THICKNESS	
0	2	2 Ft.	Soil
2	54	52	Yellow sandy clay
54	61	7	Gravel and sand
61	63	2	Yellow clay
63	84	21	Gravel, boulders and sand
84	91	7	Yellow sandy clay
91	135	44	Gravel and sand
135	151	16	Yellow clay

CONFIDENTIAL

151 Ft. Total finished well

152 Ft. 12" Double 12 Gauge Casing

Water Level 22 Ft.

Perforated 56 to 136 Ft. (80 Ft.)

3S/1E

01-1652

~~2S/1E-16~~

2S/1E-164

~~2S/1E-16~~

TEST WELL LOG NO. 5 (PROPOSED)

SURFACE ELEV. 344'

ROCKY FILL SOIL	0		
	1		
LOAM	2		
	15	YELLOW CLAY	
	18		
		GRAVEL, SAND & BOULDERS	
SANDY LOAM	25		
	43		
SILTY RED SAND PACKED	11		
	54	YELLOW CLAY	
GRAVEL & SAND - LOOSE	29		
	83		
YELLOW CLAY	90		
	7		
GRAVEL & SAND LOOSE	18	GRAVEL, SAND & BOULDERS	
YELLOW CLAY	108		
	110	2	
GRAVEL & SAND LOOSE	17		
	127		
YELLOW CLAY	132	5	YELLOW CLAY
	11		
	143		
GRAVEL, SAND BOULDERS	31	GRAVEL & SAND	
	180	2	
YELLOW CLAY	182	5	YELLOW CLAY
GRAVEL & SAND	187		
YELLOW CLAY	18	BLUE GRITTY CLAY	
	205		
GRAVEL, SAND BOULDERS	8		
	213		
YELLOW CLAY	14	YELLOW CLAY	
	227	GRAVEL & SAND	
		YELLOW CLAY	
GRAVEL, SAND & BOULDERS	38		
	265	GRAVEL AND SAND	
YELLOW CLAY	13		
	278		
GRAVEL, SAND & BOULDERS	10		
	288	5	
YELLOW CLAY	293		YELLOW CLAY
GRAVEL SAND & BOULDERS	24		
	317		
YELLOW CLAY	28	GRAVELLY YELLOW & GRAY CLAY TIGHT	
TIGHT GRAVEL & SAND	345		
	360	5	

	350		
	20		
	370		
	18		
	388		
	39		
	427		
	45		
	472		
	23		
	495		
	26		
	521		
	14		
	535		
	25		
	560	6	
	566		
	11		
	577		
	11		
	588		
	38		
	626		
	39		
	665		
	37		
	702		

WELL LOG NO. 4 (EXIST.)

SURFACE ELEV. 344'

TOP SOIL	2	2
YELLOW SANDY CLAY	52	54
SAND & GRAVEL	7	61
YELLOW CLAY	2	63
GRAVEL, BOULDERS & SAND	21	84
YELLOW SANDY CLAY	7	91
GRAVEL AND SAND	44	135
YELLOW CLAY	16	151

WELL LOG NO. 3 (EXIST.)

SURFACE ELEV. 344'

TOP SOIL	22	22
YELLOW SANDY CLAY	28	50
"	10	60
"	40	100
YELLOW SANDY CLAY	12	112
CLAY & GRAVEL	52	164
SAND & GRAVEL	8	172
	12	184
	70	254
	25	279
	95	374
SAND & GRAVEL	10	384
	105	489
GRAVEL AND BOULDERS	8	497
	113	610
SAND, GRAVEL & BOULDERS	15	625
	120	745
YELLOW CLAY	135	880
YELLOW CLAY AND GRAVEL	9	889
	142	1031
	8	1039
	150	1189
	1	1190

PLEASANTON TWP. CO. WATER DIST.

WELL LOGS

T. C. BINKLEY
CONSULTING ENGINEER
PALO ALTO, CALIFORNIA

DR.	TR.	CH.	REC.	SCALE	DATE
TCB	WR			1" = 40'	12/28/61

APPROVED T.C.B. DWG. NO. 6201-2

MJH

ORIGINAL
File Original, Duplicate and Triplicate with the REGIONAL WATER POLLUTION CONTROL BOARD No. 2
(Insert appropriate number)

WATER WELL DRILLERS REPORT
(Sections 7076, 7077, 7078, Water Code)
STATE OF CALIFORNIA

Do Not Fill In
No. 40514
State Well No.
Other Well No.

(1) OWNER:
Name Pleasanton Township ~~County~~ Water District
Address P. O. Box 67
Pleasanton, California

(2) LOCATION OF WELL:
County Alameda Owner's number, if any—
R. F. D. or Street No. Approx. 160' N.E. of Nevis St.; 25' SW of Black Avenue; 100' East of Santa Rita Road - Pleasanton

(3) TYPE OF WORK (*check*):
New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (*check*):
Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☒
Cable ☐
Dug Well ☐

(6) CASING INSTALLED:
SINGLE ☒ DOUBLE ☐ 30

From	ft. to	ft.	Diam.	Gage or Wall
0	135		18	5/16"
0	325		18	5/16"
325	650		12	1/4"

Type and size of shoe or well ring
Describe joint welded seams - welded joints

If gravel packed

Diameter of Bore	from ft.	to ft.
36	0	135
28½	135	650

Size of gravel: ¼ x 1/8

(7) PERFORATIONS:
Type of perforator used Factory - Louvre type
Size of perforations 2½ in., length, by 1/8 in.

From	ft. to	ft.		Rows per ft.
149	180	45 per lin. foot		
201	212	45 per lin. foot		
228	265	45 per lin. foot		
278	288	45 per lin. foot		
293	317	45 per lin. foot		

See over for balance

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☒ Yes ☐ No To what depth ft.
Were any strata sealed against pollution? ☒ Yes ☐ No If yes, note depth of strata

From	ft. to	ft.
0	135	

Method of Sealing 36 to 30" cemented to 135'

(9) WATER LEVELS:
Depth at which water was first found [illegible] ft.
Standing level before perforating [illegible] ft.
Standing level after perforating [illegible] ft.

(10) WELL TESTS:
Was a pump test made? ☒ Yes ☐ No If yes, by whom? C & N Pump & Well
Yield: 2820 gal./min. with 22' ft. draw down after 100 hrs.
Temperature of water Was a chemical analysis made? ☐ Yes ☒ No
Was electric log made of well? ☐ Yes ☐ No

(11) WELL LOG:
Total depth 685 ft. Depth of completed well 650 ft.
Formations *Describe by color, character, size of material, and structure.*

ft. to	ft.	Formation
0	1	Fill - rocky
1	3	Soil
3	18	Loam
18	43	Sandy loam
43	54	Silty red sand
54	83	Gravel and sand - loose
83	90	Yellow clay
90	108	Gravel & sand
108	110	Yellow clay
110	132	Gravel and sand
132	149	Yellow clay
149	180	Gravel-sand-boulders
180	182	Yellow clay
182	201	Yellow clay
201	212	Gravel-sand-boulders
212	220	Yellow clay
220	228	Blue clay & rotten logs
228	265	Gravel-sand-boulders
265	278	Yellow clay
278	288	Gravel-sand-boulders
288	293	Yellow clay
293	317	Gravel-sand-boulders
317	342	Yellow clay
342	348	Gravel-boulders
348	370	Yellow clay
370	388	Gravel-sand-boulders
388	427	Yellow clay
427	472	Gravel-sand-boulders
472	495	Yellow gravelly clay
495	521	Gravel-sand
521	535	Yellow clay
535	560	Blue clay - gritty
560	566	Yellow clay
566	577	Gravel-sand
577	588	Yellow clay
588	595	Gravel-sand
595	602	Yellow gravelly clay
602	630	Gravel-sand
630	652	Yellow gravelly clay
652	685	Tight gravelly yellow and blue clay

FOR OFFICIAL USE ONLY

Work started 2-3 19 62. Completed 4-4 19 62

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & N Pump and Well Co.
(Person, firm, or corporation) (Typed or printed)
Address 1901 Washington Street
Santa Clara, California

[SIGNED] [signature]
Well Driller

License No. 68648 Dated July 1, 19 61

93609 3-54 50M QUIN ⓑ SPO

DUPLICATE
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. 2
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

4625

Do Not Fill In — OH

No 40514

State Well No. 3S/1E-18L5

Other Well No.

(1) OWNER:

Name Pleasanton Township County Water District
Address P. O. Box 67
Pleasanton, California

(2) LOCATION OF WELL: PLEASANTON WELL NO. 5
County Alameda Owner's number, if any—
R. F. D. or Street No. Approx. 160' N.E. of Nevis St.; 25' SW of Black Avenue; 100' East of Santa Rita Road - Pleasanton
Between City Well No. 4 (on the north) & City Well No. 3 (on the South) both 151' Deep.

(3) TYPE OF WORK (check):
New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☐
Cable ☒
Dug Well ☐

(6) CASING INSTALLED:
SINGLE ☒ DOUBLE ☐

From ft.	to ft.	Diam.	Gage or Wall
0	135	30	1/4
0	325	18	5/16
325	650	12	1/4

If gravel packed

Diameter of Bore	from ft.	to ft.
36	0	135
28½	135	650

Type and size of shoe or well ring
Size of gravel: ¼ x 1/8
Describe joint: Welded seams - welded joints

(7) PERFORATIONS:
Type of perforator used: Factory - Louvre type
Size of perforations 2½ in., length, by 1/8 in.

From ft.	to ft.	Perf. per row	Rows per ft.
149	180	45 per lin. foot	
201	212	45 per lin. foot	
228	265	45 per lin. foot	
278	288	45 per lin. foot	
293	317	45 per lin. foot	

Louver for balance

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☐ Yes ☒ No To what depth ft.
Were any strata sealed against pollution? ☐ Yes ☒ No If yes, note depth of strata
From 0 ft. to 135 ft.
Method of Sealing: 36 to 30" cemented to 135'

(9) WATER LEVELS:
Depth at which water was first found — Static = 100 ft.
Standing level before perforating ft.
Standing level after perforating ft.

(10) WELL TESTS:
MAY 10 1962
Was a pump test made? ☒ Yes ☐ No If yes, by whom? C & N Pump & Well
Yield: 2820 gal./min. with 221 ft. draw down after 100 hrs.
Temperature of water Was a chemical analysis made? ☐ Yes ☒ No
Was electric log made of well? ☐ Yes ☐ No SPEC. COND. = 178

(11) WELL LOG:
Total depth 685 ft. Depth of completed well 650 ft.
Formations: Describe by color, character, size of material, and structure.

From ft.	to ft.	Formation
0	1	Fill - rocky
1	3	Soil
3	18	Loam
18	43	Sandy loam
43	54	Silty red sand
54	83	Gravel and sand - loose
83	90	Yellow clay
90	108	Gravel & sand
108	110	Yellow clay
110	132	Gravel and sand
132	149	Yellow clay
149	180	Gravel-sand-boulders
180	182	Yellow clay
182	201	Yellow clay
201	212	Gravel-sand-boulders
212	220	Yellow clay
220	228	Blue clay & rotten logs
228	265	Gravel-sand-boulders
265	278	Yellow clay
278	288	Gravel-sand-boulders
288	293	Yellow clay
293	317	Gravel-sand-boulders
317	342	Yellow clay
342	348	Gravel-boulders
348	370	Yellow clay
370	388	Gravel-sand-boulders
388	427	Yellow clay
427	472	Gravel-sand-boulders
472	495	Yellow gravelly clay
495	521	Gravel-sand
521	535	Yellow clay
535	560	Blue clay - gritty
560	566	Yellow clay
566	577	Gravel-sand
577	588	Yellow clay
588	595	Gravel-sand
595	602	Yellow gravelly clay
602	630	Gravel-sand
630	652	Yellow gravelly clay
652	685	Tight gravelly yellow and blue clay

Work started 2-3- 1962 Completed 4-4- 1962

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME C & N Pump and Well Co. (Typed or printed)
Address 1901 Washington Street
Santa Clara, California
[SIGNED] [signature]
Well Driller
License No. 68648 Dated July 1, 1962

85195 8-54 50M QUIN SPO
DWR FORM No. 246 (REV. 3-54)
3S/1E-18L5

NO. 40514

in. 12"

Additional perforations: 3[illegible]

[illegible]....[illegible] holes per lineal foot

370-3[illegible]....[illegible]

4[illegible]-472....[illegible]

[illegible]-[illegible]....

5[illegible]-5[illegible]0....

5[illegible]-577....

5[illegible]-5[illegible]....

602-6[illegible]0....

640-690....

CONFIDENTIAL

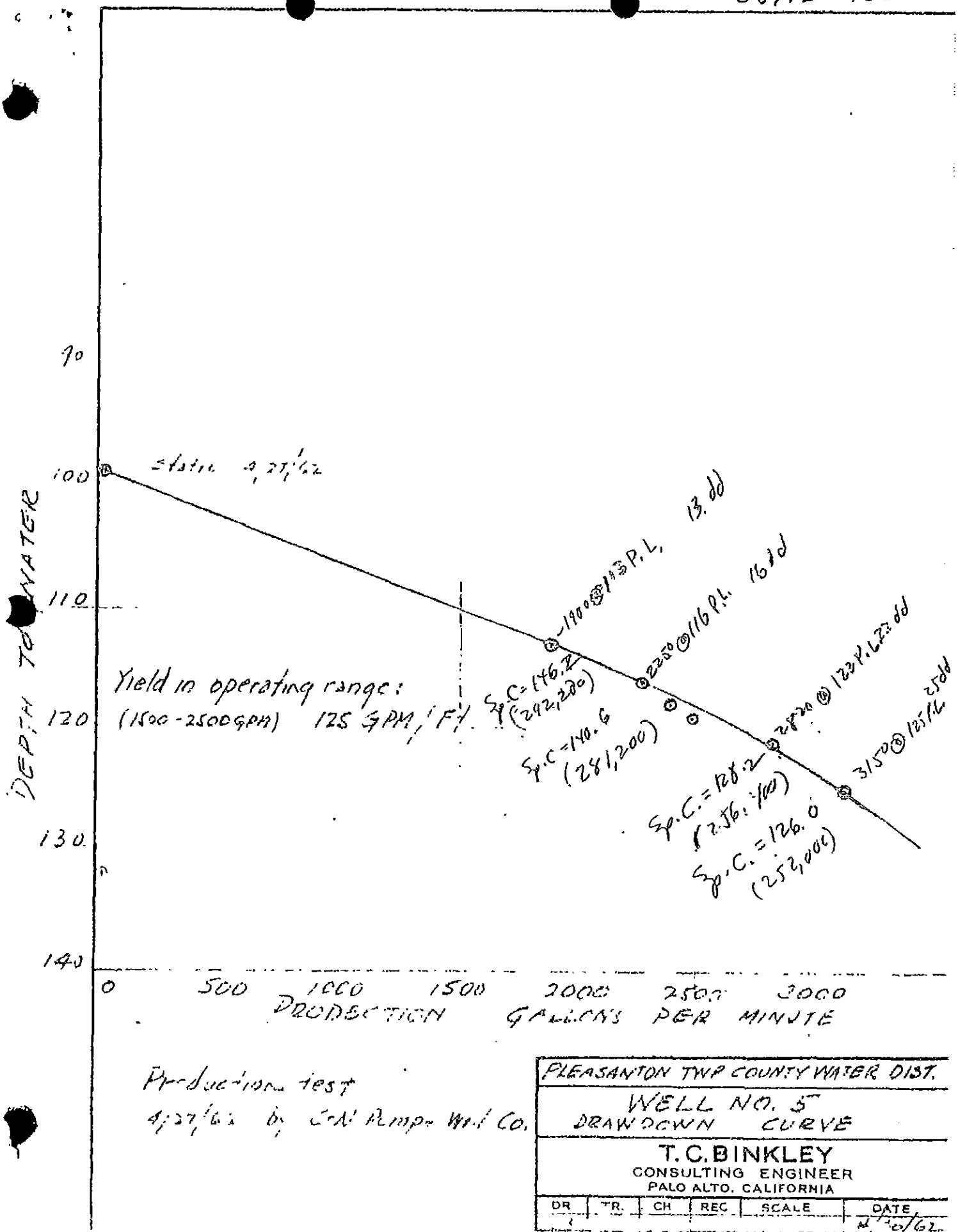
1962 JUL 19 AM 1 58

DEPARTMENT OF WATER RESOURCES SACRAMENTO

RECEIVED
REGIONAL WATER POLLUTION
CONTROL BOARD #3
MAY 16 1962

35/1E-16L

35/1E-16L5



Production test
4/27/62 by Cal Pump Well Co.

PLEASANTON TWP COUNTY WATER DIST.					
WELL NO. 5 DRAWDOWN CURVE					
T. C. BINKLEY CONSULTING ENGINEER PALO ALTO, CALIFORNIA					
DR.	TR.	CH.	REC.	SCALE	DATE 5/10/62

16L5

3S/1E-16G5

40514

3S/1E-16G4

3S/1E-16G3

TEST WELL LOG NO. 6 (PROPOSED) SURFACE ELEV. 344'

ROCKY FILL SOIL	0	
	1	1
LOAM	2	
	15	YELLOW CLAY
	18	
SANDY LOAM	25	GRAVEL, SAND & BOULDERS
	43	
SILTY RED SAND PACKED	11	
	54	YELLOW CLAY
GRAVEL & SAND - LOOSE	29	
	83	
YELLOW CLAY	7	
	90	
GRAVEL & SAND LOOSE	18	GRAVEL, SAND & BOULDERS
	108	
YELLOW CLAY	2	
	110	
GRAVEL & SAND LOOSE	17	
	127	
	5	
YELLOW CLAY	132	YELLOW CLAY
	17	
	149	
GRAVEL, SAND BOULDERS	31	GRAVEL & SAND
	180	
YELLOW CLAY	2	YELLOW CLAY
GRAVEL & SAND	187	
	5	
YELLOW CLAY	18	BLUE GRITTY CLAY
	205	
GRAVEL, SAND BOULDERS	8	
	213	
YELLOW CLAY	14	YELLOW CLAY
	227	GRAVEL & SAND
GRAVEL, SAND & BOULDERS	38	YELLOW CLAY
	265	GRAVEL AND SAND
YELLOW CLAY	13	
	278	
GRAVEL, SAND & BOULDERS	10	
	288	
YELLOW CLAY	5	YELLOW CLAY
	293	
GRAVEL SAND & BOULDERS	24	
	317	
YELLOW CLAY	28	GRAVELLY YELLOW & GRAY CLAY
	345	TIGHT
TIGHT GRAVEL & SAND	60	
	405	

	350	
	20	
	370	
	18	
	388	
	39	
	427	
	45	
	472	
	23	
	495	
	26	
	521	
	14	
	535	
	25	
	560	
	6	
	566	
	11	
	577	
	11	
	588	
	38	
	626	
	39	
	665	
	37	
	702	

WELL LOG NO. 4 (EXIST.) SURFACE ELEV. 344'

TOP SOIL	2	
	2	
YELLOW SANDY CLAY	52	
	54	
SAND & GRAVEL	7	
	61	
YELLOW CLAY	2	
	63	
GRAVEL, BOULDERS & SAND	21	
	84	
YELLOW SANDY CLAY	7	
	91	
GRAVEL AND SAND	44	
	135	
YELLOW CLAY	16	
	151	

WELL LOG NO. 3 (EXIST.) SURFACE ELEV. 344'

TOP SOIL	2	
	22	
YELLOW SANDY CLAY	28	
	30	
	10	
	40	
YELLOW SANDY CLAY	12	
	52	
CLAY & GRAVEL	6	
	58	
SAND & GRAVEL	12	
	70	
	25	
	95	
	10	
SAND & GRAVEL	105	
	8	
GRAVEL AND BOULDERS	113	
	15	
SAND, GRAVEL & BOULDERS	128	
	5	
YELLOW CLAY	135	
	9	
YELLOW CLAY AND GRAVEL	142	
	8	
	150	
	1	
	151	

PLEASANTON TWP. CO. WATER DIST.

WELL LOGS

T. C. BINKLEY
CONSULTING ENGINEER
PALO ALTO, CALIFORNIA

DR.	TR.	CH.	REC.	SCALE	DATE
TCB	WR			1" = 40'	12/28/61

APPROVED: T.C.B. DWG

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

ORIGINAL
File with DWR

WATER WELL DRILLERS REPORT

Do not fill in

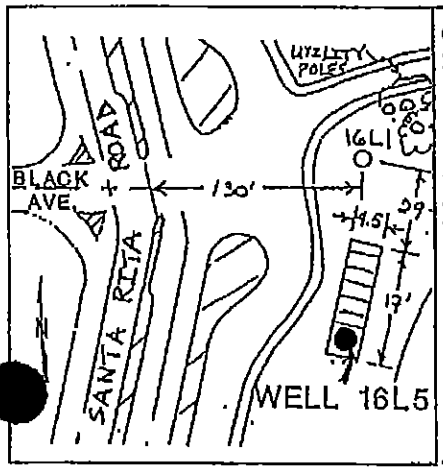
No. 40514A

Byo of Intent No. _____
d Permit No. or Date _____

State Well No. 3S/1E 16L5
Other Well No. Pleasanton 5

(1) OWNER: Name City of Pleasanton
Address 200 Old Bernal Avenue
City Pleasanton ZIP 94566

(2) LOCATION OF WELL (See instructions):
County Alameda Owner's Well Number _____
Well address if different from above _____
Township 3S Range 1E Section 16
Distance from cities, roads, railroads, fences, etc. South and east of Santa Rita Road and Black Avenue intersection in Pleasanton.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Recondilioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☒
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size ¼ x 1/8
Diameter of bore See reverse
Packed from _____ to _____ ft.

(7) CASING INSTALLED:
Steel ☒ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	135	30	¼
0	325	18	5/16
325	650	12	¼

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
149	180	2½x1/8
201	212	2½x1/8
See reverse		

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 0 - 135 ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval _____ ft.
Method of sealing cemented, 36" OD, 30" ID

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion 88 ft.

(11) WELL TESTS: See reverse
Was well test made? Yes ☒ No ☐ If yes, by whom? Driller
Type of test Pump ☒ Bailer ☐ Air lift ☐
~~Was a pump test made?~~ 22 ft. drawdown After ____ hours
Yield 2820 gal/min after 100 hours Water temperature _____
Chemical analysis made? Yes ☐ No ☒ If yes, by whom? _____
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 685 ft. Completed depth 650 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	1	Fill, rocky.
1	3	Soil.
3	18	Loam.
18	43	Sandy loam.
43	54	Silty red sand.
54	83	Gravel and sand, loose.
83	90	Yellow clay.
90	108	Gravel and sand.
108	110	Yellow clay.
110	132	Gravel and sand.
132	149	Yellow clay.
149	180	Gravel, sand, boulders.
180	201	Yellow clay.
201	212	Gravel, sand, boulders.
212	220	Yellow clay.
220	228	Blue clay and rotten logs.
228	265	Gravel, sand, boulders.
265	278	Yellow clay.
278	288	Gravel, sand, boulders.
288	293	Yellow clay.
293	317	Gravel, sand, boulders.
317	342	Yellow clay.
342	348	Gravel, boulders.
348	370	Yellow clay.
370	388	Gravel, sand, boulders.
388	427	Yellow clay.
427	472	Gravel, sand, boulders
472	495	Yellow gravelly clay.
495	521	Gravel, sand.
521	535	Yellow clay.
535	560	Blue clay, gritty.
560	566	Yellow clay.
566	577	Gravel, sand.
577	588	Yellow clay.
588	595	Gravel, sand.
595	602	Yellow gravelly clay.
602	630	Gravel, sand.
630	652	Yellow gravelly clay.
652	685	Tight gravelly yellow and blue clay.

Work started 3 Feb 1962 Completed 4 Apr 1962

WELL DRILLER'S STATEMENT:
Driller: Berlin Robinson
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed Original report signed unreadable Burdin (Well Driller)
NAME C & N Pump and Well Company (Person, firm, or corporation) (Typed or printed)
Address 1901 Washington Street
City Santa Clara ZIP _____
License No. 68648 Date of this report 1 Jul 62?

DWR 188 (REV. 12-86) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 86 96355

Gravel pack continued:

From (ft.)	To (ft.)	Diameter of bore (in.)
0	135	36
135	650	28

Perforations: continued:

From (ft.)	To (ft.)	Slot size (in.)
228	265	2½ x 1/8
278	288	2½ x 1/8
293	317	2½ x 1/8
342	348	2½ x 1/8
370	388	2½ x 1/8
427	472	2½ x 1/8
495	521	2½ x 1/8
535	550	2½ x 1/8
566	577	2½ x 1/8
588	595	2½ x 1/8
602	630	2½ x 1/8
640	650	2½ x 1/8

45 factory louvers per linear foot.

Well tests contihued:

Static water level at 98 feet.

Discharge (gal./min.)	At (ft.)
3120	125
2820	121
2480	119
2390	118
2270	116
1880	113

Report prepared using original C & N Pump and Well Water Well Drillers Report and Zone 7 file information for this well.
TNW 9 Nov 90

40514A

3S/1E-16G5

TEST WELL LOG NO. 6 (PROPOSED)

SURFACE ELEV. 344'

ROCKY FILL SOIL	0		
	1½		
LOAM	5	YELLOW CLAY	
	15		
	18		
SANDY LOAM	25	GRAVEL, SAND & BOULDERS	
	43		
SILTY RED SAND PACKED	11		
	54	YELLOW CLAY	
GRAVEL & SAND - LOOSE	29		
	83		
YELLOW CLAY	7		
	90		
GRAVEL & SAND LOOSE	18	GRAVEL, SAND & BOULDERS	
	108		
YELLOW CLAY	2		
	110		
GRAVEL & SAND LOOSE	17		
	127		
	5		
	132		
YELLOW CLAY	17	YELLOW CLAY	
	149		
GRAVEL, SAND BOULDERS	31	GRAVEL & SAND	
	180		
YELLOW CLAY	2	YELLOW CLAY	
	182		
GRAVEL & SAND	5		
	187		
YELLOW CLAY	18	BLUE GRITTY CLAY	
	205		
GRAVEL, SAND BOULDERS	8		
	213		
YELLOW CLAY	14	YELLOW CLAY	
	227	GRAVEL & SAND	
GRAVEL, SAND & BOULDERS	38	YELLOW CLAY	
	265	GRAVEL AND SAND	
YELLOW CLAY	13		
	278		
GRAVEL, SAND & BOULDERS	10		
	288		
	5		
YELLOW CLAY	293	YELLOW CLAY	
GRAVEL SAND & BOULDERS	24		
	317		
YELLOW CLAY	28	GRAVELLY YELLOW & GRAY CLAY	
	345	TIGHT	
TIGHT GRAVEL & SAND	60		
	405		

WELL LOG NO. 2 (EXIST.)

SURFACE ELEV. 344

TOP SOIL	2		
	2		
YELLOW SANDY CLAY	52		
	54		
	7		
SAND & GRAVEL	9		
YELLOW CLAY	63		
	2		
GRAVEL, BOULDERS & SAND	21		
	84		
YELLOW SANDY CLAY	7		
	91		
GRAVEL AND SAND	44		
	135		
YELLOW CLAY	16		
	151		

WELL LOG NO. 3 (EXIST.)

SURFACE ELEV. 344

TOP SOIL	22		
	22		
YELLOW SANDY CLAY	28		
	30		
	10		
YELLOW SANDY CLAY	40		
	12		
CLAY & GRAVEL	52		
	6		
SAND & GRAVEL	58		
	12		
	70		
	25		
	95		
SAND & GRAVEL	10		
	105		
GRAVEL AND BOULDERS	8		
	113		
	15		
	128		
SAND, GRAVEL & BOULDERS	5		
	133		
YELLOW CLAY	9		
	142		
YELLOW CLAY AND GRAVEL	8		
	150		
	1		

PLEASANTON TWP. CO. WATER DIST.

WELL LOGS

T. C. BINKLEY
CONSULTING ENGINEER
PALO ALTO, CALIFORNIA

DR.	TR.	CH.	REC.	SCALE	DATE
TCB	WR			1" = 40'	12/28/61

APPROVED: T.C.B. DWG. NO. 6201-2

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

ORIGINAL
File with DWR

WATER WELL DRILLERS REPORT

Do not fill in

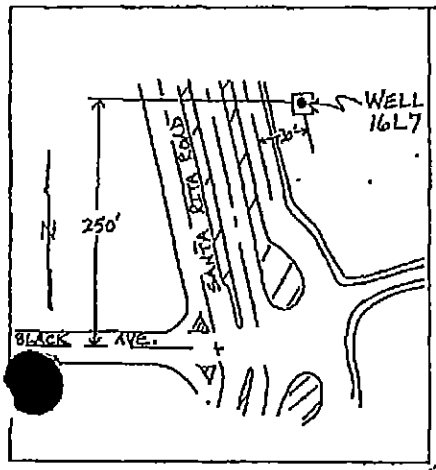
No. 1108824

[redacted] of Intent No. _____
Permit No. or Date _____

State Well No. 3S/1E 16L7
Other Well No. Pleasanton 6

(1) OWNER: Name City of Pleasanton
Address 200 Old Bernal Avenue
City Pleasanton ZIP 94566

(2) LOCATION OF WELL (See Instructions):
County Alameda Owner's Well Number _____
Well address if different from above _____
Township 3S Range 1E Section 16
Distance from cities, roads, railroads, fences, etc. North and east of Santa Rita Road and Black Avenue intersection in Pleasanton.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☒
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK: Yes ☒ No ☐ Size 3/8 x 1/8
Diameter of bore see reverse
Packed from _____ ft. to _____ ft.

(7) CASING INSTALLED: Steel ☒ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
+2	365	18	5/16
	see reverse		

(8) PERFORATIONS: Type of perforation or size of screen

From ft.	To ft.	Slot size
see reverse		

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 0 - 130 ft.
Were strata sealed against pollution? Yes ☐ No ☒ Interval _____ ft.
Method of sealing cement grout

(10) WATER LEVELS:
Depth of first water, if known 78 ft.
Standing level after well completion _____ ft.

(11) WELL TESTS: Anderson Pump Co.
Was well test made? Yes ☒ No ☐ If yes, by whom? Chowchilla
Type of test Pump ☒ Bailer ☐ Air lift ☐
[redacted] 28 ft. drawdown After [redacted] hours
[redacted] 3052 gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes ☐ No ☒ If yes, by whom? _____
Was electric log made Yes ☐ No ☒ If yes, attach copy to this report

(12) WELL LOG: Total depth 647 ft. Completed depth 647 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	4	Soil.
4	18	Brown clay.
18	21	Brown sand and cobbles.
21	47	Gravel, cobbles and boulders.
47	54	Yellow clay.
54	77	Gravel, cobbles and boulders.
77	82	Gray clay.
82	92	Blue clay.
92	100	Boulders and gravel.
100	104	Yellow silt and gravel.
104	106	Boulders.
106	109	Small gravel.
109	112	Cobbles and gravel.
112	113	Gray clay and gravel.
113	125	Gravel and cobbles.
125	141	Red clay.
141	189	Cobbles and sand.
189	191	Gray clay.
191	194	Cobbles and sand.
194	199	Brown clay.
199	202	Blue clay (joint).
202	209	Brown clay.
209	216	Cobbles and sand.
216	218	Brown clay and cobbles.
218	228	Gravel and cobbles.
228	231	Sandy brown clay and cobbles.
231	233	Gravel and cobbles.
233	239	Yellow brown clay.
239	280	Gravel and cobbles.
280	284	Yellow brown clay.
284	300	Gravel and cobbles.
300	309	Yellow brown clay.
309	328	Gravel and cobbles.
328	338	Yellow brown clay.
338	342	Gravel and cobbles.
342	350	Yellow brown clay.
350	353	Blue clay.
353	354	Gravel and cobbles.
		- Well log continued on reverse.

Work started 18 Feb 1965 Completed 11 May 1965

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed Original report signed Bill Belknap (Well Driller)
NAME Bill Belknap (Person, firm, or corporation) (Typed or printed)
Address 9274 South Buttonwillow
City Reedley ZIP _____
License No. 106833 Date of this report 10 May 65

DWR 188 (REV. 12-86) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 66 90355

110882A

3S/1E 16L7

Well log continued...

from (ft.)	to (ft.)	Formation
354	365	Blue clay.
365	369	Brown clay.
369	372	Boulders and clay.
372	383	Brown clay.
383	386	Boulders.
386	404	Sand and gravel, some boulders.
404	435	Brown clay.
435	471	Cobbles.
471	474	Yellow brown clay.
474	488	Sand and gravel and cobbles.
488	508	Yellow brown clay.
508	513	Sand and gravel, some cobbles.
513	521	Yellow brown clay.
521	532	Gravel and cobbles.
532	540	Yellow brown clay.
540	549	Gray clay (jointy).
549	582	Blue clay.
582	584	Gravel.
584	586	Yellow brown clay.
586	609	Gravel and cobbles.
609	611	Gray clay.
611	627	Gravel and boulders.
627	636	Gray clay.
636	640	Gravel.
640	647	Brown clay.

Gravel pack continued:

from (ft.)	to (ft.)	Diameter of bore (in.)
0	130	36
130	647	28

Casing installed continued:

from (ft.)	to (ft.)	Diameter (in.)	Gage or Wall
365	371	18 to 14 taper	
	625	14	5/16
	647	14 OD	1/4

Band Shoe

Perforations:

from (ft.)	to (ft.)	Slot size	Perfs per row	Type
165	365	2½ x 1/8	12	louvered
371	625	2½ x 1/8	8	louvered
625	647	2½ x 1/8	14	saw

4 rows of perforations, 4 rows per foot.

Information from original Bill
Belknap Water Well Drillers
Report.

WH 12 Oct 90

ORIGINAL
File Original, Duplicate and Triplicate with the REGIONAL WATER POLLUTION CONTROL BOARD No. 2
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

THE RESOURCES AGENCY OF CALIFORNIA

Do Not Fill In
No. 110882

State Well No.
Other Well No. 3S/1E-17

(1) OWNER:
Name Pleasanton Township County Water District
Address
Pleasanton, California

(2) LOCATION OF WELL:
County Alameda Owner's number, if any— 6
R. F. D. or Street No.
East side of Santa Rita Road about 80' north of driveway to Alisal Elementary School. About 30' east of frontage road on Lot 54 of Tract 2595, Amador Estates, Unit #1.

(3) TYPE OF WORK (check):
New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☒
Cable ☐
Dug Well ☐

(6) CASING INSTALLED:
SINGLE ☒ DOUBLE ☐

From	ft. to	ft.	Diam.	Gage of Wall
Up	2	365	18"	5/16
365		371	18" to 14"	taper
371		625	14"	5/16
625		647	14" OD	1/4"

If gravel packed

Diameter of Bore	from ft.	to ft.
36"	0	130
28"	130	647

Type and size of shoe or well ring Band
Describe joint Collars
Size of gravel: 3/8 x 1/8

(7) PERFORATIONS:
Type of perforator used Louvers, except 625-647' were sawed
Size of perforations 2½ in., length, by 1/8 in.

From	ft. to	ft.	Perf. per row	Rows per ft.
165		365	12	4
371		625	8	4
625		647	14	4

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☒ Yes ☐ No To what depth 130 ft.
Were any strata sealed against pollution? ☐ Yes ☒ No If yes, note depth of strata

From	ft. to	ft.

Method of Sealing Cement grout
FOR OFFICIAL USE ONLY

(9) WATER LEVELS:
Depth at which water was first found 78 ft.
Standing level before perforating ft.
Standing level after perforating ft.

(10) WELL TESTS:
Was a pump test made? ☒ Yes ☐ No If yes, by whom? Anderson Pump Co. Chowchilla, Calif.
Yield 3052 gal./min. with 28' ft. draw down after hrs.
Temperature of water Was a chemical analysis made? ☐ Yes ☒ No
Was electric log made of well? ☐ Yes ☒ No

(11) WELL LOG:
Total depth 647 ft. Depth of completed well 625 ft.
Formations: Describe by color, character, size of material, and structure.

0	ft. to	4	ft. Soil
4	"	18	" Brown clay
18	"	21	" Brown sand and cobbles
21	"	47	" Gravel, cobbles & boulders
47	"	54	" Yellow clay
54	"	77	" Gravel, cobbles & boulders
77	"	82	" Grey clay
82	"	92	" Blue clay
92	"	100	" Boulders and gravel
100	"	104	" Yellow silt & gravel
104	"	106	" Boulders
106	"	109	" Small gravel
109	"	112	" Cobbles and gravel
112	"	113	" Grey clay and gravel
113	"	125	" Gravel and cobbles
125	"	141	" Red clay
141	"	189	" Cobbles and sand
189	"	191	" Grey clay
191	"	194	" Cobbles and sand
194	"	199	" Brown clay
199	"	202	" Blue clay (joint)
202	"	209	" Brown clay
209	"	216	" Cobbles and sand
216	"	218	" Brown clay and cobbles
218	"	228	" Gravel and cobbles
228	"	231	" Sandy brown clay & cobbles
231	"	233	" Gravel and cobbles
233	"	239	" Yellow-brown clay
239	"	280	" Gravel and cobbles
280	"	284	" Yellow brown clay
284	"	300	" Gravel and cobbles
300	"	309	" Yellow brown clay
309	"	328	" Gravel and cobbles
328	"	338	" Yellow brown clay
338	"	342	" Gravel and cobbles
342	"	350	" Yellow brown clay
350	"	353	" Blue clay
353	"	354	" Gravel and cobbles
354	"	365	" Blue clay
365	"	369	" Brown clay
369	"	372	" Boulders and clay
372	"	383	" Brown clay

"(cont. on reverse)

Work started 2/18/65 19 Completed 5/11/65 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Bill Belknap
(Person, firm, or corporation) (Typed or printed)
Address 9274 So. Buttonwillow
Reedley, California
[SIGNED] Bill Belknap
Well Driller
License No. 106833 Dated 5/10/65 19

DWR 188 (REV. 8-54)

11. WELL LOG:

110882

383	386	Boulders
386	404	Sand and gravel; some boulders
404	435	Brown clay
435	471	Cobbles
471	474	Yellow brown clay
474	488	Sand and gravel and cobbles
488	508	Yellow brown clay
508	513	Sand and gravel; some cobbles
513	521	Yellow brown clay
521	532	Gravel and cobbles
532	540	Yellow brown clay
540	549	Grey clay (jointy)
549	582	Blue clay
582	584	Gravel
584	586	Yellow brown clay
586	609	Gravel and cobbles
609	611	Grey clay
611	627	Gravel and boulders
627	636	Grey clay
636	640	Gravel
640	647	Brown clay