

FINAL

**INSTITUTIONAL CONTROL 2023 ANNUAL REPORT
FOR OPERABLE UNIT 1 AND OPERABLE UNIT 3**

**National Aeronautics and Space Administration
Jet Propulsion Laboratory
Pasadena, California**

EPA ID# CA9800013030



Prepared for:



**National Aeronautics and Space Administration
Management Office, Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, California 91109**

April 2024

ABBREVIATIONS

µg/L	microgram per liter
Caltech	California Institute of Technology
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COC	chemical of concern
DDW	Division of Drinking Water
DTSC	Department of Toxic Substances Control
FBR	fluidized bed reactor
FFA	Federal Facilities Agreement
FFRDC	Federally Funded Research and Development Center
FWEC	Foster Wheeler Environmental Corporation
gpm	gallons per minute
IC	institutional control
JPL	Jet Propulsion Laboratory
LAWC	Lincoln Avenue Water Company
LGAC	liquid-phase granular activated carbon
MCL	maximum contaminant level
MHTS	Monk Hill Treatment System
NASA	National Aeronautics and Space Administration
NPL	National Priorities List
OU	Operable Unit
RBMB	Raymond Basin Management Board
RCRA	Resource Conservation and Recovery Act
RI	remedial investigation
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
TCE	trichloroethene
U.S. EPA	United States Environmental Protection Agency
VOC	volatile organic compound

1. INTRODUCTION

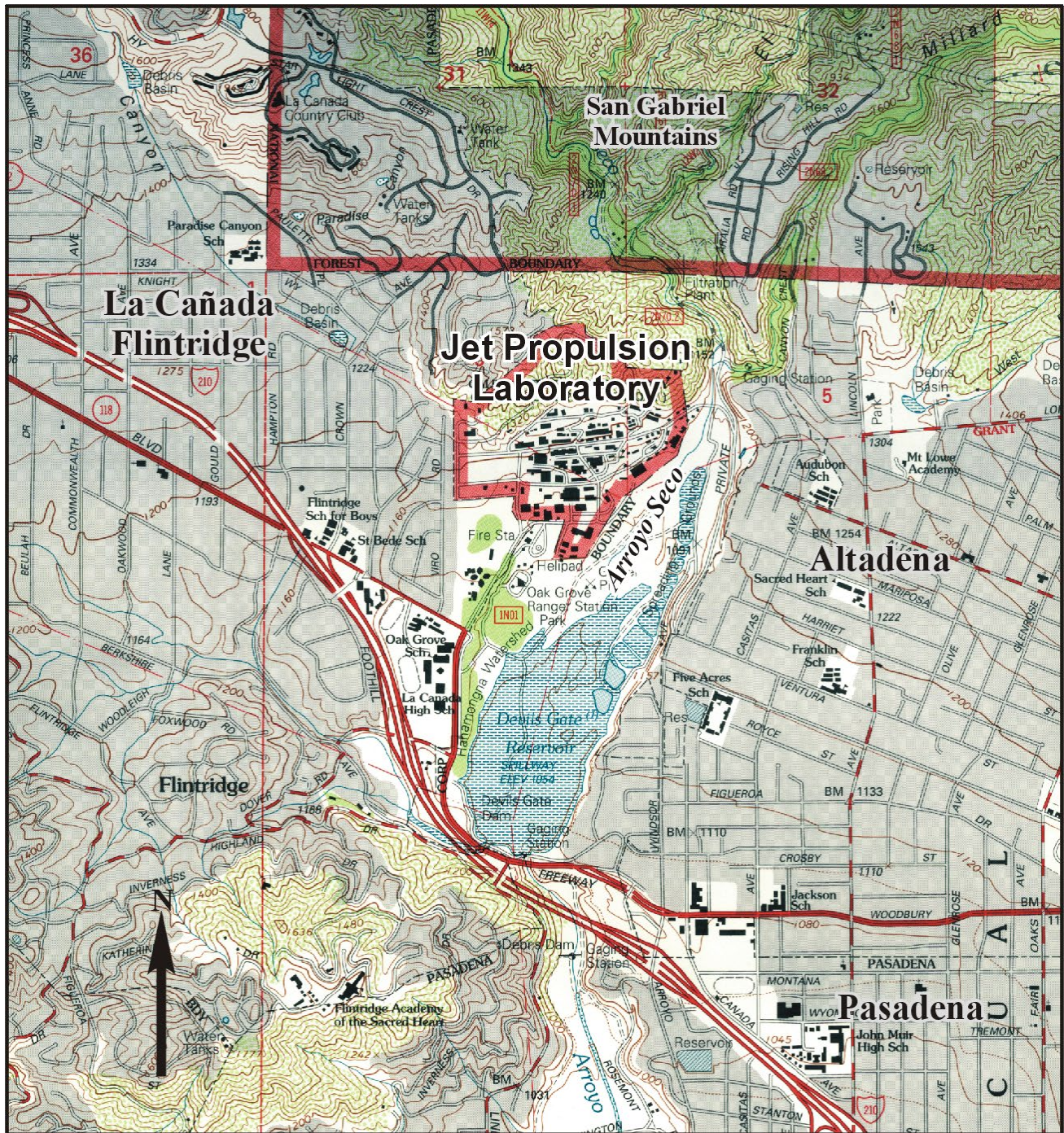
This Institutional Control (IC) 2023 Annual Report for Operable Unit (OU) 1 and OU3 documents the implementation of ICs included as part of the remedy selected in the Final Record of Decision (ROD) for OU1 and OU3 dated February 2018 (NASA, 2018) for the National Aeronautics and Space Administration's (NASA) Jet Propulsion Laboratory (JPL). The selected remedy under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) includes operation of groundwater treatment systems and implementation of ICs to ensure the effectiveness of ongoing groundwater treatment and prevent exposure to impacted groundwater at JPL. The Institutional Control Remedial Design for OU1 and OU3, dated April 2019 (NASA, 2019), describes the implementation and assurance of ICs required as part of the NASA JPL CERCLA program.

JPL is a federally funded research and development center (FFRDC) in Pasadena, California, with approximately 6,000 employees. JPL is operated by the California Institute of Technology (Caltech) under a contract with NASA. JPL's primary activities include planetary exploration, Earth science, space-based astronomy, and technology development. JPL-developed technology used to enable new missions is also applied to technical and scientific problems of national significance.

Located in Los Angeles County, JPL is situated between the incorporated cities of La Cañada-Flintridge and Pasadena and is bordered on the east by the unincorporated community of Altadena. JPL encompasses approximately 176 acres of land and more than 150 buildings and other structures. Of the JPL facility's 176 acres, approximately 156 acres are federally owned. The remaining land is leased for parking from the Flintridge Riding Club. Development at JPL is primarily located in two regions – an early-developed northeastern area and a later-developed southwestern area. Figure 1-1 is a map showing the JPL facility and surrounding areas.

In October 1992, the JPL site was placed on the National Priorities List (NPL) and, is therefore subject to the provisions of CERCLA to regulate investigation and cleanup. For CERCLA purposes, the JPL site has been divided into three OUs. The three OUs are spatially distinct areas but are connected in terms of transport of chemicals originating from JPL. OU1 addresses on-facility groundwater at JPL; OU2 addresses on-facility vadose zone soil at JPL; and OU3 addresses off-facility groundwater adjacent to the JPL property. Cleanup of OU2 is complete, as documented in the Remedial Action Report for OU2 (NASA, 2007a).

The parties to the Federal Facilities Agreement (FFA) include NASA, the United States Environmental Protection Agency (U.S. EPA), the California Department of Toxic Substances Control (DTSC), and the Regional Water Quality Control Board (RWQCB). NASA is the lead federal agency, and the U.S. EPA, DTSC, and RWQCB provide guidance and oversight to the JPL CERCLA Program.



Source: USGS Pasadena 7½-Minute Quad, 1995.

Note: (1) Devil's Gate Reservoir is dry most of the year.

JPL_LOC02.CDR

Scale in Miles



Figure 1-1. Map of JPL and the Surrounding Area

2. SITE BACKGROUND

During historic operations at JPL, various chemicals (including chlorinated solvents, solid rocket fuel propellants, cooling tower chemicals, sulfuric acid, FreonTM, and mercury) and other materials were used at the JPL facility. During the 1940s and 1950s, liquid wastes from materials used and produced at JPL (such as solvents and solid rocket propellants) were disposed of into seepage pits and waste pits; a practice considered common at the time. The remedial investigation (RI) for on-facility soil (defined as OU2) identified 40 seepage pits, five waste pits, and four discharge points at the facility that were used during historic operations (Foster Wheeler Environmental Corporation [FWEC], 1999a). Some of the pits and discharge points received volatile organic compounds (VOCs) and other waste materials, which are currently found in groundwater beneath and adjacent to JPL. In the late 1950s and early 1960s, a sanitary sewer system was installed at JPL to handle sewage and wastewater. During this time, the seepage pits, waste pits, and discharge points were closed and their use for sanitary and chemical waste disposal was discontinued. Today, laboratory chemical wastes are either recycled or sent off facility for treatment and disposal at regulated, Resource Conservation and Recovery Act (RCRA)-permitted hazardous waste facilities.

In 1980, the analyses of groundwater revealed the presence of VOCs in City of Pasadena water-supply wells located southeast of JPL in the Arroyo Seco. At about the same time, VOCs were detected in two water-supply wells used by the Lincoln Avenue Water Company (LAWC), located east of the Arroyo Seco (FWEC, 1999b). As a result, NASA initiated an investigation to evaluate VOCs originating from the JPL facility.

In 1988, a preliminary assessment/site inspection was completed at JPL, which indicated that further site characterization was warranted (Ebasco, 1988). Subsequent site investigations were conducted at JPL (Ebasco, 1990a; Ebasco, 1990b) and VOCs were detected in on-facility groundwater at levels above drinking water standards. In 1992, JPL was placed on the NPL of sites subject to regulation under CERCLA (47180-47187 *Federal Register*, Vol. 57, No. 199 [1992]). As part of this effort, NASA divided the site into three separate areas referred to as OUs: OU1 consists of on-facility groundwater (the “source area”), OU2 consists of on-facility soils (location of source material), and OU3 consists of off-facility groundwater adjacent to JPL.

After being placed on the NPL, an RI (FWEC, 1999a; FWEC, 1999b) was conducted at the JPL site to characterize the nature and extent of chemicals in soil and groundwater and assess both human health and ecological risk. Chemicals originating at JPL were not found in off-site soils or surface water. A quarterly groundwater monitoring program was initiated in August 1996 to monitor VOCs and other chemicals, including perchlorate, metals, anions, cations, and other field parameters. Historical groundwater monitoring activities have indicated that four chemicals of concern (COCs; carbon tetrachloride, trichloroethene [TCE], tetrachloroethylene, and perchlorate) have been detected in JPL monitoring wells at concentrations above the state and federal drinking water standards for each chemical. Carbon tetrachloride, TCE, and perchlorate continue to be consistently detected above state and federal drinking water standards. The perchlorate, carbon tetrachloride, and TCE plumes originating from JPL currently extend approximately 1 mile east-southeast of the source area (NASA, 2018). Analytical results from

the groundwater monitoring program are summarized in quarterly technical memoranda that are available in the information repositories and on the CERCLA website (<http://jplwater.nasa.gov>).

In the early 1990s, NASA funded treatment facilities for LAWC and the City of Pasadena to remove VOCs from drinking water wells that were affected by chemicals from JPL. Then, in the late 1990s and early 2000, NASA conducted pilot testing of several technologies to determine the most effective means to address dissolved perchlorate in groundwater. The perchlorate treatment technologies tested included reverse osmosis, a fluidized bed reactor (FBR), packed bed reactors, in situ bioremediation, and ion exchange (FWEC, 2000; NASA, 2003a). Due to the depth and extent of the chemicals in groundwater, in situ (below ground) treatment is not cost-effective at the JPL facility; therefore, groundwater must be pumped from the ground, treated aboveground, and re-injected or used for drinking water.

A draft Feasibility Study was completed in January 2000 (FWEC, 2000) to evaluate potential response actions for groundwater at the JPL site. In addition, extensive groundwater modeling and aquifer testing (NASA, 2003b) at and adjacent to the JPL site were conducted to characterize the complex groundwater conditions and groundwater flow.

Based on the earlier pilot tests, NASA installed a demonstration treatment plant in early 2005 located in the source area on the JPL property. The system was subsequently expanded as the interim remedial action for OU1 in 2007 and has a treatment capacity of 300 gallons per minute (gpm). NASA and the regulators completed and signed the Interim ROD for OU1 in February 2007 (NASA, 2007b). The system currently consists of liquid-phase granular activated carbon (LGAC) treatment to remove VOCs and ion exchange treatment to remove perchlorate. Treated water is re-injected into the ground and is not used for drinking water purposes. Figure 2-1 shows the location of the OU1 system, including locations of extraction and injection wells.

Since system startup in early 2005, the OU1 treatment system has successfully treated more than 6,043 acre-feet of groundwater, removing approximately 2,183 pounds of perchlorate and 49 pounds of VOCs. Influent perchlorate concentrations at the OU1 system have decreased significantly, from approximately 2,300 micrograms per liter ($\mu\text{g/L}$) in February 2005 to approximately 97 $\mu\text{g/L}$ in August 2023 (NASA, 2023a). Concentrations of perchlorate and VOCs at the effluent of the OU1 system (i.e., treated water) are consistently non-detect. In addition, operation of the source area treatment system appears to have resulted in a significant reduction of COCs in wells MW-7, MW-16, and MW-24, which are located within the treatment zone (i.e., within the area of influence for the extraction wells).

In July 2004, NASA implemented a removal action directed at the off-facility groundwater (OU3) to achieve quick, protective results and allow LAWC to continue use of its production wells during the high-demand summer months. This was accomplished by funding additional treatment facilities at LAWC to remove perchlorate in addition to VOCs. The perchlorate removal system uses an ion exchange technology that has worked well, successfully treating over 34,449 acre-feet of groundwater, removing approximately 1,440 pounds of perchlorate and 349 pounds of VOCs (NASA, 2023b). The LAWC system has a 2,000-gpm treatment capacity; although, the actual treatment rate is dependent on demand.

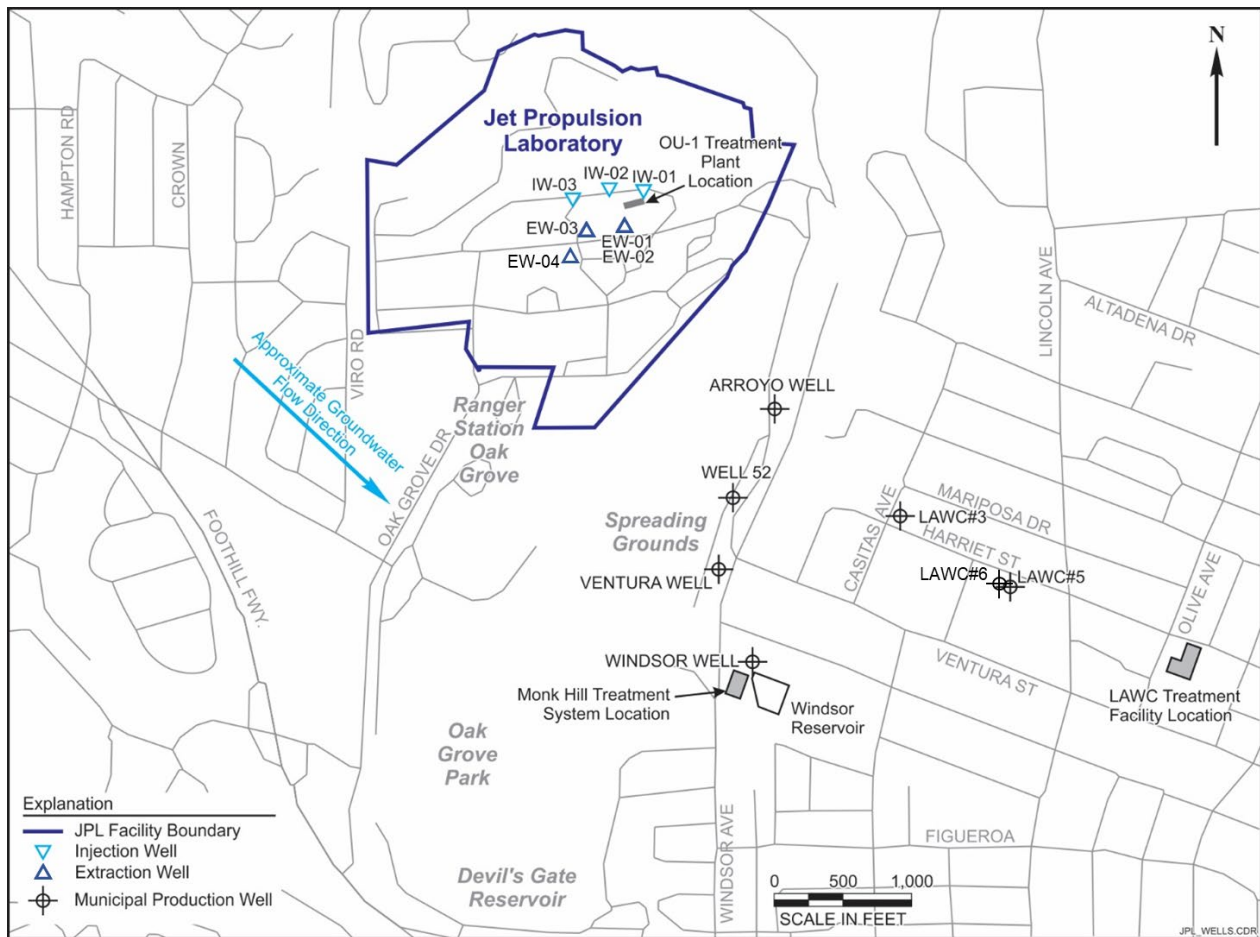


Figure 2-1. Location of OU1 and OU3 Groundwater Treatment Systems

Based on the success of the LAWC removal action and the need for similar perchlorate and VOC treatment at four City of Pasadena wells, NASA issued the Proposed Plan for OU3 in April 2006 that consisted of continued funding for operation of the LAWC treatment system, as well as funding for construction and operation of a treatment system for groundwater from the four City of Pasadena drinking water production wells located just east of JPL near the Arroyo Seco. The Interim ROD for OU3 was finalized in August 2007 (NASA, 2007c). Figure 2-1 shows the location of the LAWC treatment facility, including locations of the production wells.

In accordance with the Interim ROD for OU3, NASA implemented an interim remedial action to also remove perchlorate and VOCs from four City of Pasadena drinking water production wells beginning in 2011. The Monk Hill Treatment System (MHTS) began operation in July 2011 and has successfully treated approximately 34,145 acre-feet of groundwater, removing approximately 1,430 pounds of perchlorate using ion exchange and 234 pounds of VOCs using granular activated carbon (NASA, 2023c). MHTS has a 7,000-gpm treatment capacity; although, the actual treatment rate is dependent on demand. Figure 2-1 shows the location of the MHTS, including locations of the production wells. Groundwater treated by the current LAWC system and MHTS achieves all applicable drinking water requirements. Both systems are operating effectively and influent chemical concentrations at both systems are decreasing over time (NASA, 2017).

3. DESCRIPTION OF THE SELECTED REMEDY

NASA's selected remedy for groundwater is continued operation the interim remedies for OU1 and OU3 (NASA, 2018). The interim remedies included groundwater extraction, treatment, and reinjection at the OU1 source area, as well as operation of treatment systems to remove perchlorate and VOCs from pumped groundwater at four City of Pasadena (Mid-Plume Cleanup) and two LAWC drinking water production wells (Leading Edge Cleanup). NASA's selected remedy also includes ICs to ensure impacted groundwater within the JPL site is not utilized without appropriate evaluation and/or treatment (NASA, 2018 and NASA, 2019). Lastly, the selected remedy also includes continuation of the existing groundwater monitoring program that was established in collaboration with supporting agencies. The groundwater monitoring program provides data to evaluate the performance and effectiveness of the remedy.

The ICs include an agreement with the State of California that requires the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) to notify NASA of any proposed new extraction wells in the Monk Hill subarea, and that NASA evaluate the impact of any proposed extraction wells within/near the capture zones on the remedies for OU1 and OU3. In addition, NASA must conduct annual reviews of new well permits in the Monk Hill subarea as an additional control to prevent inadvertent exposure to chemicals.

4. INSTITUTIONAL CONTROLS IMPLEMENTATION AND ASSURANCE

In February 2019, NASA entered into an agreement with the California SWRCB DDW (NASA, 2019). This agreement includes a commitment that requires the agency to notify NASA of any new extraction wells proposed in the Monk Hill subarea of the Raymond Basin, as depicted in Figure 4-1. The SWRCB DDW oversees, regulates, and issues permits for public water systems, water recycling projects, and water treatment systems. In this role, permit applications for new groundwater wells proposed in the State of California (i.e., including the Raymond Basin aquifer) are submitted for review and approval by the SWRCB DDW.

In addition to the agreement, NASA must submit formal inquiries on an annual basis to the local management and enforcement agencies responsible for overseeing and regulating well construction, alteration, and destruction activities within the Monk Hill subarea of the Raymond Basin. These agencies include the Raymond Basin Management Board (RBMB), Los Angeles County, and the City of Pasadena, as follows:

Raymond Basin Management Board
725 N. Azusa Avenue
Azusa, CA 91702
Phone: (626) 815-1300

City of Pasadena
Water and Power Department
Water Division
150 South Los Robles Avenue
Pasadena, CA 92705
Phone: (626) 744-4436

Los Angeles County
Department of Health Services
Drinking Water Program
5050 Commerce Drive
Baldwin Park, CA 91706
Phone: (626) 430-5420

If RBMB, Los Angeles County, and/or the City of Pasadena report that permits/requests have been filed for new wells in the Monk Hill subarea of the Raymond Basin, NASA will request all relevant well data, make a determination within 30 days as to whether the installation of a well will adversely impact ongoing groundwater treatment efforts and/or result in exposure to impacted groundwater, and document the determination within 60 days.

Recognizing that changes in groundwater recharge may also affect OU1 cleanup efforts, NASA must also submit a formal inquiry to JPL on an annual basis to obtain information on any proposed rainwater recapture projects within the JPL facility. If projects are planned that include rainwater recapture, NASA will request all relevant data, make a determination within 30 days as to whether the rainwater recapture project will adversely impact ongoing groundwater treatment efforts, and document the determination within 60 days.

Finally, NASA must prepare an IC report annually to document results of assurance monitoring, and NASA will evaluate the effectiveness of IC implementation and assurance as part of Five-Year Reviews for the JPL CERCLA site.

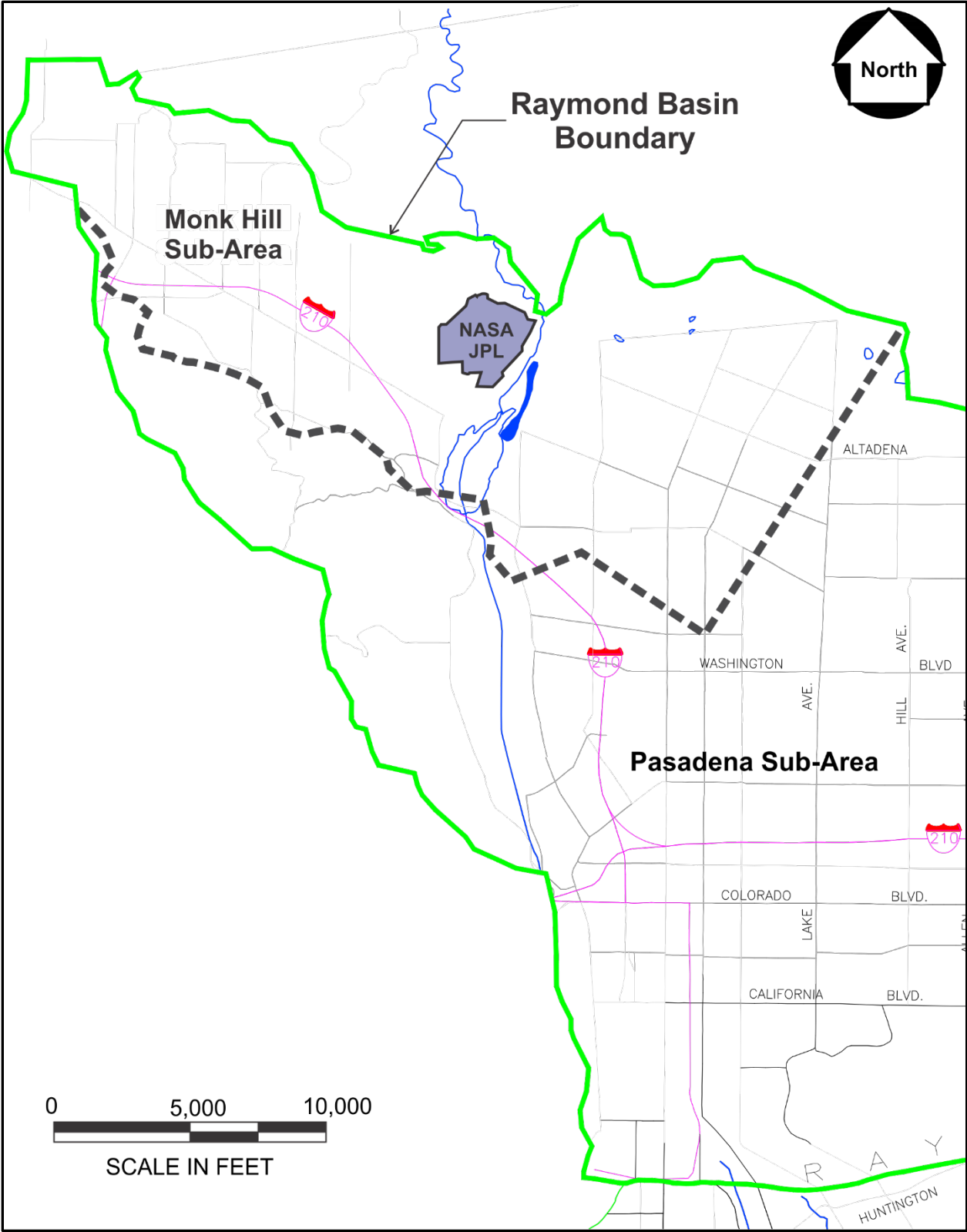


Figure 4-1. Map of the Raymond Basin Showing the Monk Hill Sub-Area

5. INSTITUTIONAL CONTROLS ANNUAL SUMMARY

On October 20, 2023, NASA submitted formal inquiries to JPL, RBMB, Los Angeles County, and the City of Pasadena. These inquiry letters are provided as Attachment 1. Responses to the inquiry letters from the City of Pasadena, JPL, RBMB, and Los Angeles County are provided in Attachment 2. No new wells or rainwater recapture projects are currently planned.

Los Angeles County provided a significant amount of data as part of the 2023 request (see Attachment 2). Table 1 summarizes the data provided by Los Angeles County. No new wells were identified in the information provided by Los Angeles County that would adversely impact the JPL groundwater treatment efforts.

Table 1. Summary of Data Provided by Los Angeles County

Work Site Address	Permit No.	Approval Date	Description of Work	Impact to JPL Groundwater Treatment Efforts
291 Figueroa Dr. Altadena, CA 91001	SR0281328	12/22/2021	Five Soil Borings (Exploratory Borings)	NONE
593 W. Woodbury Rd. Altadena, CA 91001	SR0256619	5/28/2021	One Soil Boring (Exploratory Boring)	NONE
623 Foothill Blvd. La Canada Flintridge, CA 91011	SR0215949; SR0199014; SR0315538	3/3/2020; 11/14/2022	One Soil Boring/Monitoring Well; Well Decommissioning	NONE (Gas Station located upgradient of JPL)
1418 Descanso Dr. La Canada Flintridge, CA 91011	SR0250909	4/14/2021	Six Soil Borings (Exploratory Borings)	NONE
1808 Durfee Ave. South El Monte, CA 91733	SR0223460	5/29/2020	Three Monitoring Well Destructions	NONE
2369 N. El Sol Ave. Altadena, CA 91001	SR0219274	4/8/2020	One Public Municipal Well Destruction	NONE
2601 E. Imperial Hwy. Lynwood, 90262	SR0148177; SR0148179; SR0148180; SR0144782	5/25/2018; 6/13/2018; 6/21/2018	21 Monitoring Wells Decommissioning; MW-4R, MW- 8R, MW17R, MW-25, and MW-26 Construction	NONE (Not located in the Raymond Basin)
2660 W. Foothill Blvd. La Crescenta, CA 91214	SR0204652	11/27/2019	6 Monitoring Wells Decommissioning	NONE
4800 Oak Grove Dr. Pasadena, CA 91109	SR0195575	8/22/2019	Four Soil Borings (Exploratory Borings)	NONE
11426 Telegraph Rd. Santa Fe Springs, CA 90670	SR0224006	6/2/2020	One Soil Boring	NONE
5869-020-005 Big Tujunga Canyon Rd. Sunland, CA 91040	SR0140847; 0150118	5/23/2018; 7/5/2018	Private Well Construction and Well Yield Test	NONE (Far upgradient of JPL, Located in San Gabriel Mtns.)
2439-2445 Lincoln Ave. Altadena, CA 91001	SR0324088	1/17/2023	Soil Borings/Geotechnical	NONE
1418 Descanso Dr. La Canada Flintridge, CA 91011	SR0355173	10/18/2023	Five Soil Borings (Exploratory Borings)	NONE

Work Site Address	Permit No.	Approval Date	Description of Work	Impact to JPL Groundwater Treatment Efforts
South Side of 210 Freeway, La Canada Flintridge, CA 91011	SR0223450	5/29/2020	Six Soil Borings	NONE
200 Foothill Blvd. La Canada Flintridge, CA 91011	SR0192844	8/12/2019; 6/30/2021	Soil Boring (Exploratory Boring)	NONE
La Canada Flintridge, CA 91011	SR0250134	4/13/2021	Soil Boring (Exploratory Boring)	NONE
2212 El Molino Ave., Altadena, CA 91001	SR0344193	6/23/2023	Soil Borings (Geotech Investigation)	NONE

Regarding the agreement with SWRCB DDW, NASA was not notified of any new extraction wells proposed in the Monk Hill subarea of the Raymond Basin since the agreement was established in February 2019. In addition, NASA received two e-mail updates from SWRCB DDW in 2023 verifying no new extraction well initiatives were planned in the Monk Hill Subarea. The communications between NASA and SWRCB DDW are provided in Attachment 2.

SUMMARY OF FINDINGS: Based on the available data for 2023, NASA is not aware of any well installation or rainwater recapture activities in the Monk Hill subarea of the Raymond Basin that could adversely impact ongoing groundwater treatment efforts and/or result in exposure to impacted groundwater.

6. REFERENCES

- Ebasco. 1988. *Preliminary Assessment/ Site Inspection Report for Jet Propulsion Laboratory, Pasadena, California*. April.
- Ebasco. 1990a. *Expanded Site Inspection Report for NASA-Jet Propulsion Laboratory, Pasadena, California*. May.
- Ebasco. 1990b. *Supplemental Information to the Expanded Site Inspection Report for NASA-Jet Propulsion Laboratory, Pasadena, California*. December.
- Foster Wheeler Environmental Corporation (FWEC). 1999a. *Final Remedial Investigation Report for Operable Units 1 and 3: On-Site and Off-Site Groundwater*. National Aeronautics and Space Administration, Jet Propulsion Laboratory, Pasadena, CA. August.
- Foster Wheeler Environmental Corporation (FWEC). 1999b. *Final Remedial Investigation Report for Operable Unit 2: Potential On-Site Contaminant Source Areas*. National Aeronautics and Space Administration, Jet Propulsion Laboratory, Pasadena, CA. November.
- Foster Wheeler Environmental Corporation (FWEC). 2000. *Draft Feasibility Study Report for Operable Units 1 and 3: On-Site and Off-Site Groundwater. National Aeronautics and Space Administration, Jet Propulsion Laboratory, Pasadena, CA*. January.
- National Aeronautics and Space Administration (NASA). 2003a. *Revised Final Operable Unit 1 Expanded Treatability Study Work Plan*. NASA Jet Propulsion Laboratory. October.
- National Aeronautics and Space Administration (NASA). 2003b. *JPL Groundwater Modeling Report, National Aeronautics and Space Administration, Jet Propulsion Laboratory, Pasadena, California*. December.
- National Aeronautics and Space Administration (NASA). 2007a. *Final Remedial Action Report for Operable Unit 2, National Aeronautics and Space Administration, Jet Propulsion Laboratory, Pasadena, California*. March.
- National Aeronautics and Space Administration (NASA). 2007b. *Interim Record of Decision for Operable Unit 1 Source Area Groundwater, National Aeronautics and Space Administration, Jet Propulsion Laboratory, Pasadena, California*. March.
- National Aeronautics and Space Administration (NASA). 2007c. *Interim Record of Decision for Operable Unit 3 Off-Facility Groundwater, National Aeronautics and Space Administration, Jet Propulsion Laboratory, Pasadena, California*. August.
- National Aeronautics and Space Administration (NASA). 2014. *Optimization Work Plan, National Aeronautics and Space Administration, Jet Propulsion Laboratory, Pasadena, California*. This document also serves as the Technical Report for the California Department of Public Health (CDPH). May.

National Aeronautics and Space Administration (NASA). 2017. *Final Second Five-Year Review Report, National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California*. January.

National Aeronautics and Space Administration (NASA). 2018. *Final Record of Decision for the Operable Unit 1 On-Facility Groundwater and the Operable Unit 3 Off-Facility Groundwater, National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California*. February.

National Aeronautics and Space Administration (NASA). 2019. *Final Institutional Control Remedial Design for the Operable Unit 1 On-Facility Groundwater and the Operable Unit 3 Off-Facility Groundwater, National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California*. April.

National Aeronautics and Space Administration (NASA). 2023a. *Technical Memorandum Operable Unit 1 Source Area Treatment System Progress Report March 2023 through August 2023, National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California*. November.

National Aeronautics and Space Administration (NASA). 2023b. *Technical Memorandum Lincoln Avenue Water Company Treatment System, National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California*. May.

National Aeronautics and Space Administration (NASA). 2023c. *Technical Memorandum Pasadena Water and Power Monk Hill Treatment System, National Aeronautics and Space Administration Jet Propulsion Laboratory, Pasadena, California*. April.

Attachment 1: Formal Inquiry Letters

National Aeronautics and
Space Administration

NASA Management Office
4800 Oak Grove Drive
Pasadena, CA 91109-8099



Reply to Attn of: NMO

October 20, 2023

TO: City of Pasadena
Water and Power Department, Water Division
150 South Los Robles Avenue
Pasadena, CA 92705
Phone: (626) 744-4436

Dear Mr. Takara:

SUBJECT: CY2023 Request for Information on Production Well Construction, Alteration, and Destruction Activities in the Monk Hill Sub-Area

The remedy selected in the Final Record of Decision (ROD) for Operable Unit (OU) 1 and OU3, dated February 2018, for the National Aeronautics and Space Administration's (NASA) Jet Propulsion Laboratory (JPL) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site, includes the implementation of institutional controls (ICs) to ensure the effectiveness of ongoing groundwater treatment and to prevent exposure to impacted groundwater near JPL. The IC Remedial Design for OU1 and OU3, dated April 2019, details the implementation of ICs at the JPL CERCLA Site. The ROD and IC Remedial Design are available at JPL CERCLA Program website (<https://jplwater.nasa.gov/>).

As part of the ICs, NASA must submit formal inquiries on an annual basis to the local management and enforcement agencies responsible for overseeing and regulating well construction, alteration, and destruction activities within the Monk Hill Sub-Area of the Raymond Basin. These agencies include the Raymond Basin Management Board, Los Angeles County, and the City of Pasadena. The attached map shows the JPL Facility and the Monk Hill Sub-Area of the Raymond Basin.

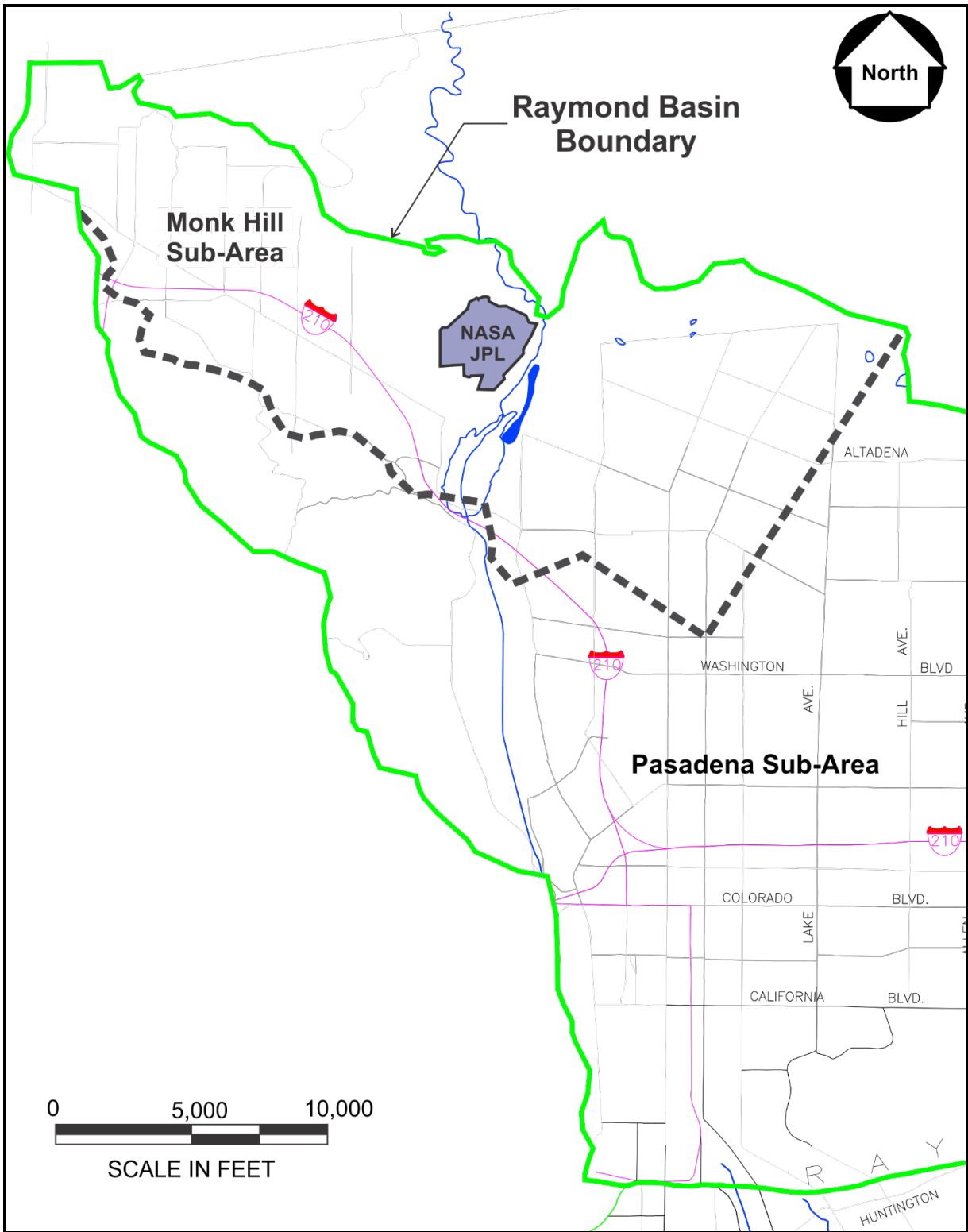
NASA is requesting information from you on any well construction, alteration, and destruction activities in the Monk Hill Sub-Area, ongoing or planned. If there are no relevant projects, please provide written confirmation that there were no well activities in 2023. Please respond within two weeks.

Please contact me if you have any questions via e-mail at sslaten@nasa.gov or via phone at (818) 393-6683.

Sincerely,

A handwritten signature in black ink that reads "Slaten".

Steven Slaten
Facilities and Environmental Manager
NASA Management Office / JPL



Map of the JPL Facility within the Monk Hill Sub-Area of the Raymond Basin

National Aeronautics and
Space Administration

NASA Management Office
4800 Oak Grove Drive
Pasadena, CA 91109-8099



Reply to Attn of: NMO

October 20, 2023

TO: Kelly Gardner
Raymond Basin Management Board
725 N. Azusa Avenue
Azusa, CA 91702
Phone: (626) 815-1300

Dear Ms. Gardner:

SUBJECT: CY2023 Request for Information on Production Well Construction, Alteration, and Destruction Activities in the Monk Hill Sub-Area

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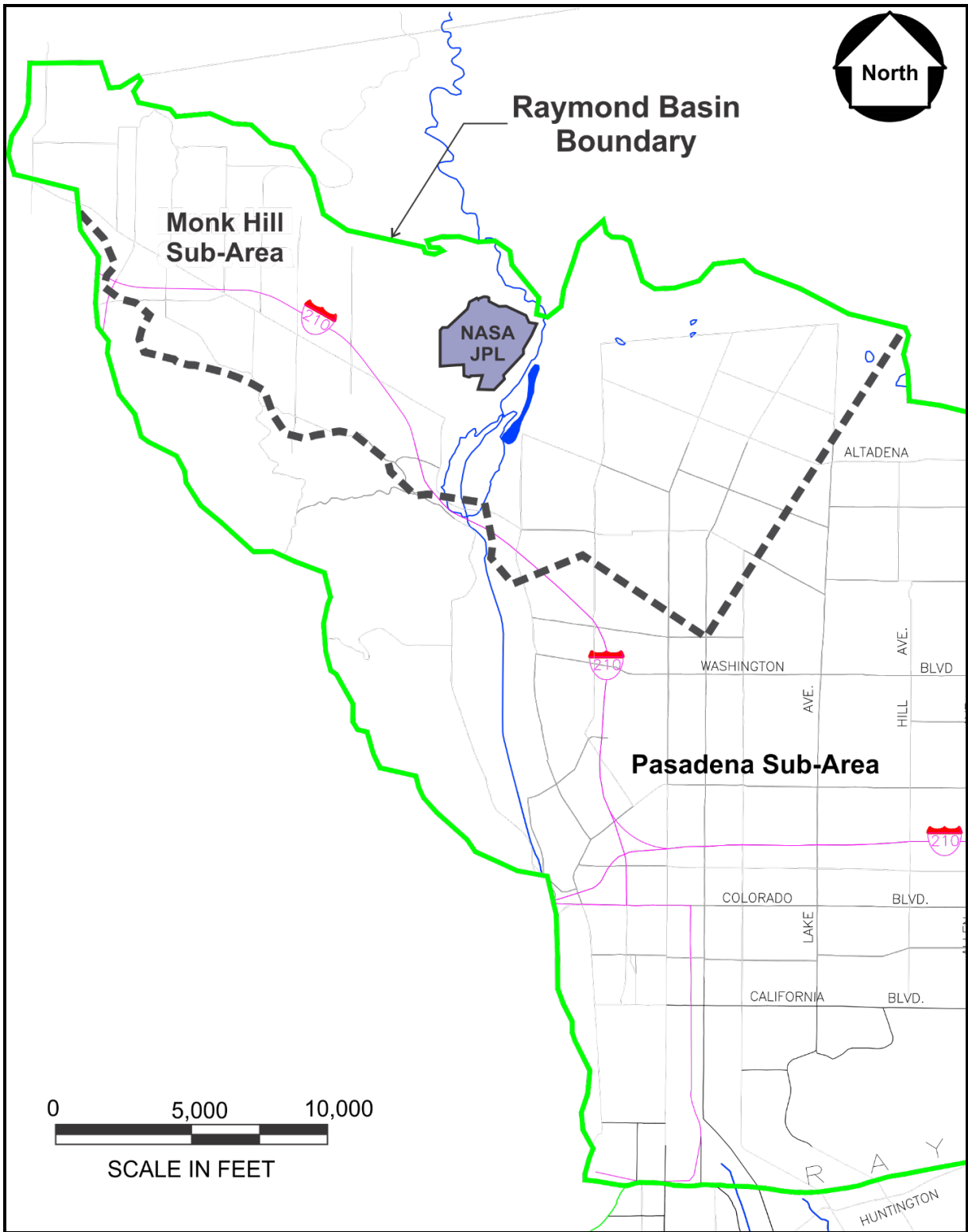
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Sincerely,

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Steven Slaten
Facilities and Environmental Manager
NASA Management Office / JPL



Map of the JPL Facility within the Monk Hill Sub-Area of the Raymond Basin

National Aeronautics and
Space Administration

NASA Management Office
4800 Oak Grove Drive
Pasadena, CA 91109-8099



Reply to Attn of: NMO

October 20, 2023

TO: Los Angeles County
Environmental Health, Drinking Water Program
5050 Commerce Drive
Baldwin Park, CA 91706
Phone: (626) 430-5420

To Whom It May Concern:

SUBJECT: CY2023 Request for Information on Production Well Construction, Alteration, and Destruction Activities in the Monk Hill Sub-Area

The remedy selected in the Final Record of Decision (ROD) for Operable Unit (OU) 1 and OU3, dated February 2018, for the National Aeronautics and Space Administration's (NASA) Jet Propulsion Laboratory (JPL) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site, includes the implementation of institutional controls (ICs) to ensure the effectiveness of ongoing groundwater treatment and to prevent exposure to impacted groundwater near JPL. The IC Remedial Design for OU1 and OU3, dated April 2019, details the implementation of ICs at the JPL CERCLA Site. The ROD and IC Remedial Design are available at JPL CERCLA Program website (<https://jplwater.nasa.gov/>).

As part of the ICs, NASA must submit formal inquiries on an annual basis to the local management and enforcement agencies responsible for overseeing and regulating well construction, alteration, and destruction activities within the Monk Hill Sub-Area of the Raymond Basin. These agencies include the Raymond Basin Management Board, Los Angeles County, and the City of Pasadena. The attached map shows the JPL Facility and the Monk Hill Sub-Area of the Raymond Basin.

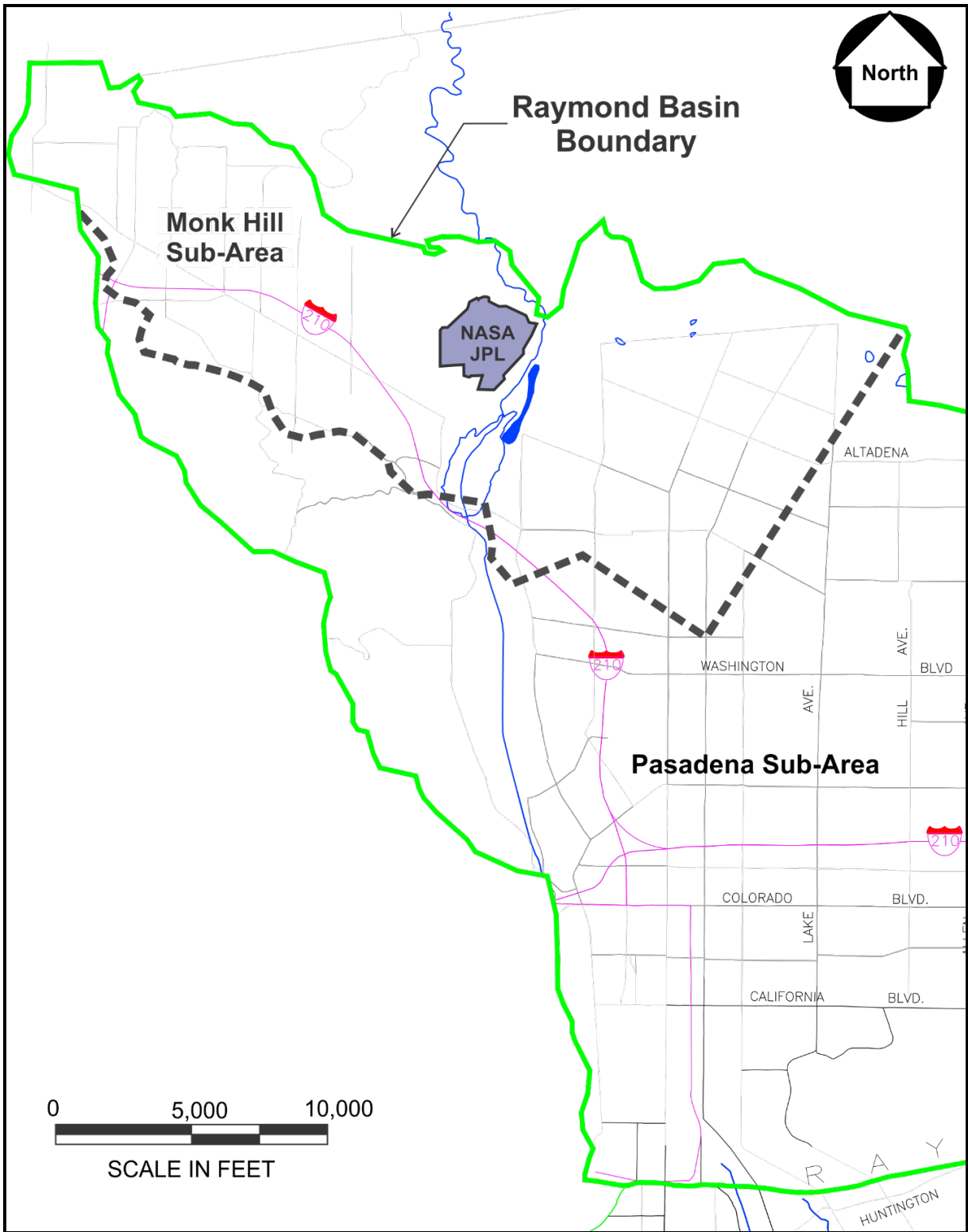
NASA is requesting information from you on any well construction, alteration, and destruction activities in the Monk Hill Sub-Area, ongoing or planned. If there are no relevant projects, please provide written confirmation that there were no well activities in 2023. Please respond within two weeks.

Please contact me if you have any questions via e-mail at sslaten@nasa.gov or via phone at (818) 393-6683.

Sincerely,

A handwritten signature in black ink that reads "Slaten".

Steven Slaten
Facilities and Environmental Manager
NASA Management Office / JPL



Map of the JPL Facility within the Monk Hill Sub-Area of the Raymond Basin

**PUBLIC HEALTH INVESTIGATION
CUSTODIAN OF RECORDS
REQUEST FOR PUBLIC RECORDS**

TEL 323 659-6148

FAX (323) 728-0217

Complete the Custodian of Records Request for Public Records Form in blue or black ink, or type.

If you have any questions about completing the form call (323) 659-6148

Submit your request to Public Health Investigation, Custodian of Records Office to Fax Number (323) 728-0217, Email to phicor@ph.lacounty.gov, or mail to:

Public Health Investigation
5555 Ferguson Drive Suite 120-04
Commerce, CA 90022

***Required Information**

REQUESTOR INFORMATION	
Name *	
Address *	
City *	
State *	
Zip *	
Telephone No. *	
Fax No.	
Website/Email	

CONTACT PERSON INFORMATION (If different from Requestor)	
Name	
Telephone No.	

DELIVERY OF RECORDS (If different from Requestor)	
Address	
City	
Zip	

RECORD INFORMATION Type of Record * (Choose only one per request)			
ENVIRONMENTAL HEALTH DISTRICT SURVEILLANCE	ENVIRONMENTAL HEALTH PROTECTION	ALL OTHERS	
Apartment, Condo, Home Inspections	Beaches	Animal Bite Report	
Apartment, Condo, Home and Institution Lead Inspections	Landfills	Medical Marijuana ID	
Food Borne Outbreak	Public Swimming Pools		
Food Poisoning	Recycled Water		
Food Vehicles	Residential Pools		
Motels and Hotel Inspection	Septic Tanks		
Retail Food Inspection	Sewage		
Schools and Day Care Inspection	Water Wells		
Street Vendor			
Other Type of Record:			

REQUEST INFORMATION (Provide as much information possible)	
Incident Date/Time	
Incident/Food Borne Illness/Outbreak Summary No.	
Type of Disease	
Inspector Name (If known)	
Incident Location	
Owner Name	
Victim/Patient/Complainant Name	
Date of Birth	
Medical Record No.	
Location of Records	

From: [Keith Fields](#)
To: [Jorge Perez](#)
Cc: [Slaten, Steven W. \(HQ-RA000\)](#); [David Conner](#)
Subject: RE: Parcel numbers
Date: Tuesday, November 14, 2023 9:50:00 AM

Mr. Perez,

Thank you for following up. It took me a bit to figure this out because there are thousands of parcel numbers in the area we need to search. The solution appears to be the Map Book numbers (i.e., the first four digits of the parcel number). We need LA County to search all parcel numbers beginning with the following four digits (map books numbers):

- 5801 through 5848
- 5866 through 5870

Parcel numbers beginning with these numbers encompass the area represented on the map provided in the letter submitted with our original request.

Please let me know if you have any questions.

Respectfully,

KEITH FIELDS, PE, PMP

VICE PRESIDENT

TIDEWATER, INC.

keith.fields@tideh2o.net

3761 Attucks Drive

Powell, Ohio 43065

C: 614-778-2618

F: 410-997-8713

www.tideh2o.net

From: Jorge Perez <Jorperez@ph.lacounty.gov>
Sent: Monday, November 13, 2023 5:21 PM
To: Slaten, Steven W. (HQ-RA000) <sslaten@nasa.gov>; Keith Fields <keith.fields@tideh2o.net>; David Conner <david.conner@tideh2o.net>
Subject: RE: [EXTERNAL]-[235325]- [EXTERNAL]RE: Parcel numbers

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

Good Afternoon,

Want to follow up on the addresses or parcel numbers for the below request.

Jorge P.

From: Slaten, Steven W. (HQ-RA000) <sslaten@nasa.gov>
Sent: Monday, November 06, 2023 10:51 AM
To: Fields, Keith A (JPL-5030)[Industry Collaborator] <keith.fields@tideh2o.net>; Conner, David J (JPL-5030)[Industry Collaborator] <david.conner@tideh2o.net>
Cc: Jorge Perez <jorperez@ph.lacounty.gov>
Subject: RE: [EXTERNAL] Re: [EXTERNAL]RE: Parcel numbers

CAUTION: External Email. Proceed Responsibly.

Correct, they need an address or parcel number to be able to search records.

Thanks,

Steve Slaten
MSR PEIS Project Manager-
Environmental Manager
NASA Office of JPL Management and Oversight (NOJMO)
Jet Propulsion Laboratory
202-368-0491

From: Keith Fields <keith.fields@tideh2o.net>
Sent: Monday, November 6, 2023 11:45 AM
To: Slaten, Steven W. (HQ-RA000) <sslaten@nasa.gov>; Conner, David J (JPL-5030)[Industry Collaborator] <david.conner@tideh2o.net>
Cc: jorperez@ph.lacounty.gov
Subject: [EXTERNAL] Re: [EXTERNAL]RE: Parcel numbers

CAUTION: This email originated from outside of NASA. Please take care when clicking links or opening attachments. Use the "Report Message" button to report suspicious messages to the NASA SOC.

Thanks Steve. I will reach out to them. This is associated I believe with the IC request I sent recently.

Keith Fields, PE, PMP
Tidewater, Inc.
3761 Attucks Drive
Powell, Ohio 43065
C: (614) 778-2618

From: Slaten, Steven W. (HQ-RA000) <sslaten@nasa.gov>
Sent: Monday, November 6, 2023 1:42:53 PM

To: Keith Fields <keith.fields@tideh2o.net>; David Conner <david.conner@tideh2o.net>
Cc: jorperez@ph.lacounty.gov <jorperez@ph.lacounty.gov>
Subject: [EXTERNAL]RE: Parcel numbers

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

From: Slaten, Steven W. (HQ-RA000)
Sent: Monday, November 6, 2023 11:12 AM
To: Fields, Keith A (JPL-5030)[Industry Collaborator] <keith.fields@tideh2o.net>; Conner, David J (JPL-5030)[Industry Collaborator]
Cc: jorperez@ph.lacounty.org
Subject: Parcel numbers

Keith or Dave , for the inquiry to La County George Perez needs the parcel number to do the requested search.

Can you get that for him?

Thanks,

Steve Slaten
MSR PEIS Project Manager-
Environmental Manager
NASA Office of JPL Management and Oversight (NOJMO)
Jet Propulsion Laboratory
202-368-0491

National Aeronautics and
Space Administration

NASA Management Office
4800 Oak Grove Drive
Pasadena, CA 91109-8099



Reply to Attn of: NMO

October 20, 2023

TO: Mr. Faustino Chirino
JPL Environmental Affairs Program Office (503)
4800 Oak Grove Drive (M/S: 200-119C)
Pasadena, CA 91109
Phone: 818-354-8634

Dear Mr. Chirino:

SUBJECT: CY2023 Request for Information on Rainwater Recapture Activities in the Monk Hill Sub-Area

The remedy selected in the Final Record of Decision (ROD) for Operable Unit (OU) 1 and OU3, dated February 2018, for the National Aeronautics and Space Administration's (NASA) Jet Propulsion Laboratory (JPL) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site, includes the implementation of institutional controls (ICs) to ensure the effectiveness of ongoing groundwater treatment and to prevent exposure to impacted groundwater near JPL. The IC Remedial Design for OU1 and OU3, dated April 2019, details the implementation of ICs at the JPL CERCLA Site. The ROD and IC Remedial Design are available at JPL CERCLA Program website (<https://jplwater.nasa.gov/>).

As part of the ICs, NASA must submit formal inquiries on an annual basis to JPL to obtain information on any proposed rainwater recapture projects within the JPL facility. The attached map shows the JPL Facility and the Monk Hill Sub-Area of the Raymond Basin.

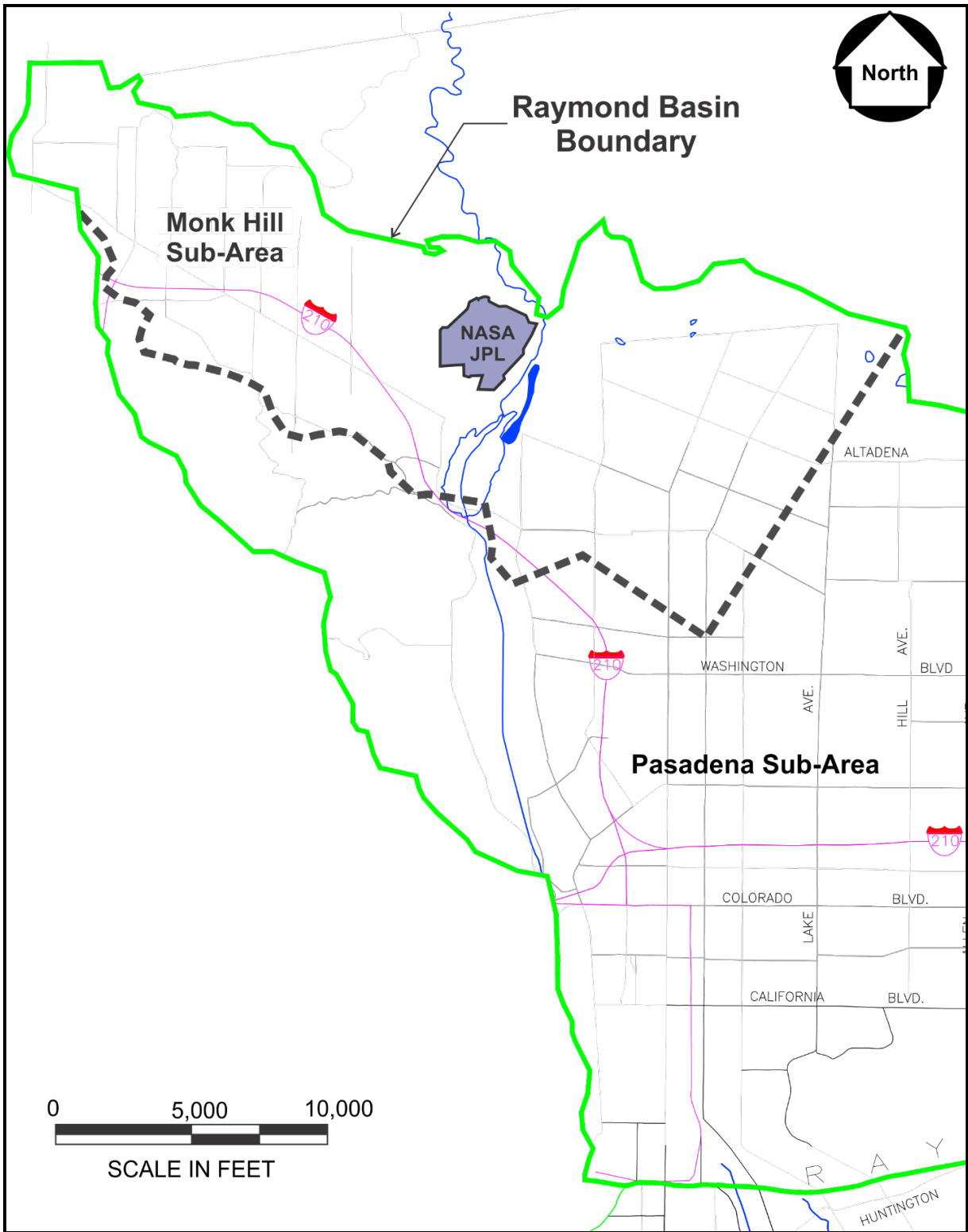
NASA is requesting information from you on any proposed rainwater recapture projects with the JPL facility, ongoing or planned. If there are no relevant projects, please provide written confirmation that there were no rainwater recapture activities in 2023. Please respond within two weeks.

Please contact me if you have any questions via e-mail at sslaten@nasa.gov or via phone at (818) 393-6683.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Slaten".

Steven Slaten
Facilities and Environmental Manager
NASA Management Office / JPL



Map of the JPL Facility within the Monk Hill Sub-Area of the Raymond Basin

**Attachment 2: Communication in Response to Formal Inquiry Letters
and Records Requests**

Communications with SWRCB DDW

From: Diep, Chi P.@Waterboards
To: [Keith Fields](#)
Cc: [Steven Slaten \(sslaten@nasa.gov\)](mailto:sslaten@nasa.gov)
Subject: [EXTERNAL]RE: [EXTERNAL]RE: NASA JPL Institutional Controls (IC) Verification
Date: Friday, August 25, 2023 5:51:00 PM

You don't often get email from chi.diep@waterboards.ca.gov. [Learn why this is important](#)

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

Hi Keith,

Sorry, I might have missed a quarter. However, I have check with others in our office that have water systems in the Monk Hill area and they do not have any new projects proposed there. As for Pasadena, they also did not have any new projects proposed there. Let me know if you have any questions. Thanks,

Chi Diep, P.E.

Metropolitan District Engineer
State Water Resources Control Board
Division of Drinking Water
500 North Central Ave. Suite 500
Glendale, CA 91203
Direct: 818-551-2016
General: 818-551-2004
Fax: 818-551-2054
Email: Chi.Diep@waterboards.ca.gov

From: Keith Fields <keith.fields@tideh2o.net>
Sent: Tuesday, February 14, 2023 10:19 AM
To: Diep, Chi P.@Waterboards <Chi.Diep@waterboards.ca.gov>
Cc: Steven Slaten (sslaten@nasa.gov) <sslaten@nasa.gov>
Subject: RE: [EXTERNAL]RE: NASA JPL Institutional Controls (IC) Verification

EXTERNAL:

Thanks Chi. We really appreciate the update.

Respectfully,

KEITH FIELDS, PE, PMP

VICE PRESIDENT
TIDEWATER, INC.

keith.fields@tideh2o.net
3761 Attucks Drive
Powell, Ohio 43065
C: 614-778-2618
F: 410-997-8713
www.tideh2o.net

From: Diep, Chi P.@Waterboards <Chi.Diep@waterboards.ca.gov>
Sent: Tuesday, February 14, 2023 1:15 PM
To: Keith Fields <keith.fields@tideh2o.net>
Cc: Steven Slaten (sslaten@nasa.gov) <sslaten@nasa.gov>
Subject: [EXTERNAL]RE: NASA JPL Institutional Controls (IC) Verification

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Hi Keith,

This just a quarterly update on new projects in the Monk Hill area. I recently had a meeting with others that have water systems in the Monk Hill area and they have indicated that they have not receive any request for new drinking water wells in that area. As for Pasadena, we haven't received any information for new project from them in the last quarter. Let me know if you have any questions. Thanks,

Chi Diep, P.E.

Metropolitan District Engineer
State Water Resources Control Board
Division of Drinking Water
500 North Central Ave. Suite 500
Glendale, CA 91203
Direct: 818-551-2016
General: 818-551-2004
Fax: 818-551-2054
Email: Chi.Diep@waterboards.ca.gov

From: Keith Fields <keith.fields@tideh2o.net>
Sent: Tuesday, November 1, 2022 6:19 AM
To: Diep, Chi P.@Waterboards <Chi.Diep@waterboards.ca.gov>
Cc: Steven Slaten (sslaten@nasa.gov) <sslaten@nasa.gov>; O'Keefe, Jeff@Waterboards <Jeff.OKeefe@waterboards.ca.gov>
Subject: RE: NASA JPL Institutional Controls (IC) Verification

EXTERNAL:

Thanks Chi. We appreciate your plan to put quarterly reminders in the calendars of DDW staff that have water systems in the Monk Hill area. NASA will continue sending annual reminders to DDW as well.

Respectfully,

KEITH FIELDS, PE, PMP

VICE PRESIDENT

TIDEWATER, INC.

keith.fields@tideh2o.net

3761 Attucks Drive

Powell, Ohio 43065

O: 614-792-2896

C: 614-778-2618

F: 410-997-8713

www.tideh2o.net

From: Diep, Chi P.@Waterboards <Chi.Diep@waterboards.ca.gov>

Sent: Wednesday, October 26, 2022 6:15 PM

To: Keith Fields <keith.fields@tideh2o.net>

Cc: Steven Slaten (sslaten@nasa.gov) <sslaten@nasa.gov>; O'Keefe, Jeff@Waterboards <Jeff.OKeefe@waterboards.ca.gov>

Subject: [EXTERNAL]RE: [EXTERNAL]RE: NASA JPL Institutional Controls (IC) Verification

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

Hi Keith,

We don't have frequent request for new wells for the Monk Hill area. We are planning to put quarterly reminders to check in our calendar, especially for those of us that have water systems in this area. We would also appreciate these reminders as well from NASA/JPL. Thanks,

Chi Diep, P.E.

Metropolitan District Engineer

State Water Resources Control Board

Division of Drinking Water

500 North Central Ave. Suite 500

Glendale, CA 91203

Direct: 818-551-2016

General: 818-551-2004

Fax: 818-551-2054

Email: Chi.Diep@waterboards.ca.gov

From: Keith Fields <keith.fields@tideh2o.net>
Sent: Thursday, October 20, 2022 12:52 PM
To: Diep, Chi P.@Waterboards <Chi.Diep@waterboards.ca.gov>
Cc: Steven Slaten (sslaten@nasa.gov) <sslaten@nasa.gov>; O'Keefe, Jeff@Waterboards <Jeff.OKeefe@waterboards.ca.gov>
Subject: RE: [EXTERNAL]RE: NASA JPL Institutional Controls (IC) Verification

EXTERNAL:

Chi,

Thanks for getting back to us so quickly. We appreciate the information you provided.

In addition, I think the U.S. EPA wants us to describe the DDW process/procedure that would trigger notification to NASA about a new well in the Monk Hill Subarea. For example, if a new DDW staff member were assigned oversight of the Pasadena system and Pasadena submitted paperwork to DDW about a new well, how would that new staff member know to notify NASA? Is there a written procedure for systems in the Monk Hill Subarea that flags DDW staff to contact NASA? How does the MOU get attached to systems in the Monk Hill Subarea?

Thanks again for your help in addressing the U.S. EPA request.

Respectfully,

KEITH FIELDS, PE, PMP

VICE PRESIDENT

TIDEWATER, INC.

keith.fields@tideh2o.net

3761 Attucks Drive

Powell, Ohio 43065

O: 614-792-2896

C: 614-778-2618

F: 410-997-8713

www.tideh2o.net

From: Diep, Chi P.@Waterboards <Chi.Diep@waterboards.ca.gov>
Sent: Wednesday, October 19, 2022 4:59 PM
To: Keith Fields <keith.fields@tideh2o.net>
Cc: Steven Slaten (sslaten@nasa.gov) <sslaten@nasa.gov>; O'Keefe, Jeff@Waterboards <Jeff.OKeefe@waterboards.ca.gov>
Subject: [EXTERNAL]RE: NASA JPL Institutional Controls (IC) Verification

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

Hi Keith,

For my District, we over see Pasadena Water and Power which work with NASA on their Monks Hill treatment. PWP has approach us on plans to drill new well(s) in the Arroyo Seco area but has not submitted a permit application. My understanding is that they are still a ways away from able to submit a permit application. As for other Districts in our office, they have indicated that none of their water systems have submitted permit applications for new wells in the area described in the memo. As we have don't have many projects in this area, it's good to get a reminder. Thanks,

Chi Diep, P.E.

Metropolitan District Engineer
State Water Resources Control Board
Division of Drinking Water
500 North Central Ave. Suite 500
Glendale, CA 91203
Direct: 818-551-2016
General: 818-551-2004
Fax: 818-551-2054
Email: Chi.Diep@waterboards.ca.gov

From: Keith Fields <keith.fields@tideh2o.net>
Sent: Wednesday, October 19, 2022 8:56 AM
To: Diep, Chi P.@Waterboards <Chi.Diep@waterboards.ca.gov>
Cc: Steven Slaten (sslaten@nasa.gov) <sslaten@nasa.gov>
Subject: NASA JPL Institutional Controls (IC) Verification

EXTERNAL:

Hello Chi. I hope you are doing well.

During the September 14, 2022 JPL RPM Meeting, we mentioned a request from the U.S. EPA associated with the ICs in place at JPL. Specifically, the U.S. EPA requested that NASA “conduct an audit of the SWRCB DDW records to ensure the notification system is in place and functioning properly.”

As you may recall, NASA and DDW signed a memorandum of agreement (MOU) in 2019 (see attached) that includes the “notification system” that the U.S. EPA is referring to. The MOU specifies that “SWRCB will inform NASA and provide relevant well data within 30 days of receiving a permit application for new groundwater well(s) proposed for installation in the Monk Hill subarea of the Raymond Basin.”

Can you help us with this request from U.S. EPA, or direct us to the right person at DDW? I would be glad to get on a call with someone at DDW, if that would be preferred.

Thanks in advance for your help.

KEITH FIELDS, PE, PMP

VICE PRESIDENT

TIDEWATER, INC.

keith.fields@tideh2o.net

3761 Attucks Drive

Powell, Ohio 43065

O: 614-792-2896

C: 614-778-2618

F: 410-997-8713

www.tideh2o.net

Communications with the City of Pasadena



PASADENA WATER AND POWER

October 26, 2023

Delivered via E-mail

Mr. Steven Slaten
Facilities and Environmental Manager
NASA Management Office/JPL
4800 Oak Grove Drive
Pasadena, CA 91109-8099

Subject: CY2023 Request for Information on Production Well Construction, Alteration, and Destruction Activities in the Monk Hill Subarea

Dear Mr. Slaten:

Pasadena Water and Power (PWP) is responding to NASA-JPL's request for information regarding production well construction, alteration, and destruction activities in the Monk Hill Subarea of the Raymond Groundwater Basin for the calendar year 2023. PWP maintains four active production wells in the Monk Hill Subarea, including Arroyo, Ventura, Well 52, and Windsor wells. In the past ten months, PWP operated Arroyo, Well 52, and Ventura. Recently, Ventura Well was rehabilitated and a new variable frequency drive pump and motor were installed. Depending on groundwater levels and water quality restraints, PWP intends to operate a combination of the wells. Due to the current aquifer levels, Windsor Well is not capable of operating.

PWP is in the design phase and preparing an initial study and mitigated negative declaration for a new production well (Explorer Well). This well will be installed approximately 1,000 feet due north of the Arroyo Well. PWP anticipates the start of the drilling in calendar year 2024.

Efforts are continued to be made to address water quality issues and to infiltrate more stormwater into the groundwater basin to mitigate drought conditions.

If you have any questions, please call me at (626) 744-3729 or by e-mail at gtakara@cityofpasadena.net.

Regards,

Gary Takara
Engineering Manager

Communications with Raymond Basin Management Board (RBMB)

From: [Kelly Gardner](#)
To: [Keith Fields](#)
Cc: [Lauren Augino](#); [Steven Slaten \(sslaten@nasa.gov\)](#)
Subject: [EXTERNAL]RE: NASA JPL CERCLA Program: Annual Institutional Controls (ICs) Inquiry Letter
Date: Tuesday, October 24, 2023 5:43:17 PM
Attachments: [RBMB Well Permit Log_102423.pdf](#)

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

Hi Keith and Steve,

Attached is the RBMB Permit log for your review. In 2023, the 2 applications received fall outside of the Monk Hill. I believe the last one received in the Monk Hill is the Explorer well with the City of Pasadena back in 2021.

Please let me know if you have any additional questions,

Kelly

From: Keith Fields <keith.fields@tideh2o.net>
Sent: Monday, October 23, 2023 8:42 AM
To: Kelly Gardner <kelly@watermaster.org>
Cc: Lauren Augino <lauren@watermaster.org>; Steven Slaten (sslaten@nasa.gov) <sslaten@nasa.gov>
Subject: NASA JPL CERCLA Program: Annual Institutional Controls (ICs) Inquiry Letter

Hello Kelly. I hope you had a great weekend.

Attached please find the annual letter in compliance with the Final Record of Decision for JPL Groundwater. We request a written response providing the information requested or confirming that no new wells are ongoing or planned in the Monk Hill Subarea of the Raymond Basin.

Respectfully,

KEITH FIELDS, PE, PMP

VICE PRESIDENT

TIDEWATER, INC.

keith.fields@tideh2o.net

3761 Attucks Drive

Powell, Ohio 43065

C: 614-778-2618

F: 410-997-8713

www.tideh2o.net

Communications with JPL

From: [Chirino, Faustino R \(US 5030\)](#)
To: [Keith Fields](#)
Cc: [Slaten, Steven W \(US 0910-NASA\)](#)
Subject: [EXTERNAL]RE: NASA JPL CERCLA Program: Annual Institutional Controls (ICs) Inquiry Letter
Date: Wednesday, October 25, 2023 11:24:34 AM

CAUTION: External email, DO NOT click on any links/attachments unless you recognize the sender and know the content is safe

Good morning Keith,

I confirm that there are no current or planned no rainwater recapture projects within the JPL Facility. Let me know if you have any questions. Thanks,

Faustino Chirino
Org 503 | Section Manager, Environmental Affairs Program Office
O 818-354-8634 | M 818-653-3133
<https://jpl.webex.com/meet/fchirino>

Jet Propulsion Laboratory | jpl.nasa.gov
4800 Oak Grove Dr, Mail Stop 200-119A
Pasadena, California 91109

From: Keith Fields <keith.fields@tideh2o.net>
Sent: Monday, October 23, 2023 8:42 AM
To: Chirino, Faustino R (US 5030) <faustino.r.chirino@jpl.nasa.gov>
Cc: Slaten, Steven W (US 0910-NASA) <Sslaten@nasa.gov>
Subject: [EXTERNAL] NASA JPL CERCLA Program: Annual Institutional Controls (ICs) Inquiry Letter

Hello Tino. I hope you had a great weekend.

Attached please find the annual letter in compliance with the Final Record of Decision for JPL Groundwater. We request a written response providing the information requested or confirming that no rainwater recapture projects within the JPL Facility are ongoing or planned.

Respectfully,

KEITH FIELDS, PE, PMP

VICE PRESIDENT

TIDEWATER, INC.

keith.fields@tideh2o.net

3761 Attucks Drive

Powell, Ohio 43065

C: 614-778-2618

F: 410-997-8713

www.tideh2o.net

Communications with Los Angeles County



BARBARA FERRER, Ph.D., M.P.H., M.Ed.
Director

MUNTU DAVIS, M.D., M.P.H.
County Health Officer

ANISH P. MAHAJAN, M.D., M.S., M.P.H.
Chief Deputy Director

RITA SINGHAL, M.D., M.P.H.
Director, Disease Control Bureau

LUCILLE RAYFORD, Ph.D., R.N.
DPH Nursing Director

MARILYN SMITH, M.P.H
Chief, Public Health Investigation

5555 Ferguson Drive Suite 120-04
Commerce, CA 90022
TEL (323) 659-6148 • FAX (323) 728-0217

November 17, 2023

Steve Slaten
4800 Oak Grove Drive (Building 180-801)
Pasadena, California 91109
sslaten@nasa.gov

PUBLIC RECORD REQUEST-SUBJECT: NASA JPL CERCLA Program

Dear Steve Slaten:

This letter is in response to your request for records made pursuant to the California Public Records Act ("CPRA") to the Los Angeles County Department of Public Health ("Public Health"). Your request received on October 27, 2023, sought the following:

- *“... information from you on any well construction, alteration, and destruction activities in the Monk Hill Sub-Area, ongoing or planned.”*

On November 6, 2023, per the California Public Records Act, Government Code § 7922.535(b), we were extending the time to respond to your request and that we anticipated providing you with a determination on or before November 20, 2023, as to whether we were able to identify any disclosable public records.

Enclosed please find the records responsive to your request. Portions of the records have been redacted according to the provision of California law outlined below:

- **California Constitution, Article I, section 1**, which specifically declares the right to personal privacy. The Legislature enacted the CPRA "mindful of the right of individuals to privacy." (Government Code section 7921.000). In order to protect private information, personal phone numbers, names and email addresses were redacted.



BOARD OF SUPERVISORS

Hilda L. Solis
First District

Holly J. Mitchell
Second District

Lindsey P. Horvath
Third District

Janice Hahn
Fourth District

Kathryn Barger
Fifth District

In providing you with this response, the County is not waiving any rights, defenses, or claims of privilege, exception, or exemption under the CPRA or any other statutes. The County reserves its right to assert all applicable privileges, doctrines, and exemptions.

This concludes Public Health's response to your request. If you have any questions, please contact me at (323) 659-6148.

Sincerely,

Jorge Perez

Jorge Perez, Deputy Health Officer
Public Health Investigation
COR ID No. 235325



ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
291 Figueroa Dr	Altadena	91001	Raj.pirathiviraj@terracon.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
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- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 5 Soil Borings/Exp. Holes	PERMIT NUMBER: SR0281328	DATE: 12-22-2021
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole.
- Ensure soil borings are sealed per California Well Standards 74-90
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.





ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
593 W Woodbury Rd	Altadena	91001	kviswanathan@geosyntec.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
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TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 1 Soil Boring/Exp. Hole	PERMIT NUMBER: SR0256619	DATE: 5-28-2021
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole.
- Ensure soil borings are sealed per California Well Standards 74-90
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.





ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
623 Foothill Blvd	La Canada Flintridge	91011	Jaret.fischer@stantec.com

NOTICE:

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TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: One Soil Boring	PERMIT NUMBER:	SR0215949	DATE:	3-3-2020
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- As discussed, please ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole.
- Ensure soil borings are sealed per California Well Standards 74-90
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.

APPROVED BY:

Belinda Larsen, REHS
21515 Vanowen St. Ste. 116
Canoga Park, Ca 91303
(818) 593-7308





ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
623 Foothill Blvd	La Canada	91011	Gianne.schull@arcadis.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
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- **ONCE APPROVED NOTIFY BELINDA LARSEN AT blarsen@ph.lacounty.gov PREFERABLY 4 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED SR0199014 (One Monitoring Well Construction)

DATE: 9-25-2019

ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure annular sanitary seal is sealed per California Well Standards 74-90: Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland Cement and up to 6% Bentonite may be added.
- Notify me by e-mail at blarsen@ph.lacounty.gov prior to start of field work.
- Drillers shall submit their well completion reports to the Department of Water Resources through the Online System of Well Completion Reports (OSWCR) at https://civicnet.resources.ca.gov/DWR_WELLS.



5834
Belinda Larsen R.E.H..S
818-593-7308

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
623 Foothill Blvd	La Canada	91011	Gianne.schull@arcadis.com

NOTICE:

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TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED SR0199014 (One Monitoring Well Construction)

DATE: 9-25-2019

ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure annular sanitary seal is sealed per California Well Standards 74-90: Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland Cement and up to 6% Bentonite may be added.
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5834
Belinda Larsen R.E.H..S
818-593-7308

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
1418 Descanso Dr	La Canada/Flintridg	91011	kviswanathan@geosyntec.com

NOTICE:

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TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 6 Soil Borings/Exp. Holes	PERMIT NUMBER: SR0250909	DATE: 4-14-2021
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole.
- Ensure soil borings are sealed per California Well Standards 74-90
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 - No hydrated Bentonite chips
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.





ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
1808 Durfee Ave	South El Monte	91733	info@geo-cal.com

NOTICE:

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- **ONCE APPROVED NOTIFY BELINDA LARSEN AT blarsen@ph.lacounty.gov PREFERABLY 4 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED SR0223460 (3 MW Destructions)

DATE: 5-29-2020

ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Well destructions must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.
- Notify me by e-mail at blarsen@ph.lacounty.gov prior to start of field work.
- Drillers shall submit their well completion reports to the Department of Water Resources through the Online System of Well Completion Reports (OSWCR) at https://civicnet.resources.ca.gov/DWR_WELLS.



5838

 Belinda Larsen R.E.H.S.
 818-593-7308

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

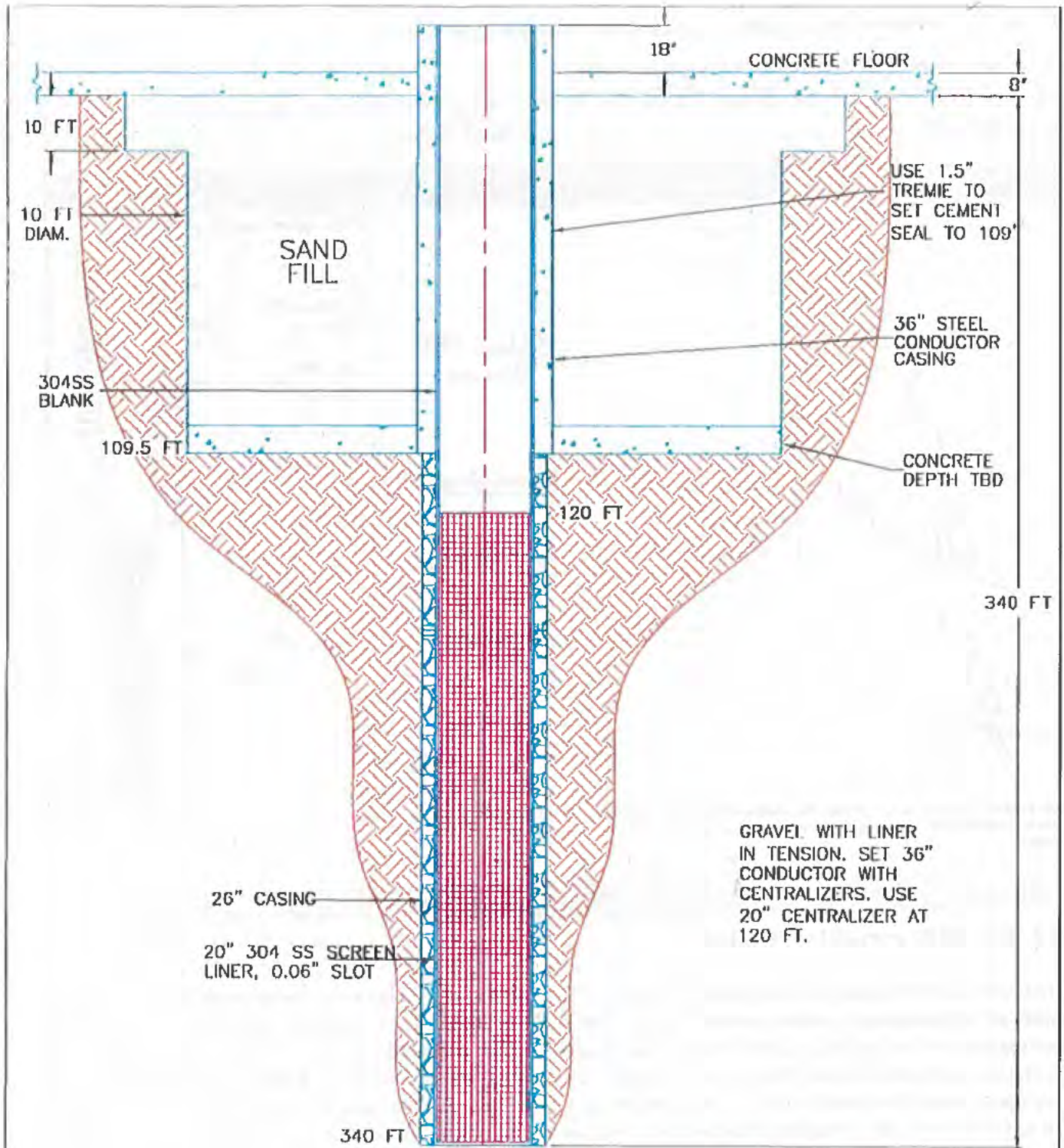
DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



OUTLINE DRAWING NOT TO SCALE



159 North Acacia Street
San Dimas, Ca 91773
Phone: (909) 599-9606
Fax: (909) 599-6238

GENERAL PUMP COMPANY
WATERWELL & PUMP SERVICE SINCE 1952

CUSTOMER : OLSSON CONSTRUCTION - CIC BALDWIN PARK WELL ?

DESCRIPTION : AS BUILT WELL DRAWING

MATLS: STEEL CONDUCTOR CASING, SS BLANK, SS SCREEN

DWC NO.
13361AB

PCS. REQ'D : 1

GPC ENGINEERING

DY: DANIEL

DATE: 05-26-2016
REV. 00-10-2016

JOB NO 13361

Belinda Larsen

From: Mike Bodart <MBodart@genpump.com>
Sent: Tuesday, April 14, 2020 7:44 AM
To: Belinda Larsen
Subject: RE: Plan Review for 2369 N. El Sol Ave

CAUTION: External Email. Proceed Responsibly.

Hi Belinda,

I will see if I can find one. We have not decommissioned a hand dug well in a long time. They are very rare. Our proposed plan meets the California requirements per 74-81 & 90 and the plan has been approved by our registered geologist. This plan was drawn up a long time ago, but the work was never performed. The City of Pasadena has their own Health Department, but this well is located out of the City limits, therefore they want me to work with your Department.

We modified two wells in LA County that were originally hand dug with a similar design to be used for potable water supply. I can send you a copy of the permit and how added a seal for reference. Let me know if that would be helpful.

Thanks,

Michael Bodart

President / Director of Engineering

General Pump Company, Inc.

159 North Acacia Street

San Dimas, California 91773

mbodart@genpump.com

Ofc: 909-599-9606, x222

Cell: 909-721-2554

From: Belinda Larsen <blarsen@ph.lacounty.gov>
Sent: Tuesday, April 14, 2020 7:31 AM
To: Mike Bodart <MBodart@genpump.com>
Subject: RE: Plan Review for 2369 N. El Sol Ave

Mike,

If you have had a similar well to destruct in the past, could you give me a work plan and permit number to look in to what was done? I would like to have more detail so I can research and make sure the destruction methods comply with the California Well Standards.

Belinda

From: Mike Bodart <MBodart@genpump.com>

Sent: Monday, April 13, 2020 2:39 PM

To: Belinda Larsen <blarsen@ph.lacounty.gov>

Cc: Voutchkova, Roumiana <rvoutchkova@cityofpasadena.net>; Boman, Brad <bboman@cityofpasadena.net>; Luis Busso <lbusso@genpump.com>

Subject: RE: Plan Review for 2369 N. El Sol Ave

CAUTION External Email. Proceed Responsibly.

Hi Belinda,

Sorry it took me a few days to get back to you. This well is EXTREMELY rare and will require us to look at the design and create a decommissioning process that will protect the ground water, but also be reasonable in cost. The LA County specification is set up for a standard rotary or cable tool drilled well. This one is a hand dug well, so we have always worked with your Department to come up with a special process for any hand dug wells. Is it possible to have a four-way conference call with the Pasadena City engineers, our registered geologist, your Department, and myself to discuss the options for the destruction? If so, please send us a few different dates and times and we will run them by the City.

Thanks,

Michael Bodart

President / Director of Engineering

General Pump Company, Inc.

159 North Acacia Street

San Dimas, California 91773

mbodart@genpump.com

Ofc: 909-599-9606, x222

Cell: 909-721-2554

From: Belinda Larsen <blarsen@ph.lacounty.gov>

Sent: Wednesday, April 8, 2020 3:23 PM

To: Mike Bodart <MBodart@genpump.com>

Subject: Plan Review for 2369 N. El Sol Ave

Hi Mr. Bodart,

Please see attached plan review and provide as much information as possible. I have attached the Los Angeles County Policy for Well Construction/Destruction. See the second page to make sure the LA County Requirements are followed as well as the California Well Standards. Please feel free to contact me to discuss.

Belinda Larsen EHS III

LA County Drinking Water Program

West Valley Office

blarsen@ph.lacounty.gov

818 593-7308



159 N. ACACIA STREET * SAN DIMAS, CA 91773
PHONE: (909) 599-9606 * FAX: (909) 599-6238

CAMARILLO, CA 93010 * PHONE: (805) 482-1215
www.genpump.com

WELL & PUMP SERVICE SINCE 1952

Lic. #496765

Serving Southern California and Central Coast

April 21, 2020

Via Email

LA County Drinking Water Program
5050 Commerce Dr.
Baldwin Park, California 91706
Attn: *Belinda Larsen*

Subject: City of Pasadena - Casitas Well Decommission

I have completed my review of the existing proposed well decommission for the City of Pasadena Casitas Well. The proposed plan followed a scope of work which was drafted 21 years ago. There are no records of a drilling log from the early 1900's. What we know from the recent video log inspection is that the water table is below 151 ft below ground surface (bgs). Two nearby wells monitored by the California Department of Water Resources (Local Well IDs: MW-19 & MW-20) with similar perforated intervals as the Casitas Well indeed show recent static groundwater levels ranging from 182 ft bgs to 225 ft bgs. Based on the limited information provided to me, and submitted with this application, the decommission procedures set forth should adequately seal this well from surficial or aquifer(s) cross contamination encompassing this 527 ft, 18-inch diameter well casing. The well is perforated within largely unconfined alluvial deposits predominantly composed of sands and gravels. Thus, the potential for a possible aquifer cross contamination is not present during this decommission project.

A 10-sack sand slurry can be used to seal the 18" existing well casing below the bottom of the vault to the total depth of the well. A 10-foot thick concrete pour should also be emplaced with this tremie pipe in the bottom of the vault to further protect the any groundwater intrusion to the well below. To dispel any concerns regarding surface water or rain infiltration to the vault and possibly creating a "perched water" condition from 150 ft bgs to 5 ft bgs then it is recommended that the remaining 145 ft of vault space be filled with 35' of soil and/or sand with alternating 10' sections of 6 sack concrete. The top of the vault should then have a minimum of 20' concrete.

One possible option for the near ground surface decommission portion is to excavate and remove the walls of the vault to 10 ft (instead of the normal 5 ft) which would allow for a future pool if this site would be sold as a residential lot. Looking at where the well is located on this lot, I would assume that a pool would not be located this close to the property lining, therefore the 5' depth may be sufficient. If the county and city agree with this approach to decommission this well, we can modify the application and submit a CAD drawing to illustrate the destruction plan.

Please review the records and contact us if you have any questions regarding this recommended decommission process. Thank you.



Roumiana Voutchkova
City of Pasadena
April 21, 2020
Page -2-

Sincerely,

GENERAL PUMP COMPANY, INC.

Luis Busso, P.G.

Luis Busso
Senior Project Geologist
California License No. 9146



ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Denial

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
2369 N. El Sol Ave	Altadena	91001	mbodart@genpump.com Mhass@genpump.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	One Public Municipal Well Destruction	PERMIT NUMBER:	SR0219274	DATE:	4-8-2020
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WORK PLAN NOT APPROVED. PLEASE REVISE OR SUBMIT THE FOLLOWING INFORMATION:

- Please provide more information on perforations. When was the casing perforated? Provide the amount of perforations per foot.
- Provide approved bottom fill from bottom to 151 bgs. The casing shall be filled up to 150 feet below grade with at least a ten-sack fine mix. Provide information on 11-sac sand slurry and if it meets the California Well Standards and LA County Policy. See attached bulletin on L A County Policy.
- Provide an approved upper seal according to the California Well Standards. Pea Gravel not an approved upper seal for the entire fill of the hand dug shaft.
- Provide work plan detail to clean out and remove contaminants and remove the concrete filled pipe at side of the shaft.

REVIEWED BY:

Belinda Larsen, REHS
21515 Vanowen St. Ste. 116
Canoga Park, Ca 91303
(818) 593-7308



5838



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2369 N. El Sol Ave	Altadena	91001	mbodart@genpump.com mhass@genpump.com

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- **ONCE APPROVED NOTIFY BELINDA LARSEN AT blarsen@ph.lacounty.gov PREFERABLY 4 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED **SR0219274 (One Municipal Well Destruction)** DATE: 4-22-2020
 ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Well destruction must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.
- Notify me by e-mail at blarsen@ph.lacounty.gov prior to start of field work.
- Drillers shall submit their well completion reports to the Department of Water Resources through the Online System of Well Completion Reports (OSWCR) at https://civinet.resources.ca.gov/DWR_WELLS.



5838

 Belinda Larsen R.E.H.S.
 818-593-7308

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
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WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
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WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
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ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

SR0148177

2601 East Imperial Hwy, Lynwood, CA 90262

Work Plan Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2601 East Imperial Hwy	Lynwood	90262	gthornton@geosyntec.com

NOTICE:

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- **ONCE APPROVED NOTIFY INSPECTOR AT ytaye@ph.lacounty.gov PREFERABLY 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED (1 monitoring well decommissioning)

DATE: June 13, 2018

ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure to backfill with cement based sealing material using a tremie pipe or equivalent, proceeding upward from the bottom of the boring.
- The decommissioning of wells must comply with all applicable requirements published in the [California Well Standards \(Bulletins 74-81 and 74-90\)](#) and Los Angeles County Code.
- Drillers shall submit their well completion reports to the Department of Water Resources through the Online System of Well Completion Reports (OSWCR) at https://civicnet.resources.ca.gov/DWR_WELLS.



REHS NO. 7115

Yonas Taye

Yonas Taye, REHS

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

SR0148179

2601 East Imperial Hwy, Lynwood, CA 90262

Work Plan Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2601 East Imperial Hwy	Lynwood	90262	gthornton@geosyntec.com

NOTICE:

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- **ONCE APPROVED NOTIFY INSPECTOR AT ytafe@ph.lacounty.gov PREFERABLY 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED (MW-4R construction)

DATE: June 21, 2018

ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure to backfill with cement based sealing material using a tremie pipe or equivalent, proceeding upward from the bottom of the boring.
- The construction of wells must comply with all applicable requirements published in the California Well Standards Bulletins 74-81 and 74-90) and Los Angeles County Code.
- Drillers shall submit their well completion reports to the Department of Water Resources through the Online System of Well Completion Reports (OSWCR) at https://civicnet.resources.ca.gov/DWR_WELLS.



REHS NO. 7115

Yonas Tafe

Yonas Tafe, REHS

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

SR0148180

2601 East Imperial Hwy, Lynwood, CA 90262

Work Plan Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2601 East Imperial Hwy	Lynwood	90262	gthornton@geosyntec.com

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- **ONCE APPROVED NOTIFY INSPECTOR AT ytafe@ph.lacounty.gov PREFERABLY 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED (MW-8R, MW-17R, MW-25, MW-26 construction)

DATE: June 21, 2018

ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure to backfill with cement based sealing material using a tremie pipe or equivalent, proceeding upward from the bottom of the boring.
- The construction of wells must comply with all applicable requirements published in the California Well Standards Bulletins 74-81 and 74-90) and Los Angeles County Code.
- Drillers shall submit their well completion reports to the Department of Water Resources through the Online System of Well Completion Reports (OSWCR) at https://civicnet.resources.ca.gov/DWR_WELLS.



REHS NO. 7115

Yonas Tafe

Yonas Tafe, REHS

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

SR0144782

2601 East Imperial Hwy, Lynwood, CA 90262

Work Plan Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2601 East Imperial Hwy	Lynwood	90262	gthornton@geosyntec.com

NOTICE:

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- **ONCE APPROVED NOTIFY INSPECTOR AT ytaye@ph.lacounty.gov PREFERABLY 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED (20 monitoring wells decommissioning)

DATE: May 25, 2018

ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure to backfill with cement based sealing material using a tremie pipe or equivalent, proceeding upward from the bottom of the boring.
- The decommissioning of wells must comply with all applicable requirements published in the [California Well Standards \(Bulletins 74-81 and 74-90\)](#) and Los Angeles County Code.
- Drillers shall submit their well completion reports to the Department of Water Resources through the Online System of Well Completion Reports (OSWCR) at https://civicnet.resources.ca.gov/DWR_WELLS.



REHS NO. 7115

Yonas Taye

Yonas Taye, REHS

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

SR0204652

2660 West Foothill Boulevard, La Crescenta, CA 91214

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2660 West Foothill Boulevard	La Crescenta	91214	rarboleda@acesengineering.com

NOTICE:

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TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED (6 monitoring wells decommissioning)

DATE: November 27, 2019

ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure to backfill using a tremie pipe or equivalent, proceeding upward from the bottom of the boring.
- The decommissioning of wells must comply with all applicable requirements published in the [California Well Standards \(Bulletins 74-81 and 74-90\)](#), [Los Angeles County Code](#) and all other applicable laws.
- Submit well completion report/log to ytaye@ph.lacounty.gov within 30 days from the date its decommissioning is completed.
- Drillers shall submit their well completion reports to the Department of Water Resources through the Online System of Well Completion Reports (OSWCR) at https://civinet.resources.ca.gov/DWR_WELLS.



FILE NO. 7115

Yonas Taye

Yonas Taye, REHS

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



ENVIRONMENTAL HEALTH

Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm



Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
4800 Oak Grove Drive	Pasadena	91109	nguyen@converseconsultants.com

NOTICE:

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TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 4 Soil Borings/Exp. Holes	PERMIT NUMBER: SR0195575	DATE: 8-22-2019
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole.
- Ensure soil borings are sealed per California Well Standards 74-90
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.

APPROVED BY:

Belinda Larsen, REHS
21515 Vanowen St. Ste. 116
Canoga Park, Ca 91303
(818) 593-7308





ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
11426 Telegraph Road	Santa Fe Springs	90670	Jaret.fischer@stantec.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: One Soil Boring	PERMIT NUMBER: SR0224006	DATE: 6-2-2020
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole.
- Ensure soil borings are sealed per California Well Standards 74-90
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11. And any other applicable Codes.

APPROVED BY:

Belinda Larsen, REHS
 21515 Vanowen St. Ste. 116
 Canoga Park, Ca 91303
 (818) 593-7308



5838

Los Angeles County Department of Public Health
5050 Commerce Drive
Baldwin Park, CA 91706
Attention: Drinking Water Program

Arcadis U.S., Inc.
2300 Clayton Road
Suite 400
Concord
California 94520
Phone: 925 274 1100
Fax: 925 726 0121
www.arcadis.com

Date: November 15, 2022
Subject: Well Destruction Work Plan
Chevron Service Station 96368
623 Foothill Boulevard, La Canada, California

1 Introduction

On behalf of Chevron Environmental Management Company (Chevron), Arcadis U.S., Inc. (Arcadis) has prepared this Well Destruction Work Plan for Chevron Service Station 96368 located at 623 Foothill Boulevard, La Canada Flintridge, California (site). The objective of this Work Plan is to detail the field activities needed to destroy an existing groundwater monitoring wells (MW-2, MW-3, and MW-5) for the site.

2 Pre-Field Activities

This section discusses pre-field activities associated with the proposed well destruction activities.

2.1 Access and Permitting

Property owners and relevant stakeholders will be notified of proposed field activities prior to conducting field work. Before the well destruction activities are implemented, well destruction permit will be obtained through Los Angeles County Department of Public Health (LACDPH).

2.2 Health and Safety Plan

As required by the Occupational Safety and Health Administration 29 Code of Federal Regulations 1910.120 (Hazardous Waste Operations and Emergency Responses), Chevron and/or onsite contractor will prepare a Health and Safety Plan (HASP) that addresses the hazards associated with fieldwork at the site. The HASP is intended to identify and prevent potential safety hazards. Field staff and contractors will be required to review the HASP before beginning field operations at the site.

2.3 Utility Locate

A DigAlert ticket will be created with the Underground Service Alert of Southern California at least 72 hours prior to the commencement of field activities to identify public utilities within the work area. In addition, Chevron will retain a private utility locating company to further identify and mark underground utilities or obstructions to be avoided during subsurface activities.

3 Field Activities

Chevron and a designated contractor will coordinate field activities associated with the destruction of the monitoring wells.

3.1 Well Destruction – Pressure Grouting (MW-2 and MW-3)

Chevron proposes to destroy groundwater monitoring wells MW-2 and MW-3 via pressure grouting method, in accordance with LACDPH guidelines and California Well Standards. Monitoring wells are as shown on Figure 2 and well construction logs for the monitoring wells are included as Attachment A.

The well will be gauged, and total depth will be confirmed per the corresponding boring log prior to commencing well destruction activities. Chevron will retain a drilling contractor with a C-57 license to destroy the well. The well box ring, lid, and the surrounding well pad will be removed. The well will be pressure-grouted using a grout containing Portland cement (95%)/bentonite (5%). The grout will be delivered from the bottom of the well to the top using a tremie pipe. The grout will be pressurized to a minimum of 25 pounds per square inch for approximately 15 minutes using either a grout pump or compressed air system. Additional grout will be added (and pressure applied) until the well no longer accepts the material. The wells will be pressure grouted from the bottom to 1.5 feet below ground surface. After completion of pressure grouting, top 5 feet of well casing will be removed with cutting tools. If cutting tools alone could not remove top 5' casing, then over-drilling will be performed to 5' bgs, and a mushroom cap will be created. Concrete will be applied from 1.5 feet bgs to the ground surface, dyed to match existing ground conditions.

Based on the well construction log, an anticipated grout volume is calculated to be 26 gallons for each well (Attachment B), assuming no mushroom cap is required. The actual grout volume will be recorded.

3.2 Well Destruction – Over-Drilling (MW-5)

Chevron proposes to destroy groundwater monitoring wells MW-5 via over-drilling method, in accordance with LACDPH guidelines and California Well Standards. MW-5 is as shown on Figure 2 and well construction logs for the monitoring wells are included as Attachment A.

The well will be gauged, and total depth will be confirmed per the corresponding boring log prior to commencing well destruction activities. Chevron will retain a drilling contractor with a C-57 license to destroy the well. The well box ring, lid, and the surrounding well pad will be removed. MW-5 will be abandoned via over-drilling methods. The entire well column will be drilled to total depth and subsequently backfilled with neat cement using a tremie pipe. The cement will be a mixture in the proportion Portland cement (95%)/bentonite (5%). Neat cement will be added until the borehole is filled to 3 to 4 feet bgs. The amount of grout added should equal or exceed the calculated volume of the void to be filled. The remainder of the borings will be backfilled with concrete and/or other surface finish materials to match surrounding surface conditions.

3.3 Waste

Anticipated wastes generated during well decommissioning activities include the well lids, PVC casing, and concrete collars. These wastes are anticipated to be disposed as commercial waste.

4 Schedule and Reporting

Upon Work Plan approval, Chevron estimates completing the work proposed within 90 days of obtaining applicable permits. Upon completion of this field activities proposed in this Work Plan, a driller will prepare a completion report detailing well destruction activities.

Sincerely,
Arcadis U.S., Inc.

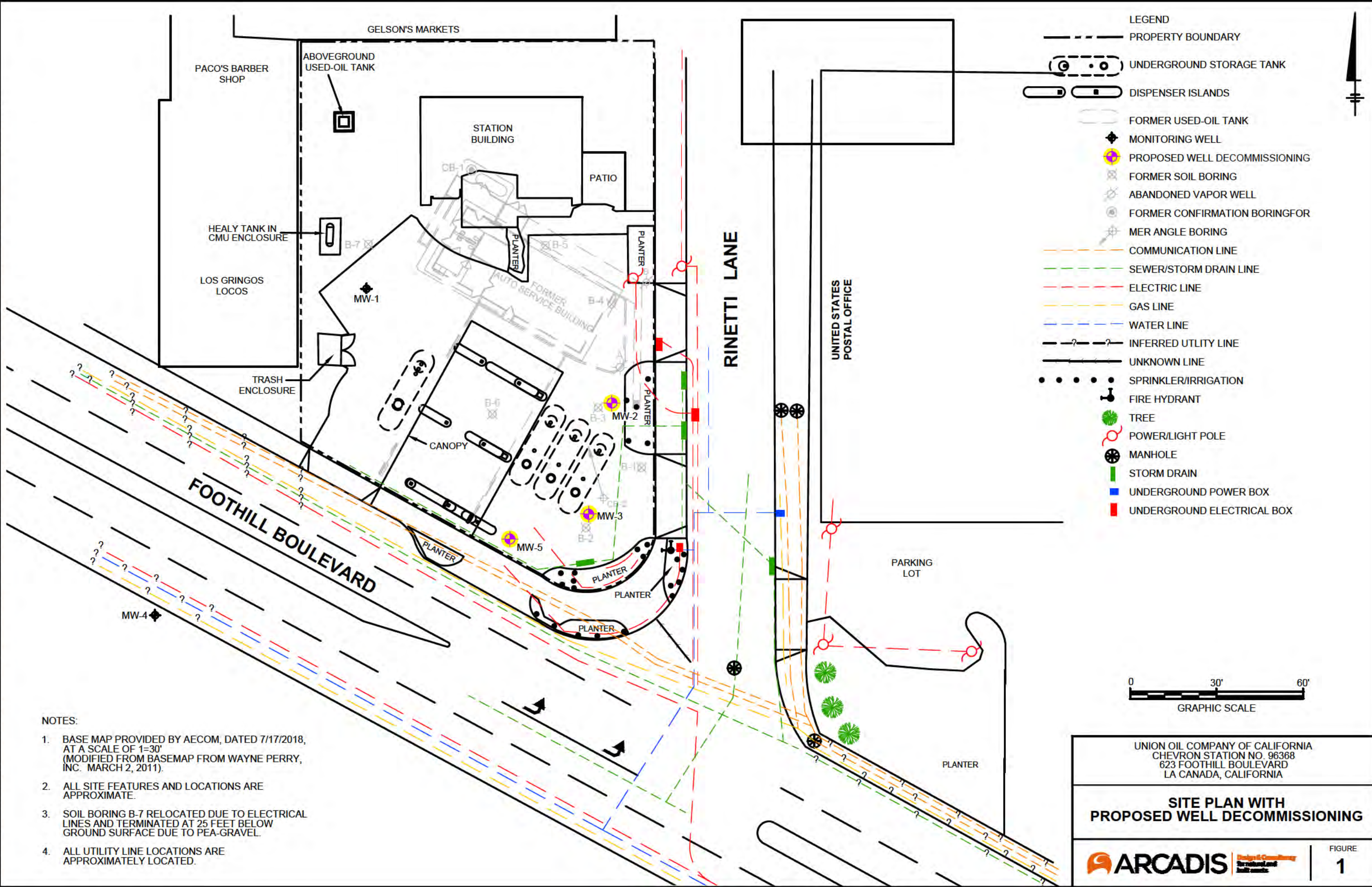
Shinta Aizawa
Project Manager

Email: Shinta.Aizawa@arcadis.com
Telephone: 310-753-5539

Enclosures:

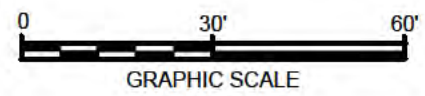
- Figure 1. Site Plan with Proposed Well Decommissioning
- Attachment A. Boring-Well Construction Log
- Attachment B. Well Abandonment Pressure Grouting Calculations

C:\BIM\OnDrive - ARCADIS\360 Docs\CHEVRON CORPORATION\96368-La Canada\2019\ASRT\MK6.6368\01-DWG\96368 - Fig 2 - Site Plan.dwg LAYOUT: 2 SAVED: 12/23/2019 2:28 PM PLOTSTYLETABLE: PLT\FULL.CTB PLOTTED: 12/23/2019 2:28 PM BY: MURESAN, ELENA



LEGEND	
	PROPERTY BOUNDARY
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	DISPENSER ISLANDS
	FORMER USED-OIL TANK
	MONITORING WELL
	PROPOSED WELL DECOMMISSIONING
	FORMER SOIL BORING
	ABANDONED VAPOR WELL
	FORMER CONFIRMATION BORING FOR
	MER ANGLE BORING
	COMMUNICATION LINE
	SEWER/STORM DRAIN LINE
	ELECTRIC LINE
	GAS LINE
	WATER LINE
	INFERRED UTILITY LINE
	UNKNOWN LINE
	SPRINKLER/IRRIGATION
	FIRE HYDRANT
	TREE
	POWER/LIGHT POLE
	MANHOLE
	STORM DRAIN
	UNDERGROUND POWER BOX
	UNDERGROUND ELECTRICAL BOX

- NOTES:**
1. BASE MAP PROVIDED BY AECOM, DATED 7/17/2018, AT A SCALE OF 1"=30' (MODIFIED FROM BASEMAP FROM WAYNE PERRY, INC. MARCH 2, 2011).
 2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
 3. SOIL BORING B-7 RELOCATED DUE TO ELECTRICAL LINES AND TERMINATED AT 25 FEET BELOW GROUND SURFACE DUE TO PEA-GRAVEL.
 4. ALL UTILITY LINE LOCATIONS ARE APPROXIMATELY LOCATED.



UNION OIL COMPANY OF CALIFORNIA
CHEVRON STATION NO. 96368
623 FOOTHILL BOULEVARD
LA CANADA, CALIFORNIA

**SITE PLAN WITH
PROPOSED WELL DECOMMISSIONING**

ARCADIS Engineering & Construction
Environmental & Infrastructure

FIGURE
1

Attachment A

MW-3 Boring-Well Construction Log



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Project Number:AY**Ä"A)
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Coordinates:A ' 88' ?>V8' Elevation#A Datum:A
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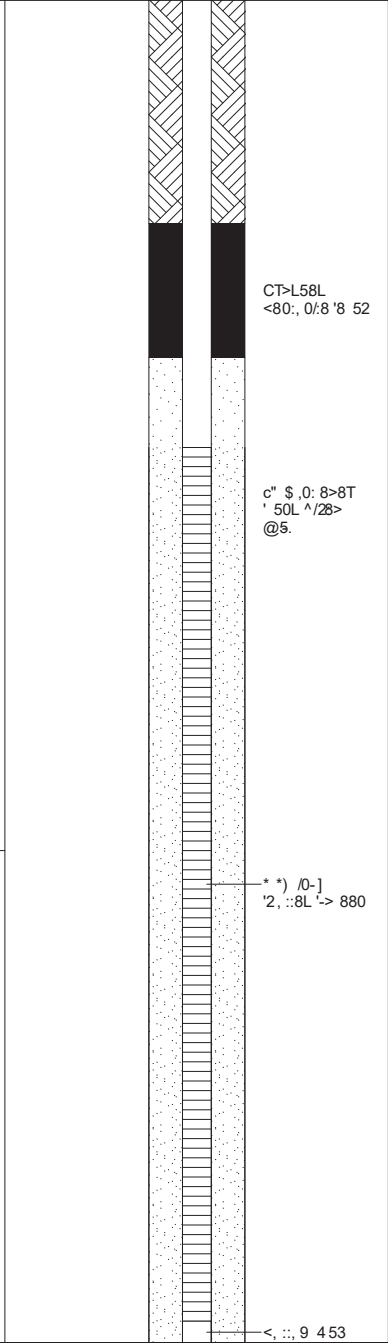
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Notes: A

Attachment B

Well Abandonment Pressure Grouting Calculations

Spreadsheet for Well Abandonment Pressure Grouting Calculations (MW-3)

CEMC

96368 La Canada

623 Foothill Boulevard, La Canada, California

	Diameter (inches)	Radius (inches)	Pi Value	Radius (feet)	r^2	Height h	Volume (cu ft) (cu ft)	Cu Ft to gal.	Volume (gals)	Total Filter pack Volume (gals)	Filter pack porosity (value)	Effective Filter pack Volume (gals)	Total Volume (gals)
Casing Blank	2	1	3.14	0.0833	0.0069	40	0.872	7.48	6.52				6.52
Casing Screen	2	1	3.14	0.0833	0.0069	20	0.436	7.48	3.26				3.26
Borehole Filter pack	8	4	3.14	0.3333	0.1111	22	7.676	7.48	57.41	54.15	0.3	16.25	16.25
Borehole Mushroom cap	8	4	3.14	0.3333	0.1111	0	0.000	7.48	0.00				0.00
													<u>26.03</u>

Casing Blank = Length of Blank Casing Adjacent to seal/grout backfill

Casing Screen = Length of Casing adjacent to Filter pack

Borehole Filter pack = Length of borehole annulus filled with Filter pack

Borehole Mushroom cap = length of borehole above casing cut off filled with grout

Radius in inches = radius of casing or borehole

Pi = 3.1415

Radius in feet = Radius in inches/12

r^2 = Radius Squared

h = height of borehole or casing

Volume = $\pi \cdot r^2 \cdot h$ in ft^3 = cubic feet

Conversion factor cu ft to gals= cu ft * 7.48

Total Filter pack volume = Borehole Filter pack volume - casing screen

Filter pack porosity = Assumed porosity of 30%

Effective Filter pack Volume = Total Filter pack volume * Filter pack porosity

Total Volume = Blank Casing + Screen Casing + Effective Filter pack Volume + Mushroom cap

User Defined Value

WARNING

IRRITATING TO THE SKIN AND EYES

Contains Portland Cement. Wear Rubber Boots and Gloves. PROLONGED CONTACT MAY CAUSE BURNS. Avoid Contact With Eyes and Prolonged Contact With Skin. In Case of Contact With Skin or Eyes, Flush Thoroughly With Water. If Irritation Persists, Get Medical Attention.

NOTICE: Cement, fine and coarse aggregate contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

KEEP OUT OF REACH OF CHILDREN.



The Company shall have no liability for and hereby excludes warranties or merchantability and NOTE: fitness for any purpose, and all other warranties express or implied, with respect to reactive aggregate, and popping (Pop-Outs), checking, discoloring of surface cracking of concrete.

CONTROL NUMBER

5731016

TICKET NUMBER

58201660

LOADING	LEAVE PLANT	ARRIVE JOB	START UNL	FINISH UNL	LEAVE JOB	ARRIVE PLANT	OVERTIME	WATER ADDED
258	108	134	142	158			0	20

RIVER: I have verified the specific slump for this job to be: _____

I verify that this load will meet the slump spec on the job (Please initial)

IMPORTANT CUSTOMER: READ BEFORE SIGNING, WILL AFFECT YOUR RIGHTS. SIGNATURE BELOW CONSTITUTES ACCEPTANCE OF ALL TERMS, CONDITIONS & WAIVERS PRINTED ON FRONT & BACK OF THIS FORM.

INVOICES SHALL BE PAID IN FULL ON OR BEFORE THE LAST DAY OF THE MONTH FOLLOWING THE DATE OF DELIVERY. CUSTOMER AGREES TO PAY A SERVICE CHARGE 1 1/2% PER MONTH ON ALL INVOICES WHICH ARE PAST DUE. IN ADDITION, CUSTOMER AGREES TO PAY COSTS AND EXPENSES FOR COLLECTION OF ANY AMOUNTS DUE HEREUNDER, INCLUDING ACTUAL ATTORNEY'S FEES INCURRED.

ASSOCIATED READY MIXED CONCRETE
 2730 E. WASHINGTON BLVD
 LOS ANGELES, CA 90023



Signature

REASON FOR DELAY TIME

<input type="checkbox"/> JOBSITE DELAY	<input type="checkbox"/> 75% OF LOAD
<input type="checkbox"/> PLACEMENT	<input type="checkbox"/> 50% OF LOAD
<input type="checkbox"/> EARLY ARRIVAL	<input type="checkbox"/> 25% OF LOAD
<input type="checkbox"/> EQUIPMENT FAILURE	<input type="checkbox"/> WAS WATER ADDED AFTER BEING ON JOB FOR 30 MIN OR MORE
<input type="checkbox"/> 100% OF LOAD	

TIME: 1:57

LD TO: VICTE WELL DRILLING (LAD-PRYTH) PO.# CUSTOMER # 58

LIVERY ADDRESS: 4121 BIG TULUNGA CYN - SUNLAND

CROSS STREETS: 4-0ND VISTA

MAP PAGE	ZONE	TIME DUE
4724-CL	472	1:57
PROJECT#	ORDER #	
58	250	

LOAD SIZE	LOAD #	USE	PLANT	TRUCK #	DRIVER
4.00	0001		58	0461	SPENCER, ROBERT

WEIGHMASTER: DEE-MEDINA, JOSE Weighed At: 8946 Bradley Avenue, Sun Valley, CA 91352 Order Total: 692.04

LOAD QUANTITY	CUMULATIVE QTY.	ORDERED QTY.	PRODUCT CODE	PRODUCT DESCRIPTION	UNIT PRICE	AMOUNT
4.00 YDS	4.00	4.00	310	SACK SAND	115.00	460.00
1.00 gal			999			0.00
1.00 gal			926	ENVIRONMENT FE	20.00	20.00
1.00 gal			936	ENERGY SURCHAR	30.00	30.00

Rev / Start	Rev / Stop	EXCESSIVE TIME ON JOB WILL RESULT IN ADDITIONAL PER MINUTE CHARGES.	MIN. LOAD CHG.	132.00
			TAX	20.00
			SUB TOTAL	632.00
			OVERTIME	
			TOTAL DUE	632.00

WATER ADDED AT PLANT	% MOISTURE	F.M.	T.A.	SLUMP
137	4.65	50.3	227.1	5.00

RECEIVED BY: _____ The terms and conditions on the reverse side of this Delivery ticket and any attachments thereto are a part of the agreement between Company and Customer. Acceptance of this order constitutes agreement to all terms and conditions shown on the face and back.

The above signee is over the age of eighteen (18) years and has authority to execute this Agreement on behalf of Customer.

WATER Tgt: 137.32 gal Act: 137.0
 TPE/1/V Tgt: 1760.0 lb Act: 3770.0
 W/CSWD Tgt: 9143.58 lb Act: 9440.0 Hst: 4.65

SAFETY FIRST!

PUMPING TEST DATA SHEETS

SECTION 7: CONSTANT-RATE PUMPING TEST

7A	7B	7C	7D	7E	7F	7G
Date and Time of Day	Elapsed Time (min)	Depth to Water (ft brp)	Drawdown (in ft) from Static Water Level (in 5C) = (7C-5C)	Totalizer Reading (gals)	Rate of Flow (gpm)	Observations/ Comments/ Other Data
9-5-18/8:45	0	363.6	0	72261.9		START OF CONSTANT-RATE TEST
9:00	15	78.6	15	72319.3	3.82	
9:15	30	79.2	15.6	72388.5	3.28	Calibrated
9:30	45	79	15.4	72417.8	3.28	
9:45	60	79	15.4	72465.3	3.16	
10:15	90	79	15.4	72560.4	3.17	
10:45	120	112.7	49.1	72782.0	7.038	
11:15	150	117.1	53.5	73008.8	7.43	
11:45	180	117.9	54.3	73222.0	7.24	
12:15	210	119.0	55.4	73435.1	7.10	
12:45	240	116.7	53.1	73635.7	6.68	
1:15	270	117.1	53.5	73838.1	6.74	
1:45	300	117.3	53.7	74040.6	6.75	calibrate
2:45	360	118.0	54.4	74445.5	6.74	
3:45	420	118.4	54.8	74850.5	6.78	
4:45	480	118.8	55.2	75255.9	6.75	
5:45	540	119.2	55.6	75661.5	6.76	
6:45	600	119.5	55.9	76066.7	6.75	calibrate
7:45	660	119.7	56.1	76471.7	6.75	
8:45	720	120.9	57.3	76875.9	6.73	
9:45	780	120.4	56.8	77284.9	6.81	
10:45	840	120.6	57.0	77688.3	6.72	
9-6-18/12:45	960	121.1	57.5	78501.9	6.78	
2:45	1080	121.6	58.0	79316.9	6.79	
4:45	1200	121.9	58.3	80132.5	6.79	
6:45	1320	122.1	58.5	80948.8	6.80	

Calibration 9:10 AM 92.38 3.24 meter / 9:07 96.31 3.11 / Elapsed time with meter 3.28

CAL. 1:45 PM 6.75 METER / 1:48 44.46 6.74 /

CAL. 6:45 PM 6.75 METER / 6:50 45.1 6.65 /

CAL. 8:15 AM 6.80 METER / 8:21 45.3 6.62 /



FIELD DATA SHEET

SECTION 1: WATER WELL OWNER INFORMATION

1A	NAME OF WELL OWNER	Steve Lukastewicz
1B	ADDRESS (Attach a map showing exact location):	APN: 5869-020-005
1C	TELEPHONE NUMBER OF WELL OWNER:	818-951-4393

SECTION 2: WATER WELL DATA AND INFORMATION

2A GPS COORDINATES OF WELL:		
	Latitude (N):	Longitude (W):
2B	DATE OF WELL CONSTRUCTION	2F PERFORATED INTERVALS (ft bgs):
	June 2018	
2C	TOTAL CASING DEPTH (ft bgs):	
	400	
2D	CASING DIAMETER (inches)	2G TYPE OF PERFORATIONS:
	4.5	
2E	TYPE OF CASING MATERIAL:	2H DEPTH OF SANITARY SEAL (ft bgs):
	PVC SDR-17	
2I	STATE WELL COMPLETION REPORT (DRILLERS' LOG) AVAILABLE?	
	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	LOG NO.: 1083497 (ALSO, ATTACH LOG)

SECTION 3: DRILLING CONTRACTOR INFORMATION

3A	NAME OF DRILLING CONTRACTOR:	Vics Well Drilling
3B	ADDRESS AND TELEPHONE NUMBER OF CONTRACTOR:	3807 Siena Hwy Box 4504 Acton, CA 93510
3C	STATE CONTRACTOR'S LICENSE NO.:	886439

SECTION 4: PUMP DATA/INFORMATION

4A	MAKE AND MODEL OF PUMP:	Goulds 5GS10412
4B	TYPE OF PUMP (submersible/turbine) AND HP:	1 hp
4C	DEPTH OF PUMP INTAKE (ft bgs):	400 381
4D	DIAMETER OF DISCHARGE PIPE (inches):	1/2"
4E	APPROXIMATE DISTANCE FROM WELLHEAD TO DISCHARGE LOCATION	
4F	DESCRIBE DISCHARGE LOCATION (NATURAL STREAM, OPEN FIELD, CEMENT CHANNEL, ETC.)	
4G	NAME, ADDRESS AND TELEPHONE NUMBER OF PUMP INSTALLER:	
	Roadrunner Pump Service P.O. Box 1052 Pearblossom, Ca. 93553	

Section 9: Hard Rock Well Yield Determination

The allowable (or permitted) yield of the well will be the total gallons pumped for 24 hours, as determined by the totalizer dial readings divided by the pumping duration of the test in minutes – 1440, provided that full recovery occurs within 24 hours.

For cases where full recovery does not occur within 24 hours, the allowable yield will be the total gallons pumped for 24 hours, as determined by the totalizer dial readings divided by the total number of minutes for full recovery.

A well that has not fully recovered within five days will be considered to be a non-sustainable source of water.

9A. Total gallons pumped for 24 hours:

9503

9B. Total minutes required for Full Recovery:

1440

9C. Divide 9A by 9B

6.5

WELL YIELD: 6.5

I certify that the information and data contained in this report accurately reflects the Performance of this well.

Signature Carr Ford License 575030

Date 9/5/18

FIELD DATA SHEET

SECTION 5: TEST INFORMATION/PARAMETERS	
5A	NAMES OF LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS OBSERVERS:
5B	DATE(S) OF TESTING: 9/5/18
5C	PRE-TEST STATIC WATER LEVEL (ft brp): 63.6
5D	REFERENCE POINT (RP, in ft above ground surface): 1.5
5E	STATIC WATER LEVEL = 5C-5D (ft bgs): 65.1
5F	INITIAL TOTALIZER READING (gals or cubic ft, please specify): 72261
5G	FINAL TOTALIZER READING (gals or cubic ft, please specify): 81764
5H	TOTAL GALLONS PUMPED = 5G-5F (gals or cubic ft, please specify): 9503
5I	TOTAL LENGTH OF PUMPING TEST (min): 1440
5J	FINAL AVERAGE PUMPING RATE = 5H÷5I 6.5
5K	MAXIMUM DEPTH OF PUMPING LEVEL (ft bgs): 122
5L	MAXIMUM WATER LEVEL BREAKDOWN = 5K-5E (in ft): 56
5M	SPECIFIC CAPACITY OF WELL = 5J÷5L (gpm/ft ddn): .11

NOTE: Please submit digital photographs of wellhead and site, showing piping and any nearby drainage areas.



ENVIRONMENTAL HEALTH

Drinking Water Program



COUNTY OF LOS ANGELES
Public Health

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
5869-020-005/BIG TUJUNGA CANYON RD.	SUNLAND	91040	VICSWELLDILLING@YAHOO.COM

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- **ONCE APPROVED NOTIFY INSPECTOR TERI HACHEY AT thachey@ph.lacounty.gov PREFERABLY 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED

DATE: May 23, 2018

ADDITIONAL APPROVAL CONDITIONS:

Work plan approval issued for private well construction located at 5869-020-005/Big Tujunga Canyon Rd., Sunland. Maintain all set back requirements as stated in the California Well Water Standards, 74-90 and the Los Angeles County Code, Title 11. The annular seal is to be witnessed by an inspector from the Drinking Water Program. Please schedule an appointment in advance for the seal inspection.

SR 0140847

A concrete slab or base is required around the casing and shall be a minimum of 3 feet horizontally in all directions from the casing and shall be 6 inches thick. The slab or concrete pad must slope slightly away from the casing so as to drain water away. Bacteriological and chemical water quality testing is required for this permit to be complete and a well yield test is required under a separate permit.



Teri Hachey



TERI HACHEY R.E.H.S.
661-287-7017

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: *5/1/18* REHS signature: *[Signature]*

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature *ALWAYS NO*

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
APN 5869-020-005	Sunland/Tujunga	91042	roadrunnerpump@roadrunner.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
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- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- **ONCE APPROVED NOTIFY BELINDA LARSEN AT { [HYPERLINK "mailto:blarsen@ph.lacounty.gov"](mailto:blarsen@ph.lacounty.gov) } PREFERABLY 4 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED

DATE: 7-5-2018

ADDITIONAL APPROVAL CONDITIONS:

Permit # 0150118 approved to conduct a well yield test. Please comply with the following:

- 1) Initial start-up of pump and static water level measurement.
- 2) Commencement of the 23rd hour of the test and pump shut-off.
- 3) Water level recovery and field data verification 24 hours after pump shut off.

Contractor will complete and submit all final field data test sheets to inspector.

Provide water quality bacterial and chemical test results for final approval.



Belinda Larsen R.E.H..S
818-593-7308

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

5869-019-015

5869-019-015-4101 - Big Tujunga - Husel Saw
Nick 5869-019-015-4121 - Big Tuj - Septic plot plan

5869-020-005 big tujunga cyn.



Legend

Parcels



1" = 210

Notes

0 0.07 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere
© Latitude Geographics Group Ltd.

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

2004-

Teri Hachey

From: Marc Cecena
Sent: Wednesday, May 23, 2018 7:57 AM
To: Teri Hachey; Steve Lukasiewicz
Cc: Mary Ann Marquez; Jose Mandanas
Subject: FW: 4121-4101 Big Tujunga Canyon Road.
Attachments: PERMITS.pdf; well permit.pdf; Assr_Map_1995.pdf; Assr_Map_1988.pdf

In addition to the information from my previous email, the attached county permit documents reflect improvements to parcel APN: 5869-019-015 that established the single family residence in 1960. The permit was originally issued with the existing address at the time 4121 Big Tujunga Canyon Rd. Also attached are a 1988 and 1995 Los Angeles County Assessor's Index Map, which shows parcel 5869-019-015 (-015) and this parcel location before it was split into 2 parcels (old APN: 5869-019-014).

Following the lot split of parcel 5869-019-014 into 2 parcels, address number 4121 was used for both of the new parcels -015 and -016. Our permit records indicate that an address change occurred to parcel -015 from 4121 to 4101 Big Tujunga Canyon Road with the original address number 4121 remaining with parcel -016. My office has not obtained exactly when the address change took place. If you require a date of the address change, further research will be needed for my office to determine that information. The attached 2004 expired permit confirms address number 4121 in use for parcel -016.

The official address assignments for parcels -015 and -016 are correct as described in my responses.

Please contact me if you have any questions.

Best regards,

Marc Ceceña

Senior Geographic Information Systems Analyst
Los Angeles County Public Works
(626) 458-5194
ADDRESSING@DPW.LACOUNTY.GOV

Your feedback is important to us. Please take a moment to complete the Customer Feedback Form through the following link: <http://dpw.lacounty.gov/go/MPMSURVEY>



<http://egis3.lacounty.gov/dataportal/>

From: Marc Cecena
Sent: Tuesday, May 22, 2018 8:35 AM
To: 'Steve Lukasiewicz' <steve@lukmar.com>
Cc: Mary Ann Marquez <MMARQUEZ@dpw.lacounty.gov>; Jose Mandanas <JMANDANAS@dpw.lacounty.gov>
Subject: RE: 4121-4101 Big Tujunga Canyon Road.

Mr. Lukasiewicz,

In response to your address verification inquiry, the County of Los Angeles Department of Public Works Survey/Mapping and Property Management Division and Building and Safety Division have confirmed the following address assignments to be valid.

APN: 5869-019-015 is 4101 Big Tujunga Canyon Road, Tujunga, CA 91042

APN: 5869-019-016 is 4121 Big Tujunga Canyon Road, Tujunga, CA 91042

The issuance of each address number is assigned solely to the parcel as described above.

Truly yours,

Marc Ceceña

Senior Geographic Information Systems Analyst

Los Angeles County Public Works

(626) 458-5194

ADDRESSING@DPW.LACOUNTY.GOV

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<http://egis3.lacounty.gov/dataportal/>

From: Steve Lukasiewicz [<mailto:steve@lukmar.com>]
Sent: Tuesday, May 22, 2018 7:50 AM
To: Marc Cecena <MCecena@dpw.lacounty.gov>
Subject: Re: 4121-4101 Big Tujunga canyon road.

Thanks: We are anxiously awaiting the change of address confirmation. Steve. P.S. Call me if there is anything I can do to help out !

From: [Marc Cecena](mailto:Marc.Cecena)
Sent: Monday, May 21, 2018 4:09 PM
To: [Steve Lukasiewicz](mailto:Steve.Lukasiewicz)
Subject: RE: 4121-4101 Big Tujunga canyon road.

Thank you. I'll get back to you.

Marc Ceceña

Senior Geographic Information Systems Analyst

Los Angeles County Public Works

(626) 458-5194

ADDRESSING@DPW.LACOUNTY.GOV

Your feedback is important to us. Please take a moment to complete the Customer Feedback Form through the following link: <http://dpw.lacounty.gov/go/MPMSURVEY>



<http://egis3.lacounty.gov/dataportal/>

From: Steve Lukasiewicz [<mailto:steve@lukmar.com>]
Sent: Monday, May 21, 2018 4:08 PM
To: Marc Cecena <MCecena@dpw.lacounty.gov>
Subject: 4121-4101 Big Tujunca canyon road.

Marc: Thanks so much for helping me with this.

Steven Lukasiewicz

LUKMAR

INSURANCE SERVICES

Ph. 818-9514393

Fax 818-951-9551

<http://secure-web.cisco.com/1ZRCfhBByM1Qj->

[3PTCZnrRgx8zM8uZu7VZX2KaR64t0TSRyvwcDVXuASqR80AfELAWB2ev2pvgrcsA9aSfzBgdu9PZRk7q2jS6rJoLDhuq2BjC2SeBlwzHgJbNDvyORInYDxi5KWS1a6t4sNSS4Wdgc4NhDflMDDmJKYyEzwWGUUpkWheavOKrP7coJVqOEj5tW0Yj4ADDGnU3M3duLPQvCmPogX30KnKfilj7F-sb3_FpdBc1txp9djTDK8vd14p6fKr0m-bJhtYXt_cqt6mjDTm12oT35w27LtdZC5nKm0v3xsJkTG79qBnw6uTvtutnYOLPRtSyXcDd84aezUBLb9Wh5Z9_3iPziMjkGJRuXXGETg36A3aPyKvQKYZ_5GhGA-ANvAAbOGSZvO63bj0g/http%3A%2F%2Fwww.lukmar.com](http://secure-web.cisco.com/1ZRCfhBByM1Qj-3PTCZnrRgx8zM8uZu7VZX2KaR64t0TSRyvwcDVXuASqR80AfELAWB2ev2pvgrcsA9aSfzBgdu9PZRk7q2jS6rJoLDhuq2BjC2SeBlwzHgJbNDvyORInYDxi5KWS1a6t4sNSS4Wdgc4NhDflMDDmJKYyEzwWGUUpkWheavOKrP7coJVqOEj5tW0Yj4ADDGnU3M3duLPQvCmPogX30KnKfilj7F-sb3_FpdBc1txp9djTDK8vd14p6fKr0m-bJhtYXt_cqt6mjDTm12oT35w27LtdZC5nKm0v3xsJkTG79qBnw6uTvtutnYOLPRtSyXcDd84aezUBLb9Wh5Z9_3iPziMjkGJRuXXGETg36A3aPyKvQKYZ_5GhGA-ANvAAbOGSZvO63bj0g/http%3A%2F%2Fwww.lukmar.com)



Virus-free. www.avq.com

APR 20 1960

APPLICATION FOR BUILDING PERMIT 4121 Big Tujunga Ave.

COUNTY OF LOS ANGELES
DEPARTMENT OF COUNTY ENGINEER
BUILDING AND SAFETY DIVISION
JOHN A. LAMBIE, COUNTY ENGINEER
CARRAN D. CRIFTON, CHIEF OF DIVISION

FOR APPLICANT TO FILL IN

BUILDING ADDRESS	4121 Big Tujunga Ave. Ad.
LOT NO.	P. 50 1/2 of 1/4 of Sec. 3 TRACT
TRACT (See Att.)	7.5 34 413 N
SIZE OF LOT	1/4 AC. 110' x 110'
USE OF EXISTING BLDG.	
OWNER	E.W. Kirschner
MAIL ADDRESS	8330 17th Street
CITY	Sunland
ARCHITECT OR ENGINEER	
ADDRESS	
CONTRACTOR	R.C. Nobles
ADDRESS	4121 Big Tujunga Rd.
DESCRIPTION OF WORK	
NEW	ADD
ALTER	
REPAIR	
DEMOLITION	
NO. OF STORIES	1
NO. OF UNITS	1
STRUCTURE	Single Family Residence
SIGNATURE OF APPLICANT	E.W. Kirschner
ADDRESS	
VALUATION \$	24,000.00
PERMIT FEE	\$17.50

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL COUNTY ORDINANCES AND STATE LAWS RELATIVE TO BUILDING CONSTRUCTION PERMITS.

SIGNATURE OF APPLICANT: *E.W. Kirschner*

ADDRESS: 8330 17th Street

BUILDING ADDRESS	4121 Big Tujunga Ave. Ad.
LOCALITY	Big Tujunga Canyon
DISTRICT NO.	3-1
GROUP	I
TYPE CONDT.	II
PROCESSED BY	SLW
STATISTICAL CLASSIFICATION	
CLASS. NO.	1
MAP NUMBER	Big Tujunga Co. Map
USE ZONE	Official Conditioning Sheet #2
YARD FRONT	30' x 100'
YARD SIDE	Big Tujunga Co. 60'
YARD REAR	
STREET NAME	
CAVITY	
CAVITY WIDTH	

INSPECTION RECORD

DATE	4/15/60
BY	W. J. ...
REMARKS	...
DATE	4/15/60
BY	W. J. ...
REMARKS	...
DATE	4/15/60
BY	W. J. ...
REMARKS	...

FOUNDATION	LOCATION	DATE	INSPECTOR'S SIGNATURE
FRAME	MATERIALS	4/15/60	W. J. ...
FRAMING	FINE STOPS	4/15/60	W. J. ...
FURNACE	LOCATION		
GAS VENT	DUCT		
LATH	INT.		
LATH	EXT.		
HOUSE NUMBER COR.			
RECT AND POSTED			
FINAL			

CLYDE N. DILLAM, PRINCIPAL STRUCTURAL ENGINEER
PERMIT VALIDATION NO. 60-1000

APR 20 1960
APR 20 1960
APR 20 1960

COUNTY OF LOS ANGELES
 DEPARTMENT OF PUBLIC WORKS
 BUILDING AND SAFETY / LAND DEVELOPMENT

SAN GABRIEL VALLEY # 0500
 125 BALDWIN
 ARCADIA CA 91007
 PHONE: (626) 574-0941 EXT:

BUILDING PERMIT
 NEW RESIDENTIAL
 BL 0500 0103050033

LEGAL ID:
 ON FILE
 ASSESSOR INFORMATION NUMBER:
 5869-019-016

OWNER:
 LUBOFF, EDWARD;BELLY
 10529 WILGET AVE
 TUCUONGA CA 91042
 TEL. NO:
 (818) 951-1072-
 (4) 388-1441

APPLICANT:
 SAME AS OWNER
 TEL. NO:

CONTRACTOR:
 SAME AS OWNER
 TEL. NO:
 LIC. NO:

ARCHITECT OR ENGINEER:
 J. ESPARZA AND ASSOCIATES
 6107 YORK BLVD
 LOS ANGELES CA 90042
 TEL. NO:
 LIC. NO:
 NONE

MAP NO: SEMER MAP BOOK: PAGE: FIRE ZONE:
 II II X 4
 NO. OF FAMILIES: DWELLING UNITS: APT/COND: STAT CLASS:
 NO NO NO 01

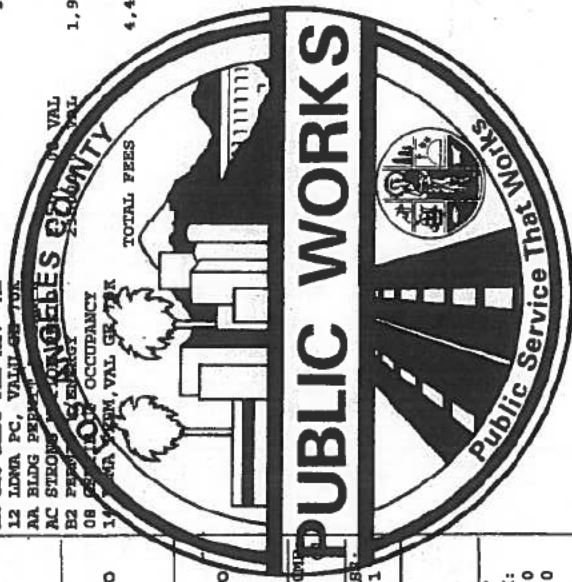
AIR QUALITY:
 NO SCHOOL WITHIN 1000 FEET HAZARDOUS MATERIALS NO

REQUIRED SET BACK FRONT PL- SIDE PL- YARD: HWY: TOTAL SETBACK FROM EXIST PROP LINE: WIDTH:
 0 0 0 0 0 0 0 0

STRUCTURE: 3380 SQ. FT. STORIES: 2 NO. OF CORST TYPE
 GARAGE: 745 1 1 VN VN
 OTHER: 2060 1 1 VN VN
 OCCUP GROUP: R3 R3 U1 U1
 USE ZONE: IX

BLDGS. NOW ON LOT:
 VALUATION: 235,000
 FEES PAID

FREE DESCRIPTION: QUANTITY: UOM: AMOUNT:
 B1 PLANCHERCK W/ENERGY 350000.00 VAL 1,988.18
 EK GEO BLDG PLAN REV ME 302.90
 L2 LOMA FC, VALUATION 60.00
 AA BLDG PERMIT 22.00
 AC STRONG 23.50
 E2 PERMIT OCCUPANCY 1,910.26
 O8 PERMIT VAL GR/CK 80.20
 14 PERMIT VAL GR/CK 25.00
 TOTAL FEES 4,412.04



BUILDING ADDRESS:
 4121 BIG TUUONGA CANYON RD
 LCMT CA 91042
 NEAREST CROSS STREET: MOUNT GLEASON
 THOMAS PAGE: GRID: LOCALITY: BIG TUUONGA CA

ISSUED ON: 10/27/03 PROCESSED BY: DLB EXPIRES ON: 10/21/04
 FINAL DATE: 5/7/07/2007

EXPIRED BY LIMITATION
 DESCRIPTION OF WORK
 NEW 3380 SQ FT, 2 STRY SPR W/2060 SQ FT BASEMENT, AND A
 600 SQ FT ATTACHED GARAGE W/ A 145 SQ FT WORKSHOP ATTACHED *

APPROVALS	DATE	INSPECTOR SIGNATURE
LOCATION AND SETBACKS		
SOILS ENGINEER APPROVAL		
FOUNDATION/TRENCH FORMS		
SLAB/UNDER FLOOR		
RAISED FLOOR FRAMING		
UNDERFLOOR INSULATION		
1ST LEVEL FLOOR SHEATH		
2ND LEVEL FLOOR SHEATH		
ROOF SHEATHING		
FIRE DEPT. FRAME INSPECT	11/7/03	[Signature]
BLDG DEPT. FRAME INSPECT	11/16/03	[Signature]
SHEAR PANELS	11/18/03	[Signature]
INSULATION/WEATHER STRIP	11/18/03	[Signature]
INTERIOR LATH/DRYWALL		
EXTERIOR LATH		
LOT DRAINAGE		
SMOKE DETECTION DEVICES		
FIRE DEPARTMENT APPROVAL		

* ADDITIONAL DATA ON FILE
 REPORT ID: DPR261 ROUTE TO: BS0500

Handwritten signature

4121 Big Tujunga Canyon Rd

SAN GABRIEL VALLEY # 0500
 125 BALDWIN
 ARCADIA CA 91007
 PHONE: (626) 574-0941 EXT:

COUNTY OF LOS ANGELES
 DEPARTMENT OF PUBLIC WORKS
 BUILDING AND SAFETY / LAND DEVELOPMENT

BUILDING ADDRESS:
 4121 BIG TUJUNGA CANYON RD
 LCFT CA 91042
 NEAREST CROSS STREET: MOUNT GLEASON
 THOMAS PAGE: GRID: LOCALITY: BIG TUJUNGA CA

BUILDING PERMIT
 ALTERATION/REPAIR
 BL 0500 0807170064

ISSUED ON: 07/17/08
PROCESSED BY: VG
EXPIRES ON: 01/13/09

FINAL DATE: 12-16-8
FINAL BY: M. B. B. B.

DESCRIPTION OF WORK:
 FINALIZE EXPIRED PERMITS: BL0103050033, EL0310270022, ME0402270001, FL0402270001

SPECIAL CONDITIONS:

LEGAL ID:
 ON FILE

ASSESSOR INFORMATION NUMBER:
 5869-019-016

TENANT:

OWNER:
 LUBOFF, EDWARD, NELLY
 10529 WILSHY AVE
 TUJUNGA CA 91042
 TEL. NO: (818) 951-1072-

APPLICANT:
 SAME AS OWNER
 TEL. NO:

CONTRACTOR:
 SAME AS OWNER
 TEL. NO: LIC. NO:

ARCHITECT OR ENGINEER:
 J. ESPARZA AND ASSOCIATES
 6107 YORK BLVD
 LOS ANGELES CA 90042
 TEL. NO: LIC. NO: NONE

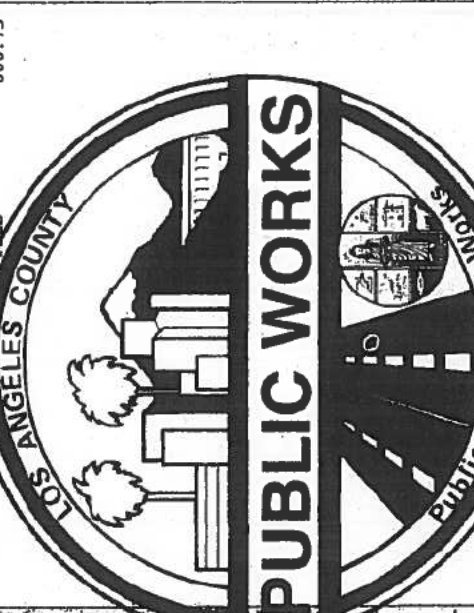
MAP NO: SEWER MAP BOOK: PAGE: 4
FIRE ZONE: 4

NO. OF FAMILIES: DWELLING UNITS: APT/COND: STAT CLASS: NO 21

AIR QUALITY: NO
SCHOOL WITHIN 1000 FEET: HAZARDOUS MATERIALS NO

REQUIRED SET BACK YARD: HWY: TOTAL SETBACK FROM EXIST FRONT PL- SIDE PL- PROP LINE: WIDTH:

APPROVALS	DATE	INSPECTOR SIGNATURE
LOCATION AND SETBACKS		
SOILS ENGINEER APPROVAL		
FOUNDATION/TRENCH FORMS		
SLAB/UNDER FLOOR		
RAISED FLOOR FRAMING		
UNDERFLOOR INSULATION		
FLOOR SHEATHING		
ROOF SHEATHING		
SHEAR PANELS		
FRAME INSPECTION		
FIRE SPRINKLER HANGERS		
INSULATION/WEATHER STRIP		
INTERIOR LATH/DRYWALL		
EXTERIOR LATH		
RATED FLOOR/CEIL ASSEM.		
RATED WALL ASSEMBLIES		
RATED SHAFTS/OPENINGS		
T-BAR CEILINGS		
LOT DRAINAGE		



LOS ANGELES COUNTY PUBLIC WORKS

Public Service

STRUCTURE: 3380
NO. OF STORIES: V-B
TYPE: V-B

EXIST BLDG USE: RESID
EXIST OCC GRP:

BLDG. NOW ON LOT: VALUATION: 45,427
FEES PAID:

FEE DESCRIPTION: QUANTITY: **DOM:** AMOUNT:
 AA BLDG PERMIT ISSUANCE 26.10
 AC STRONG MOTION RESID 45427.00 VAL 4.54
 B2 PERMIT W/EMERGENCY FEES 45427.00 VAL 770.11
 800.75

USE ZONE: XX

REPORT ID: DPR261 **ROUTE TO:** BS0500

APPROVALS: _____ DATE: _____ INSPECTOR SIGNATURE: _____

Handwritten signature

SEWER PERMIT

COUNTY OF LOS ANGELES
DEPARTMENT OF COUNTY ENGINEER
BUILDING AND SAFETY DIVISION
1000 N. GARDEN STREET, LOS ANGELES, CALIF. 90012

APPLICATION FOR PERMIT TO INSTALL SEWER SEWAGE DISPOSAL

FOR APPLICANT TO FILL IN

LEGAL DESCRIPTION LOT NO. _____
BLOCK _____ TRACT _____
SECTION OF LOT _____ NO. OF BLOSSOMS ON LOT _____
CONTRACTOR _____
ADDRESS _____
CITY _____

LOCALITY _____
NEAREST CORNER _____
OWNER _____
MAIL ADDRESS _____
CITY _____

CONNECTIONS TO	FEES	STATE COUNTY
SEWER CONNECTION TO MAIN	\$ 11.00	
SEWER CONNECTION TO MAINFIELD	\$ 11.00	7.00
SEWER CONNECTION TO MAIN	\$ 11.00	7.10
SEWER CONNECTION TO HOUSE	\$ 11.00	

PERMIT NO. 311
GROUP I
EX. MAP NO. _____
CORRECTION DATA

STATION _____
MANHOLE REFERENCE _____
TYPE OF CONNECTION _____
LENGTH FROM P.L. TO P.L. _____
STATE PERMIT NO. _____
ROAD PERMIT NO. _____

OWNER _____
AUTHORITY _____
I, _____, COUNTY ENGINEER, DO HEREBY CERTIFY THAT THIS PERMIT IS GRANTED IN ACCORDANCE WITH THE PROVISIONS OF THE SEWER ACT OF 1905 AND THE SEWER ACT OF 1921.

CORRECTION CHARGE FEE _____
REQUIREMENT FEE _____

I HAVE READ THIS APPLICATION AND AGREE TO COMPLY WITH ALL CITY AND STATE LAWS REGULATING SEWER CONNECTIONS AND TO MAINTAIN THE SAME IN GOOD ORDER AND REPAIR AT ALL TIMES.

APPROVALS
DATE _____
INSPECTOR'S SIGNATURE _____
DATE _____
INSPECTOR'S SIGNATURE _____

VALIDATION

ROBERT A. WOOD JR.
SUPERVISING MECHANICAL ENGINEER

AP 07118 SEP 20 1970

6.00

Handwritten signature

EXHIBIT #1

2

RECEIVED
 DATE 5-9-60 BY Kitcher

FROM LOS ANGELES COUNTY HEALTH DEPARTMENT
 TO LOS ANGELES COUNTY BUILDING DEPARTMENT
 OFFICE Montrose

NAME Geo. Kitcher Sr.
 ADDRESS 4121 Big Tuzinga Canyon
Big Tuzinga Canyon
 The requirements of Los Angeles County Ordinance No. 2267 shall be met by a properly installed disposal system including the following:

SEPTIC TANK
 CESSPOOL
 GREASE TRAP
 DRAINFIELD
 Length 40' width 10' depth 3'

SEEPAGE PIT
 One or more seepage pits depend- ing upon type of soil encountered.

Remarks: IF ANY DOMESTIC WATER LINES ARE ENCOUNTERED THE LOCATION OF THE SEWAGE DISPOSAL MUST BE REVISED.

COMMENTS CONT. L

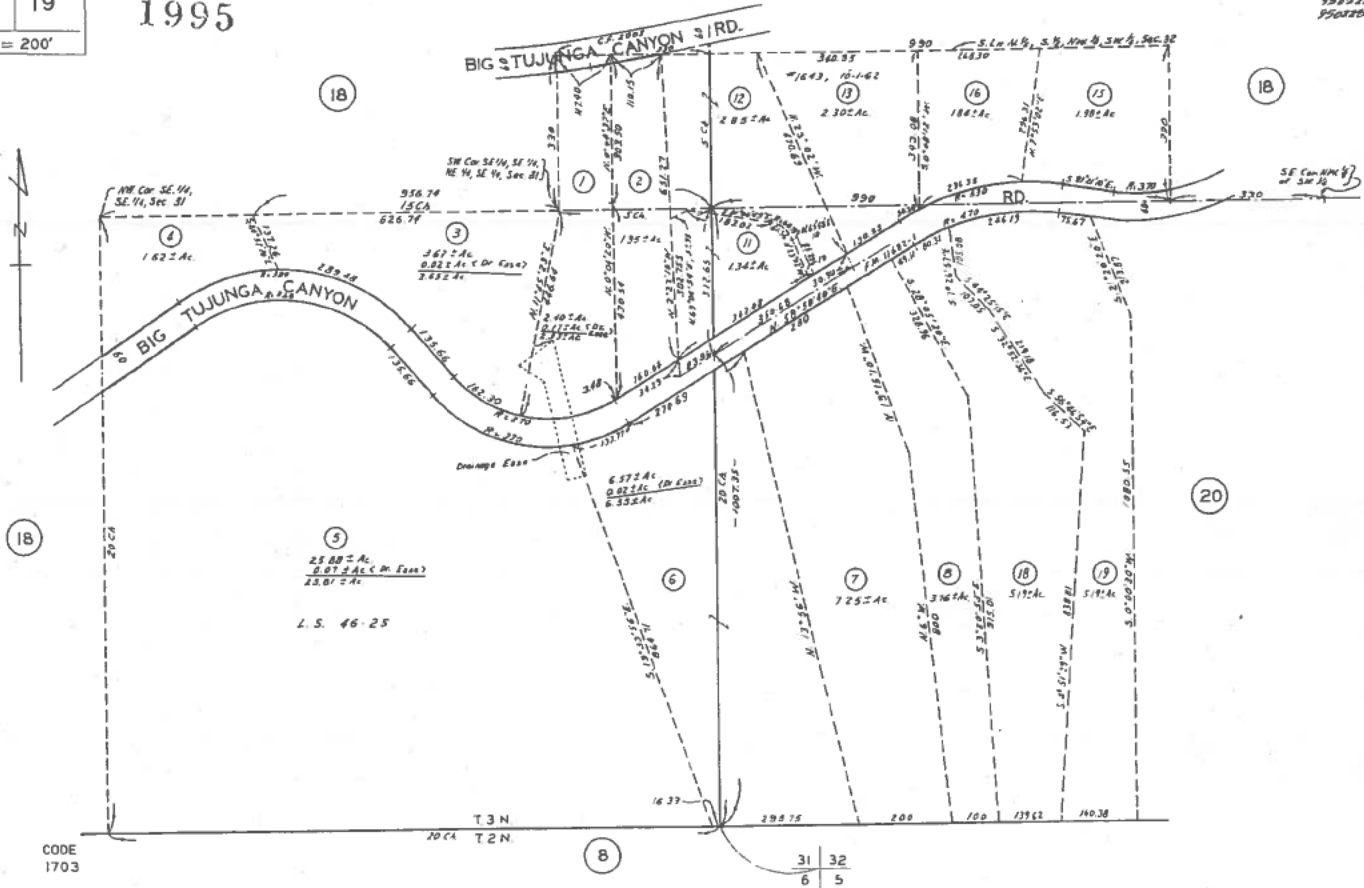
George

5869 19

1995

SCALE 1" = 200'

903270603 rev. 04
288230200001-04
2504260100302-04



CODE 1703

NO. 471 FOR PREV. ASSMT SEE 2850-3, 4 & 5

T. 3N., R. 13W.

ASSESSOR'S MAP COUNTY OF LOS ANGELES, CALIF.

(REVISED-2) WORK PLAN NARRATIVE

Job Description: Decommissioning of Groundwater Monitoring Wells

Site Address: 2660 West Foothill Boulevard, La Crescenta, CA 91214

SCOPE OF WORK

Six (6) groundwater monitoring wells will be abandoned (decommissioned) in accordance with California Department of Water Resources Bulletins 74-81 and 74-91 and Statewide Advisory: Sealing Materials for Water Wells, Monitoring Wells, Cathodic Protection Wells, and Geothermal. Three (3) of the six wells (MW-1 (B-6), MW-2 (B-7) and MW-3 (B-8)) will be abandoned by Overdrilling and the other three wells (MW-4, MW-5 and MW-6) by Pressure Grouting.

Pre-abandoning

Before the start of well abandonment, each well will be inspected to make sure no obstructions exist that will interfere with filling and sealing and the depth of each well will be measured. If obstructions are encountered, they will be removed and properly disposed.

Overdrilling Method

MW-1 (B-6), MW-2 (B-7) and MW-3 (B-8) are dry wells, consequently, those wells will be abandoned by Overdrilling. MW-1, MW-2 and MW-3 are all 4-inch wells, thus, a hollow-stem auger with 6-inch inner diameter and 10-inch outer diameter will be used to overdrill the well casings and loosen it from the surrounding materials. The casings will then be removed by attaching a chain or strap to the well casing and pulled out using the drill rig.

The created borings will be plugged and sealed with grouting material composed of Portland cement and bentonite at the ratio of 13 lbs of Portland cement to 1 lb of bentonite for every gallon of water. For a 10" x 85' boring, approximately 1,880 lbs of Portland cement (20 94-lb bags), 120 lbs of bentonite (5 25-lb bags) and 150 gallons of water are estimated to fill up a 42.5 ft³ borehole.

Pressure Grouting Method

MW-4 was set at 198 feet bgs with 60 feet screen, MW-5 at 201 feet bgs with 55 feet screen and MW-6 at 205 feet bgs with 55 feet screen and all penetrate the saturated zone. Those wells will be abandoned by Pressure Grouting.

Each well will be plugged and sealed with grouting material composed of Portland cement and bentonite at the ratio of 13 lbs of Portland cement to 1 lb of bentonite for every gallon of water at 20-40 psi for 10-20 minutes from the bottom to 5 feet bgs and the upper five feet of the casings will be removed. To plug and seal a well to the maximum depth of 200 feet (including screen interval with maximum length of 60 feet), approximately 752 lbs of Portland cement (8 94-lb bags), 48 lbs of bentonite (1.3 25-lb bags) and 60 gallons of water are estimated to fill up an 18 ft³ well space. The void created by pulling out the upper five feet of casing and the top of the well will be sealed with neat cement to approximately six inches from surface level.

Post-abandonment

The top of the borings will be resurfaced with materials that match the surrounding surface.

(REVISED) WORK PLAN NARRATIVE

Job Description: Decommissioning of Groundwater Monitoring Wells

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Pressure Grouting Method

MW-4 was set at 198 feet bgs, MW-5 at 201 feet bgs and MW-6 at 205 feet bgs and all penetrate the saturated zone. Those wells will be abandoned by Pressure Grouting.

Each well will be plugged and sealed with grout composed of 95% Portland cement and 5% bentonite at 20-40 psi for 10-20 minutes from the bottom to 5 feet bgs and the upper five feet of the casings will be removed. The void created by pulling out the upper five feet of casing and the top of the well will be sealed with neat cement to approximately six inches from surface level.

Post-abandonment

The top of the borings will be resurfaced with materials that match the surrounding surface.



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

Environmental Health Division
Drinking Water Program
5050 Commerce Drive, Baldwin Park, CA 91706
www.publichealth.lacounty.gov/eh
(888) 700-9995



PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Lincoln Affirmed Housing Proposed Senior Apartments/3020082		
ASSESSOR'S PARCEL NUMBER (APN):	MONITOR NG WELLS - Submit separate application(s) for each parcel. 5828-027-022 http://egisocx.isd.lacounty.gov/slv/?Viewer=GISViewer#		
WORK SITE ADDRESS:	ADDRESS 2439-2445 Lincoln Avenue	CITY Altadena	ZIP CODE 91001
CROSS STREET(S):	Lincoln Avenue and Figueroa Drive		
E-MAIL PERMIT TO:	<input checked="" type="checkbox"/> Driller <input checked="" type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation <input type="checkbox"/> Construction <input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 970.00	x	= \$
	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input checked="" type="checkbox"/> Test Hole <input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange <input type="checkbox"/> Construction <input type="checkbox"/> Decommission <input type="checkbox"/> 1-10 Wells <input type="checkbox"/> 11-24 Wells <input type="checkbox"/> 25+ Wells	\$ 735.00		
	\$ 825.00		
	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): 55 FT			
Estimated groundwater depth: 225 FT			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 126.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

For properties in Unincorporated communities, this Section must be completed by L.A. County Regional Planning:

This water well is associated with (type of project) _____

Regional Planning has: APPROVED the project and it is OK to proceed with this water well application

Regional Planning Plan number (RPPL): _____ Date of approval: _____

Planner signature/date: _____

This approval is only a Regional Planning referral, and does not constitute a well/exploration hole permit. Please return this application to Environmental Health to obtain your well/exploration hole permit.

FOR OFFICE USE ONLY

ASSIGNED INSPECTOR:

DATE:

SUPERVISOR'S INITIAL:

SITE / PERMIT NO.:

SR

INVOICE NO.:

IN



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

Environmental Health Division
Drinking Water Program
 5050 Commerce Drive, Baldwin Park, CA 91706
www.publichealth.lacounty.gov/eh
 (888) 700-9995



Continuation of Application

WORK SITE ADDRESS 2439-2445 Lincoln Avenue		CITY Altadena	ZIP CODE 91001	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I ABC LIOVIN		C-57 LICENSE HOLDER NAME Ivan Liovin	C-57 LICENSE NUMBER 422904	C-57 EXPIRATION DATE 9/30/2024
TELEPHONE NO. 562-981-8575	MOBILE [REDACTED]	E-MAIL ADDRESS ivan@abcdrilling.com		
STATE REGISTERED DRILLER II [REDACTED]		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO.	MOBILE	E-MAIL ADDRESS		
OWNER NAME Affirmed Housing		TELEPHONE / MOBILE 909-771-4462	E-MAIL shonda@affirmedhousing.com	
CONSULTANT NOVA Services, Inc.		OFFICE NUMBER 858-292-7575		
PROJECT CONTACT Melissa Stayner	TELEPHONE NO. 858-292-7575	Ext. 413	MOBILE [REDACTED]	E-MAIL ADDRESS mstayner@usa-nova.com
PROJECT MANAGER Melissa Stayner	TELEPHONE NO. 858-292-7575	Ext. 413	MOBILE [REDACTED]	E-MAIL ADDRESS mstayner@usa-nova.com

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site



GEOTECHNICAL

MATERIALS

SPECIAL INSPECTION

DVBE ♦ SBE ♦ SDVOSB ♦ SLBE

REVISED GEOTECHNICAL DRYWELL TESTING WORK PLAN

Project Name: Lincoln Affirmed Housing

2439-2455 Lincoln Avenue, Altadena, CA 91001

Scope of Work:

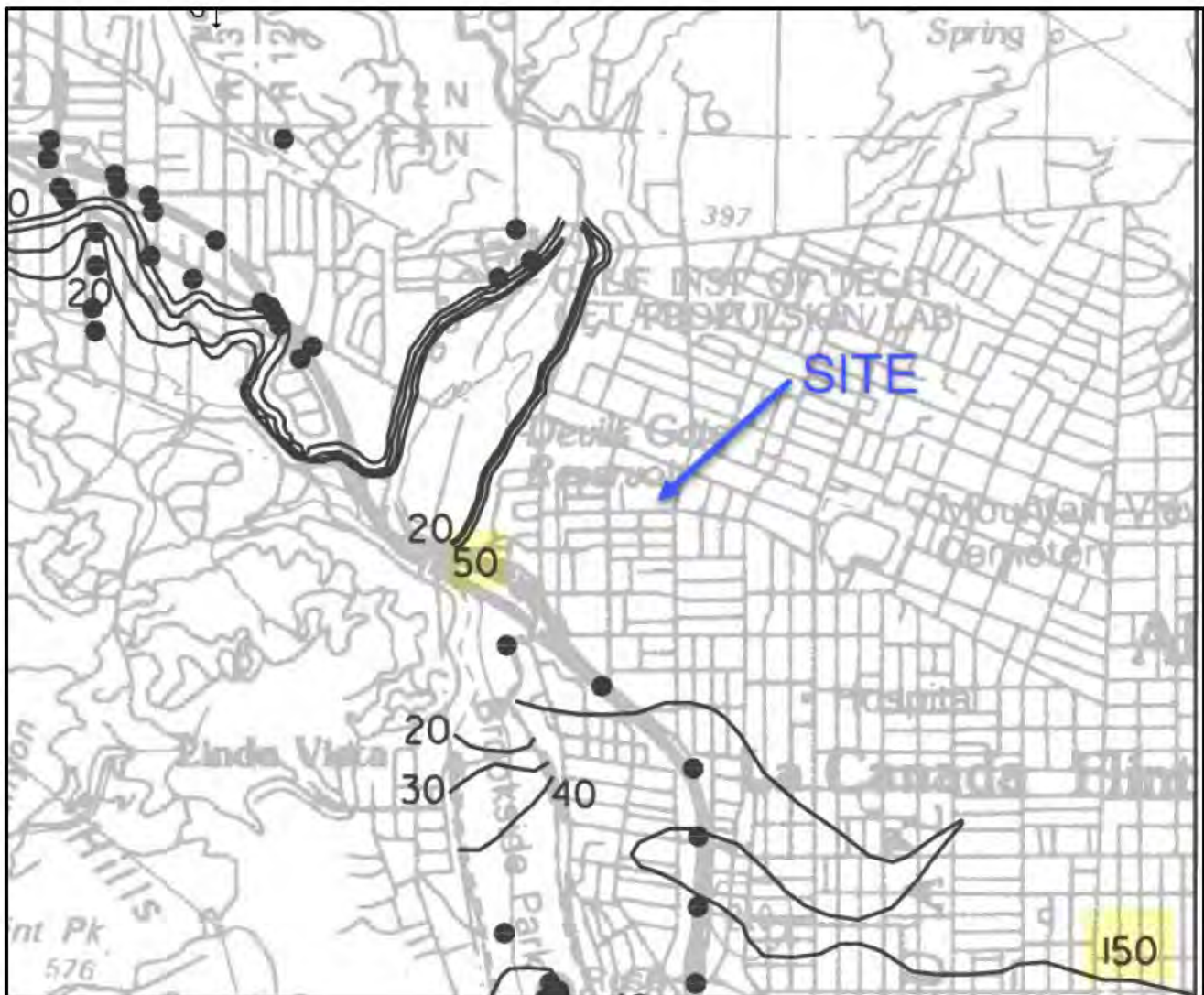
Borings/Exploration holes will comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.

- Drill one boring to 50 feet utilizing an air percussion drill rig to perform infiltration testing for proposed drywell. Water trucks, water meter access, and miscellaneous equipment will be provided on-site as necessary. The soils will be logged in accordance with USCS. Samples of soils will be collected and delivered to NOVA for laboratory analysis.
- From 50 feet to 40 feet below ground surface (bgs) the boring will be backfilled with bentonite chips.
- The dry well testing procedure will consist of a constant head test method, using a 3-inch diameter slotted schedule 40 PVC pipe placed inside the 9.5-inch diameter boring to a depth of 40 feet. The annular space between the pipe and the drilled boring walls will be backfilled with ¾-inch gravel from 40 feet to the ground surface. The infiltration well will be pre-soaked prior to field testing in accordance with the Guidelines for Geotechnical Investigation and Reporting Low Impact Development Stormwater Infiltration.
- The following day, constant head testing will involve maintaining a nearly constant water level within the boring at a depth of approximately 15 feet below existing grade. During the test period, the flow rate required to maintain a constant head will be measured and recorded at approximately 15-minute intervals until an hour after the flow rate has stabilized per the County Guidelines.
- Upon completion of the testing (the same day), the test boring will be sealed per California Well Standards (Bulletins 74-81 and 74-90). The boring will be cased to 40 feet, and the pipe used for the infiltration testing will be extracted. The boring will be drilled and the casing driven to 50 feet. The boring will be over-drilled to 55 feet to ensure complete removal of gravel and bentonite chips from the boring prior to backfilling with grout. An approved cement grout mix with a ratio of 5-6 gallons of water per 94-pound bag of Portland cement will be placed by a tremie pipe under pressure, proceeding upward from the bottom of the boring to the surface in lifts while extracting the temporary drive casing until the borehole is grouted to the ground

surface. Up to 6% of Bentonite may be added to the cement-based mix. No hydrated bentonite chips or soil cuttings will be used for backfill.

Groundwater

A monitoring well installed approximately 850 feet north of the site measured groundwater between approximately 225 to 250 feet below ground surface between October 2017 and February 2020 (CDWR 2020). This finding is consistent with NOVA's experience in the near site vicinity. NOVA does not anticipate groundwater being a constraint for infiltration feasibility. Historic high groundwater level in the area is reported within the Seismic Hazard Zon Report for the Pasadena 7.5- Minute Quadrangle, to be between 50 feet and 150 feet below ground surface (see figure below).



Attachments: Location of Proposed Drywell Test Boring
Drywell Test Boring Diagram





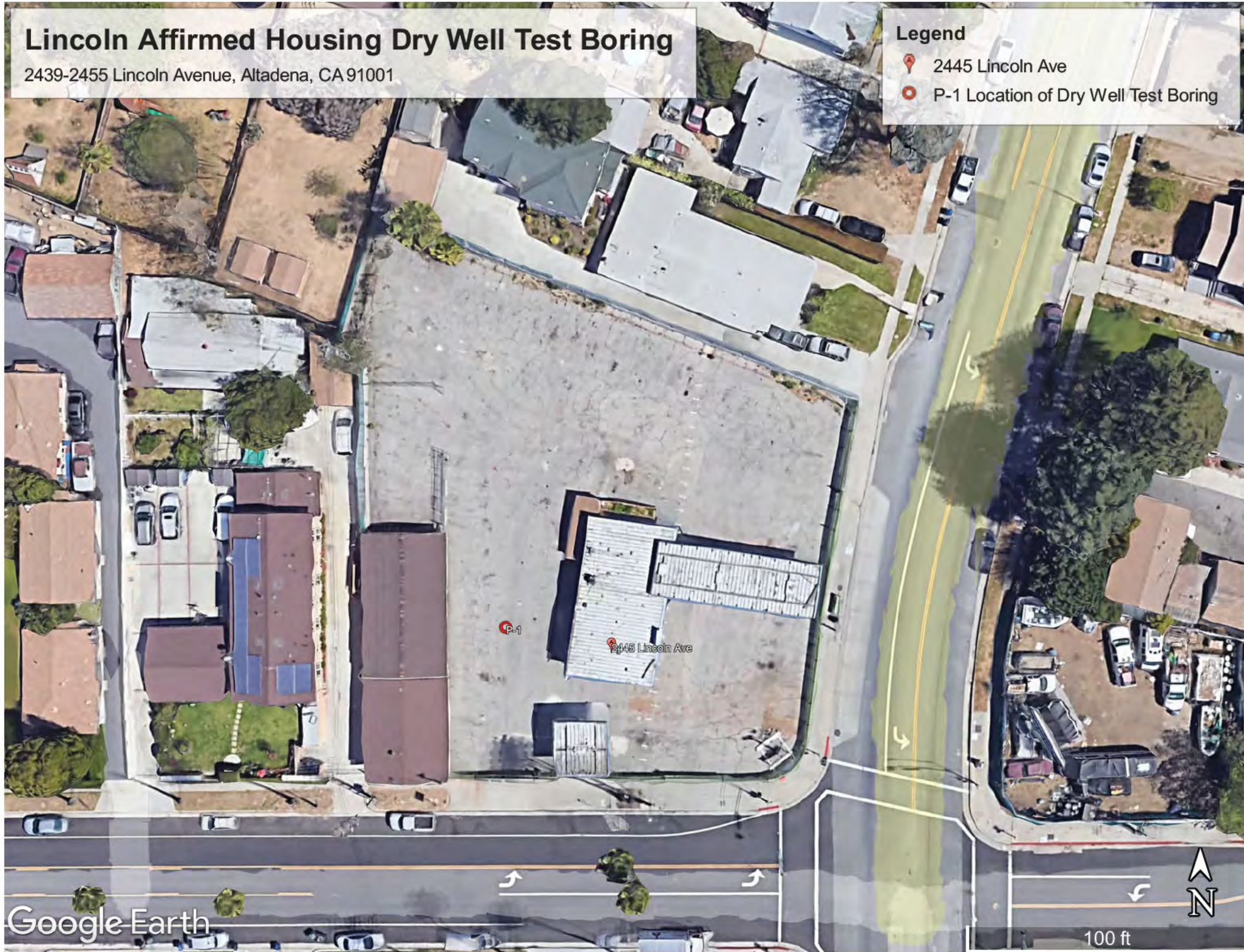
LOCATION OF PROPOSED DRYWELL TEST BORING

Lincoln Affirmed Housing Dry Well Test Boring

2439-2455 Lincoln Avenue, Altadena, CA 91001

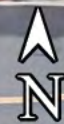
Legend

-  2445 Lincoln Ave
-  P-1 Location of Dry Well Test Boring



Google Earth

100 ft

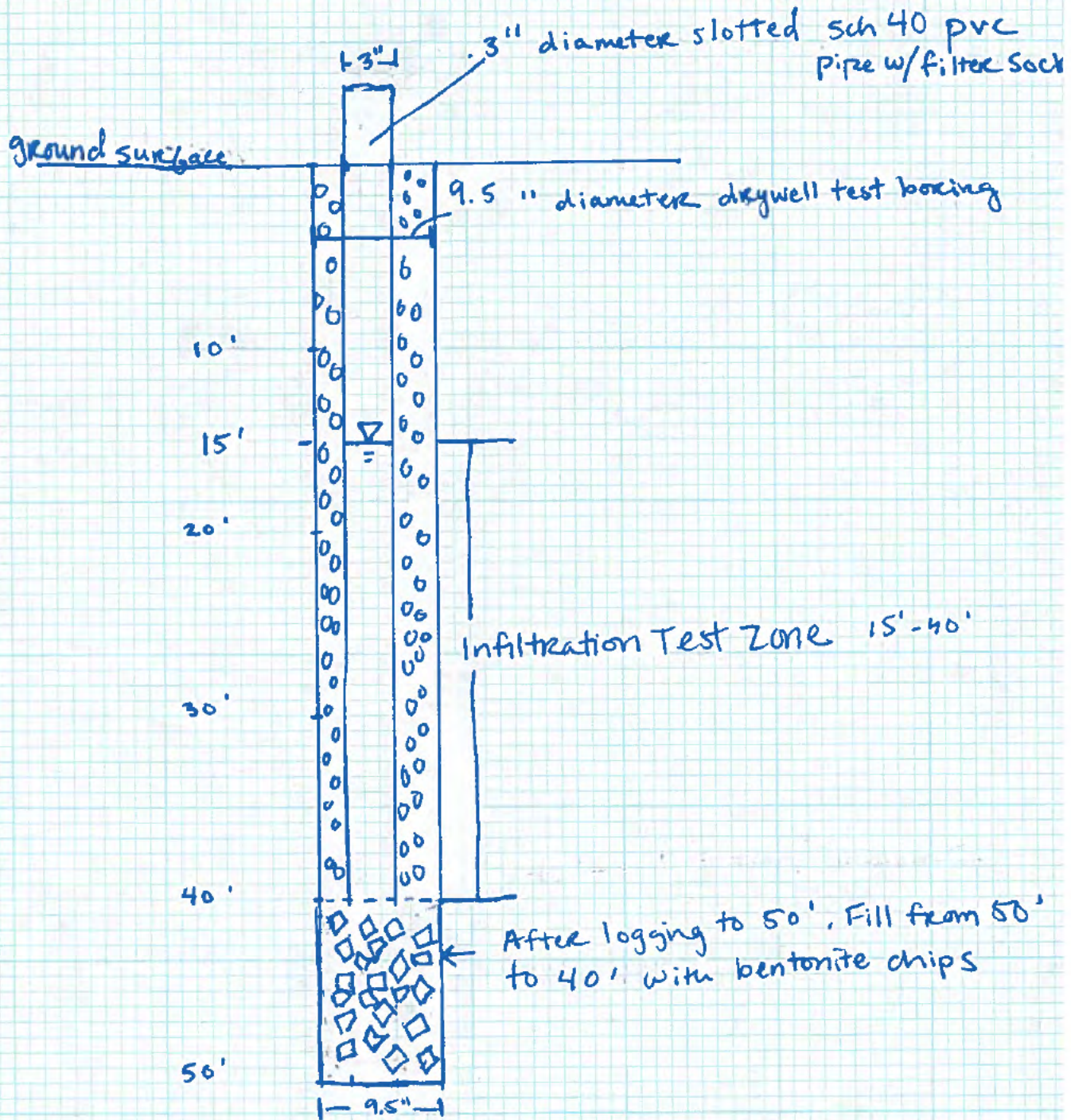




DRYWELL TEST BORING DIAGRAM

Jan 12, 2023
Lincoln Affing Housing
Altadena
PRJ. 3020082

Drywell Test Boring Diagram





**COUNTY PERMIT DENIAL
DATED JAN 17, 2023**



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Denial

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2439-2445 LINCOLN AVENUE	ALTADENA	91001	SHONDA@AFFIRMEDHOUSING.COM

NOTICE:

- WORK PLAN APPROVALS ONCE GRANTED, ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- POTENTIAL APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION OR WATERMASTER APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- **SEND THE REQUESTED ATTACHMENTS TO: MAKUO@PH.LACOUNTY.GOV**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 1 Soil Boring/Exp. Hole	PERMIT NUMBER: SR0324088	DATE: January 17, 2023
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WORK PLAN INCOMPLETE, SUBMIT THE FOLLOWING:

- Provide a narrative stating the borings/exploration holes will be backfilled within 24 hours of boring construction.
- Provide a narrative stating the backfilling procedure will be performed using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole to surface.
- Provide a narrative stating the soil borings will be sealed per California Well Standards (Bulletins 74-81 and 74-90) :
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips and/or soil cuttings.
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.

Please note: We no longer allow soil vapor probes to be installed into ground water sample borings or borings that extend into ground water. Follow the Advisory Active Soil Gas Investigations July 2015: Cal EPA, DTSC, LA RWQCB and San Francisco RWQCB for vapor probe borings. We do not permit percolation test borings unless soil samples are initiated. Please contact the Land Use Program at (626) 430-5380 for further requirements regarding percolation testing procedures, only.

Maple Kuo, REHS
 Drinking Water Program
 Environmental Health Protection Division
 Los Angeles County Department of Public Health
 5050 Commerce Drive
 Baldwin Park, CA 91706
 (323) 482-7922
MaKuo@ph.lacounty.gov



REG-15 NO: 8846

Maple Kuo



ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
1418 Descanso Dr.	La Cañada Flintridge	91011	rkhan@geosyntec.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

ONCE APPROVED NOTIFY INSPECTOR AT phabib@ph.lacounty.gov PREFERABLY 4 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 5 Soil Boring/Exp. Hole	PERMIT NUMBER: SR0355173	DATE: October 18 th , 2023
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Please ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole to surface.
- Ensure soil borings are sealed per California Well Standards 74-90
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips and/or soil cuttings.
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.

APPROVED BY:

Peter Habib, REHS

26415 Carl Boyer Dr.
Santa Clarita, Ca 91350
(213) 760-9506



5770
Peter Habib



ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
South side of 210 Freeway	La Canada Flintridge	91011	dcrayton@twininginc.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 6 Soil Borings	PERMIT NUMBER: SR0223450	DATE: 5-29-2020
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole.
- Ensure soil borings are sealed per California Well Standards 74-90
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11. And any other applicable Codes.

APPROVED BY:

Belinda Larsen, REHS
21515 Vanowen St. Ste. 116
Canoga Park, Ca 91303
(818) 593-7308



5838



ENVIRONMENTAL HEALTH

Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
Telephone: (626) 430-5420 • Facsimile: (626) 813-3016
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm



APPLICATION FOR WELL PERMIT

SERVICE	FEE	QTY	TOTALS
PRODUCTION WELLS			
<input checked="" type="checkbox"/> residential drinking water, <input type="checkbox"/> public/municipal, <input type="checkbox"/> irrigation		1	844
<input type="checkbox"/> construction	\$ 844.00	x	= \$ 0
<input type="checkbox"/> decommission <input type="checkbox"/> renovation	\$ 1103.00	x	= \$ 0
NON-PRODUCTION WELLS			
<input type="checkbox"/> monitoring, <input type="checkbox"/> piezo, <input type="checkbox"/> injection, <input type="checkbox"/> water extraction, <input type="checkbox"/> sparge, <input type="checkbox"/> test,			
<input type="checkbox"/> SVE, <input type="checkbox"/> geothermal heat exchange			
<input type="checkbox"/> construction <input type="checkbox"/> decommission			
<input type="checkbox"/> less than twenty-five (25) wells per parcel (first 24 wells)	\$ 519.00	x	= \$ 0
<input type="checkbox"/> twenty-five (25) or more wells per parcel	\$ 130.00	x	= \$ 0
CATHODIC WELLS			
<input type="checkbox"/> construction	\$ 844.00	x	= \$ 0
<input type="checkbox"/> decommission	\$ 1103.00	x	= \$ 0
CPT/HYDROPUNCH/SOIL BORINGS			
<input type="checkbox"/> 1-4 Boring	\$ 129.00		
<input type="checkbox"/> 5+ Borings	\$ 516.00		
Larger projects requiring more than 4 hours review may be subject to additional plan review fees (hourly rate at \$129.00)			
WELL SITE PLAN REVIEW	\$ 584.00	x	= \$ 0
WATER SUPPLY YIELD EVALUATION			
<input type="checkbox"/> commercial	\$ 1038.00	x	= \$ 0
<input type="checkbox"/> residential four (4) connections or less	\$ 844.00	x	= \$ 0
<input type="checkbox"/> residential each additional connections beyond four (4)	\$ 519.00	x	= \$ 0
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$ 0
WATER SAMPLING commercial food service facility for USDA certification	\$ 714.00	x	= \$ 0

Applications are nontransferable. Field Personnel cannot accept payments. DO NOT SEND CASH.
Make checks or money orders payable to:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH

Allow 10 business days for work plan review and response. Cancellations of service requests are subject to a \$65.00 processing fee plus additional plan review fees (hourly rate as applicable).

Effective July 1, 2017, additional fees (hourly rate of \$129) will be applied when field inspection is delayed in the field for more than one hour due to the driller not being ready or unable to complete the process.

5869-020-005 Big Tujunga Rd 4/9/18
WORK SITE ADDRESS CITY ZIP CROSS STREET/PARCEL# DATE

SITE/PERMIT# SR0140847	INSPECTOR: Teri 4/16/18	DATE: CK#1476 \$844	RECEIPT # IN0503747
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ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Application

WORK SITE ADDRESS 5869-020-005	CITY Little Sunland	ZIP 91040	NUMBER OF WELLS 1	START DATE ASAP
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OWNER Nick Lukasiwicz		EMAIL		
ADDRESS 8041 Foothill Ave.	CITY Sunland	ZIP 91040	TELEPHONE	

DRILLER Vics Well Drilling Inc.		PROJECT CONTACT Victor	C-67 LICENSE NUMBER 886439
ADDRESS 3807 Sierra Hwy box 4504		CITY Acton	ZIP 93510
EMAIL vicswelldrilling@yahoo.com		TELEPHONE 661 917-7560	MOBILE

CONSULTANT		PROJECT CONTACT	PROJECT MANAGER
ADDRESS		CITY	ZIP
EMAIL		TELEPHONE	MOBILE

ATTACH ALL SUPPORTING DOCUMENTS, INCLUDING:

- written narrative describing work plan details
- vertical well diagram detailing depths, sizes, thicknesses, and materials of: (1) the casing, (2) the annular (sanitary) seal, (3) the screens/slotting, and (4) any pertinent geological features
- scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

FOR WELL DECOMMISSION: well construction logs, the method of assessment, type and amount of sealant, and the method of upper seal pressure application (including PSI and time applied)

PRODUCTION WELLS	
<input type="checkbox"/> PUBLIC (MUNICIPAL UTILITY)	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> IRRIGATION	<input type="checkbox"/> CATHODIC PROTECTION
<input type="checkbox"/> GEOTHERMAL HEAT EXCHANGE	
<input type="checkbox"/> OTHER _____	
NAME OF C-57 LICENSEE	
886439	
SIGNATURE	

NON-PRODUCTION WELLS	
<input type="checkbox"/> MONITORING	<input type="checkbox"/> PIEZOMETER
<input type="checkbox"/> INJECTION	<input type="checkbox"/> WATER EXTRACTION
<input type="checkbox"/> AIR SPARGE	<input type="checkbox"/> TEST HOLE (PRE-PRODUCTION)
<input type="checkbox"/> HYDROPUNCH	<input type="checkbox"/> CONE PENETROMETER (CPT)
<input type="checkbox"/> SOIL BORING INTO GROUNDWATER	
NAME OF APPLICANT	
SIGNATURE	

BY SIGNING ABOVE, I HEREBY AGREE TO COMPLY IN EVERY RESPECT WITH ALL THE REGULATIONS, ORDINANCES, AND LAWS OF THE STATE OF CALIFORNIA, THE COUNTY OF LOS ANGELES, THE DEPARTMENT OF PUBLIC HEALTH, AND THE ENVIRONMENTAL HEALTH DRINKING WATER PROGRAM.



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS 5869-020-005	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
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NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- THIS WELL PERMIT APPROVAL IS LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- NOTIFY THE DRINKING WATER PROGRAM BY EMAIL 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

<input type="checkbox"/> WORK PLAN INCOMPLETE; SUBMIT THE FOLLOWING:	<input type="checkbox"/> WORK PLAN APPROVED Los Angeles County Drinking Water stamp	DATE: ADDITIONAL APPROVAL CONDITIONS:
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ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

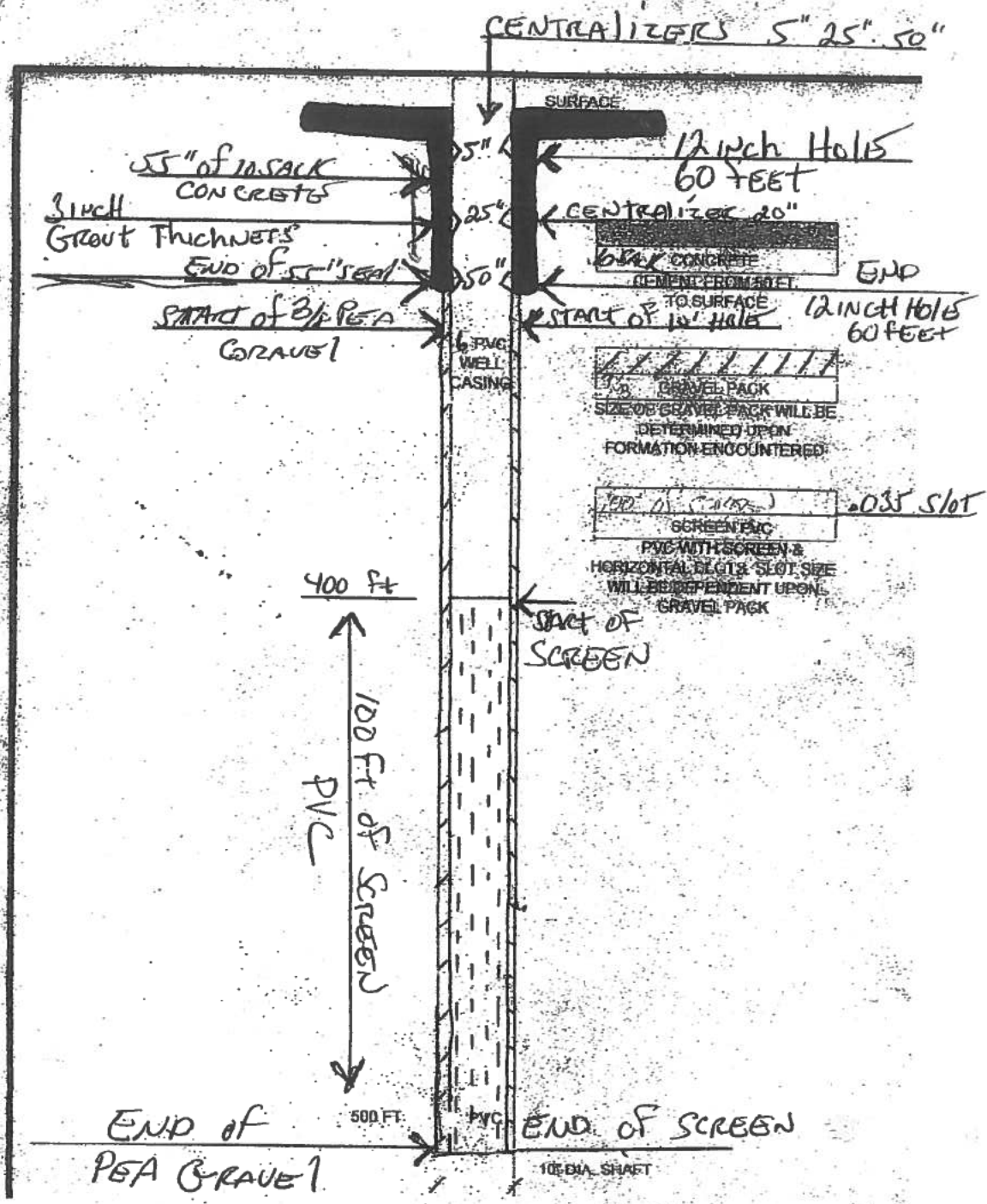
DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

5869-020-000
Nick Lukasiewicz

Vic Well Drilling

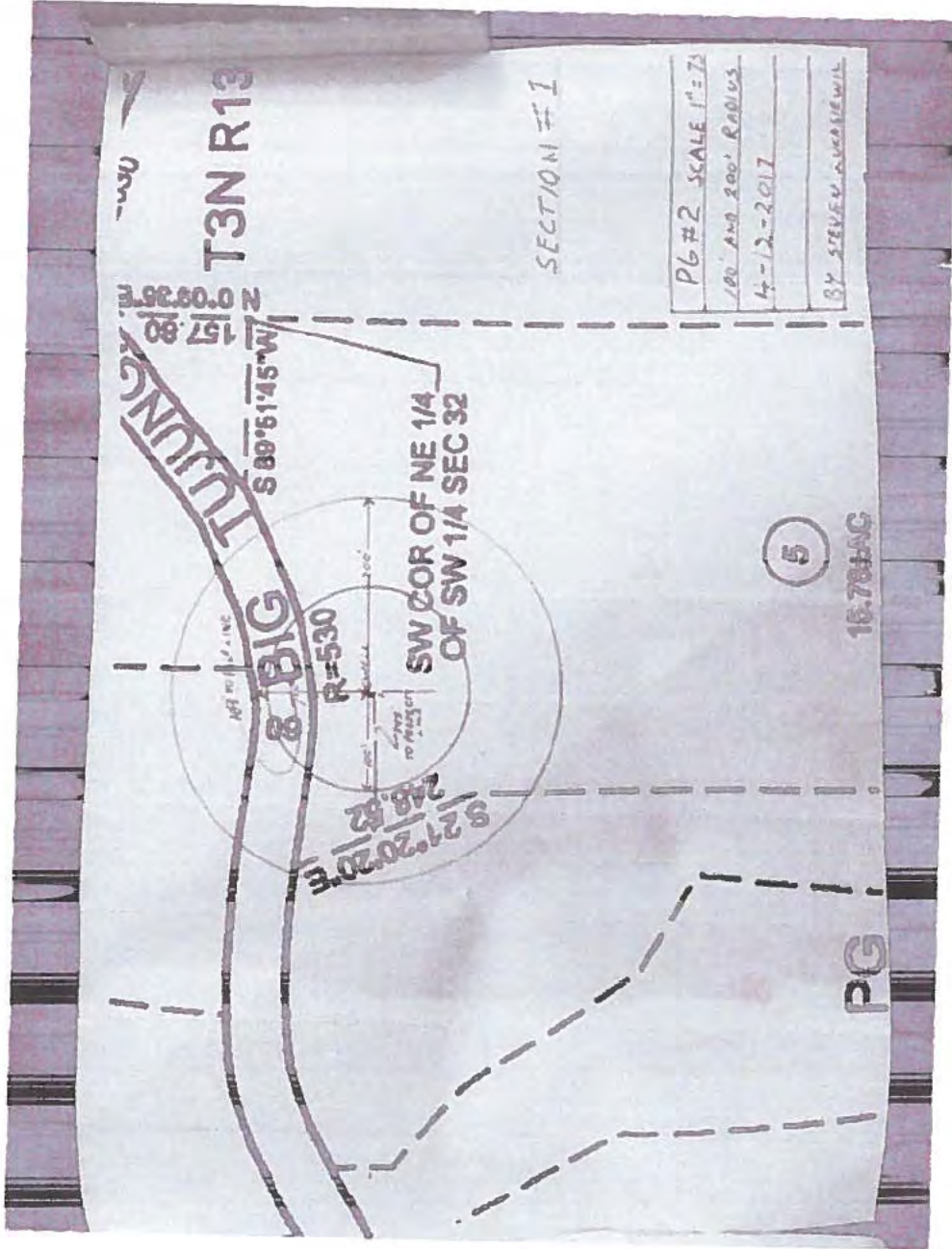
- 1) Drill with 12 $\frac{3}{4}$ inch drill bit for 20 feet for the 3 inch annular seal requirement.
- 2) Set conductor pipe as needed.
- 3) Drill with 8 inch drill bit to sufficient water.
- 4) Ream with 11 inch drill bit to depth of 60 ft for sanitary seal.
- 5) Case bore hole with 4 1/2 inch PVC to drilled depth of well. Either size of casing will meet annular seal requirements.
- 6) Centralizers will be placed at approximately at 40" 20" and at ground level.
- 7) Free fall 3/8 pea gravel to bottom of cased well and up to 50 feet below ground level as per sanitary seal requirements.
- 8) Set 80 foot of 1 1/2 inch trimming pipe.
- 9) Pump 10 sack sand slurry through trimming pipe from 50 feet to ground level .pull trimming pipe and 10' conductor pipe.
- 10) Steal reinforced 7x7x6 concrete Pad.



5869-020-005
 Nick Lukasiewicz

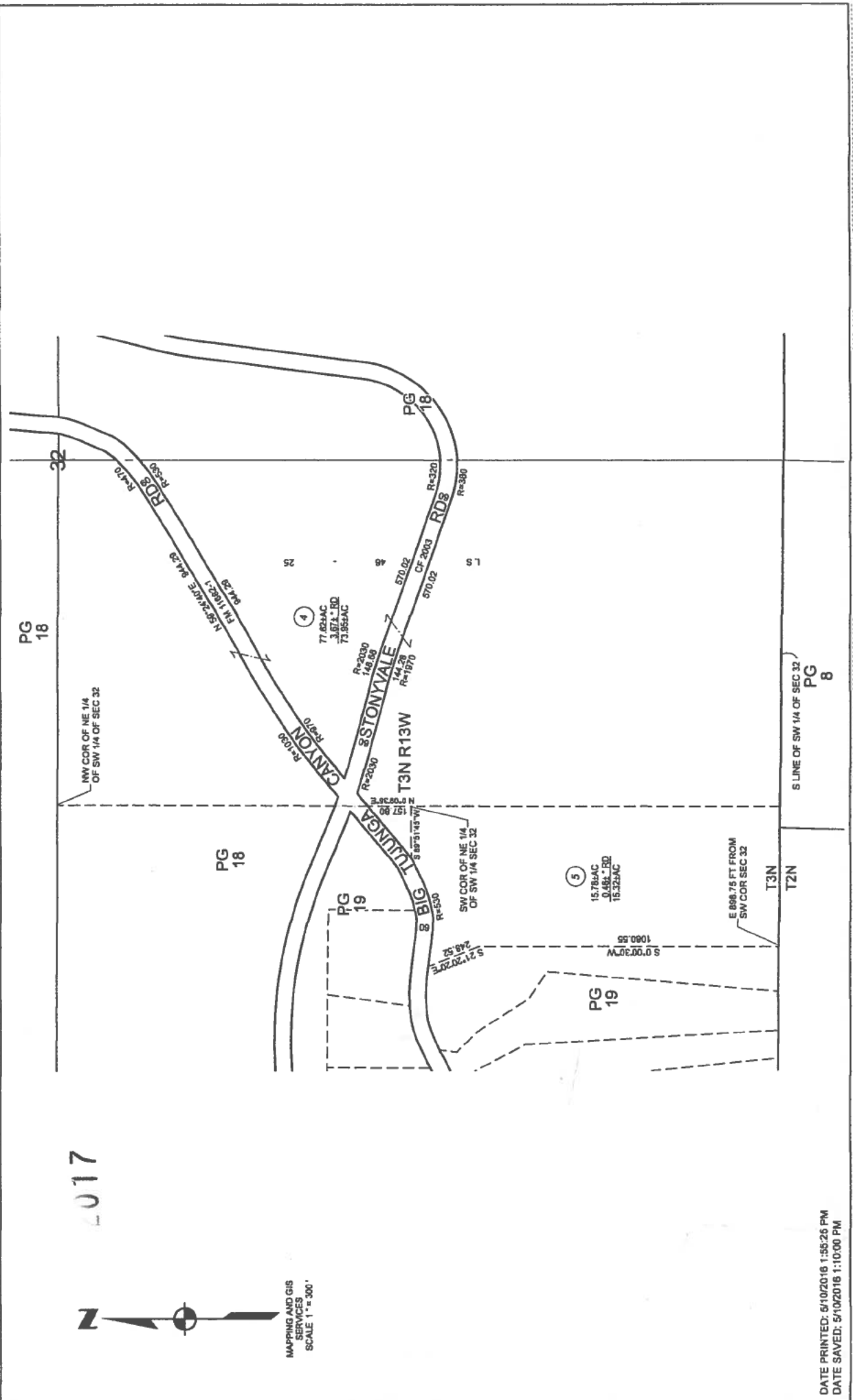
5869-020-005

Nick Lukaszewicz



58609-020-005 Nick Lukasiwicz

5869	20	P.A. 2850-6	TRA 1703	REVISED: 7-1-85 3-1-88	650513 980690809001-04 2016051102004001-03	2016051102004002-03	SEARCH NO	OFFICE OF THE ASSESSOR COUNTY OF LOS ANGELES COPYRIGHT © 2002
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DATE PRINTED: 5/10/2016 1:55:25 PM
 DATE SAVED: 5/10/2016 1:10:00 PM

Map ID: 5869-020-005 Nick Luchasiewicz



Legend

Parcels

Notes

1: 2,257



0.1 0 0.04 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere
© Latitude Geographics Group Ltd.

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

5869-020-005
Nick Lukasiewicz ORIGINAL

WATER LICENSE A

NO. 010039

RECITALS

1. This AGREEMENT is entered into the City of Los Angeles (THE CITY), by and through its Steven Lukasiewicz and Connie S. L. Lukasiewicz, husband and wife as Community Property with Right of (LICENSEE).
2. THE CITY possesses a pueblo right water within the Upper Los Angeles Water Control Area (ULARA) insofar as such waters and the use of its inhabitants within THE CITY, which right is prior to and including riparian and overlying rights as recognized by the California Supreme Court in Los Angeles v. San Fernando (1979) 14 Cal.3d 199. THE CITY's present needs and, insofar as can be known, for all future time will continue to need all the surface and native groundwater within ULARA for ordinary municipal purposes and the use of its inhabitants within THE CITY.
3. WATERMASTER is an agent of the judgment entered on January 26, 1979 in City of Los Angeles vs. City of San Fernando, et al., Los Angeles Superior Court No. 650079 (JUDGMENT). The WATERMASTER is "to assist Court in its administration and enforcement of the provisions of [the] and any subsequent orders of the Court entered pursuant to the s continuing jurisdiction". Pursuant to the JUDGMENT, the WATERMASTER is responsible and accountable for all waters of ULARA. Accordingly, water production within ULARA must be reported to the WATERMASTER by metering devices satisfactory to the WATERMASTER for purposes of ensuring LICENSEE's compliance with all directions of the WATERMASTER the JUDGMENT.
4. LICENSEE is the owner in fee of a certain piece of real property (THE SITE), described more fully in Attachment "A" hereto, which is located in an unincorporated area of Los Angeles County within ULARA.
5. LICENSEE is presently unable to obtain water service from a water service provider at THE SITE.
6. LICENSEE acknowledges that any rights which it may possess to surface water or native ground water stem from its interest in THE SITE, whether riparian, overlying, or appropriative, and, therefore, cannot be exercised subservient to THE CITY's pueblo right.
7. LICENSEE expressly acknowledges that, as a LICENSEE of THE CITY, it is subject to and bound by the provisions of the JUDGMENT pursuant to

WATER LICENSE AGREEMENT

NO. 010039

Section 10.3 thereof, which provides the jurisdiction of the Superior Court JUDGMENT. LICENSEE, therefore, jurisdiction of the court with JUDGMENT to resolve any disputes enforcement, or application of this A

all licensees of parties are subject to assigned to monitor and enforce the consents and submits to the exclusive jurisdiction pursuant to Section 7.1 of the ing the interpretation, REEMENT. LICENSEE agrees to waive of peremptory challenge, the judge risdiction pursuant to the JUDGMENT.

- 8. LICENSEE desires to obtain from a well or wells (THE WELLS), which drill upon THE SITE.
- 9. THE CITY determines that it owns or the use of consumers served by TH available for sale or distribution to

CITY permission to produce water from NSEE has in place or proposes to ntrols water, which is not required for CITY within its limits and which is ers outside THE CITY.

WHEREFORE THE CITY grants a LICENSE WELLS upon the following terms and cond

LICENSEE to produce water from THE :

- 10. LICENSEE shall and hereby does to all water rights which LICENSEE THE SITE as set forth in the LICENSEE hereby authorizes THE manner prescribed by law for
- 11. The drilling, maintenance, and destruction, of THE WELLS shall be LICENSEE. All pumps, pipelines, necessary to supply the premises wi provided and installed by and entirely
- 12. THE WELLS shall be kept in good of LICENSEE, and LICENSEE shall to prevent any foreign matter or subs protect and safeguard the waters
- 13. LICENSEE shall destroy, in accordan requirements, all wells located on TH LICENSEE to produce ULARA water.

e to THE CITY full and unconditional title stemming from its interest in attached as Attachment "B", and to record notice of said transfer in the interests in real property. including decommissioning or at the cost and expense of facilities, and other equipment water from any such wells shall be at the cost and expense of LICENSEE. tion and repair by and at the expense ke all reasonable precautions necessary from entering THE WELLS and to from pollution as long as THE WELLS ll be no duty or obligation whatsoever repair THE WELLS.

with all applicable regulatory SITE that are no longer in use by

WATER LICENSE A

NT NO. 010039

14. Use of water from THE WELLS is shall not acquire any water right wha THE WELLS, the LICENSEE's use thereon, or by reason of the from THE WELLS. issive only, and LICENSEE cannot and by the drilling and operation of occupancy of the premises, the water of, and the use of water for any purpose
15. All water taken by LICENSEE from LICENSEE in the natural untreated found, and in taking and using such its own risk. E WELLS shall be accepted by and condition in which it is there LICENSEE shall be acting entirely at
16. LICENSEE expressly acknowledges or warranty whatsoever, express or i potability, or continued availability of THE CITY makes no representation ied, as to the quantity, quality, fitness, ny such water.
17. LICENSEE expressly acknowledges comply with all federal, state, or local covered by the LICENSE issued pu it is LICENSEE's responsibility to regulations applicable to the activities to this AGREEMENT.
18. LICENSEE shall pump from THE W require for reasonable use on THE only such quantity of water as it may
19. Water taken from THE WELLS shall used only on THE SITE.
20. LICENSEE, at its own expense, will WATERMASTER and will in a install those meters on THE WELLS condition throughout the term of this I report monthly to the WA by THE WELLS. LICENSEE shall access to THE SITE for purposes of i metering of THE WELLS. LICENSEE that LICENSEE has provided assu LICENSEE understands and will com meters approved by the approved by the WATERMASTER maintain them in good working and any renewal. LICENSEE will the amount of ULARA water produced the WATERMASTER reasonable and verifying the production and 's signature on this AGREEMENT attests ces to the WATERMASTER that the with the WATERMASTER's directions.
21. LICENSEE will at the beginning of an ANNUAL ULARA LICENSE FEE year of the term of THE LICENSE pay THE CITY as determined herein:
 - 21.1 From time to time, but in no CITY will establish the maxi expressed in acre-feet per annually (MAXIMUM AMOUN SITE'S approved land use(s) nt less than once every five years, THE allowable ULARA Water Production , reasonably needed to serve THE SITE considering among other factors THE zoning.

WATER LICENSE A

NT NO. 010039

- 21.2 Any proposed changes in the reported to THE CITY in writing THE CITY will re-evaluate a ANNUAL ULARA LICENSE
- Expansion of current or
 - Grading that exceeds 50
 - Change in land use
 -
 -
 -
 -
- 21.3 The ANNUAL LICENSE FEE \$500.00 per year plus an product of the following factors
- The actual pumped (APA) of water produced (in acre-feet/year) as reported to WATERMASTER.
- Base rate of the applicable "Los Angeles Water Rates" Provisions F, G, and H (or I) \$50.00 per acre-foot (eleven cubic feet, 748 gallons) plus the current surcharge as determined in Attachment
- Usage Fee Formula: (APA First Tier Rate) + (APA x Out of City Rate) - (APA x Pumping)
- 21.4 The LICENSEE will notify THE CITY when the first well is completed, and the annual usage fee will become effective on the date that the well is completed.
22. LICENSEE shall not exceed the MAXIMUM AMOUNT as determined in Attachment "C". If the cumulative of ULARA water production that is reported to the WATERMASTER MAXIMUM AMOUNT for the same period, then the LICENSEE will be required to pay for such excess amount of water production in accordance with rate as defined in Paragraph 21.3 within 30 days of the production to WATERMASTER. THE CITY may evaluate and revise the factors that comprise the annual usage fee and the annual Maximum Allowable ULARA Production to establish a revised

WATER LICENSE A

NO. 010039

ANNUAL ULARA LICENSE FEE

23. The LICENSE granted by this the AGREEMENT has been e LICENSE will expire of its own force on the part of THE CITY on the fifth is renewed by THE CITY in the man
MENT becomes effective upon the date by both LICENSEE and THE CITY. The effect with no further action required anniversary of that effective date unless it required by law.
24. This LICENSE may be cancelled by CITY as follows:
- 24.1 In the event that a water willing, and able to provide THE SITE under commercially reasonable terms and conditions, the authorization given to LICENSEE by this instrument is revoked.
becomes available and is ready, tic and fire protection water service to
- 24.2 In the event that LICENSEE forth in Paragraphs 10 any terms of this LICENSE set 22, inclusive, including subparts thereof.
- 24.3 In the event that WATERMASTER has failed to comply with a di informs THE CITY that LICENSEE of the WATERMASTER.
- 24.4 In the event that THE CITY d which it possesses for the use its limits and, therefore, no lo distribution to consumers hereby warrants that it shall similar revocations, restrictions customers and licensees nes that it requires all the water consumers served by THE CITY within r has water available for sale or THE CITY; except that THE CITY exercise this right unless it makes limitations or to other similarly situated THE CITY.
- i obligations set forth in it are subject to law.
all limitations imposed by appli
25. This LICENSE may be transferred condition that each person or entity subdivision thereof comply with the AGREEMENT within 30 days of the change of legal title to THE SITE upon ming legal title to THE SITE or any of Paragraph 21, apply for a new nsfer of title, and execute AGREEMENT.
26. LICENSEE and THE CITY on the AGREEMENT, and it may not be mod executed by both LICENSEE and TH AGREEMENT.
t of the understanding between , which are the subject of the ed except by a separate writing CITY after the date of execution of this

WATER

EMENT NO. 010039

Steven Lukasiewicz

DATED:

Connie Syl Lukasiewicz

B

DEPA OF THE CITY OF LOS ANGELES
DIRE TOR OF WATER RESOURCES

A MICHAEL N. FEUER, CITY LEGALITY ATTORNEY

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BY_

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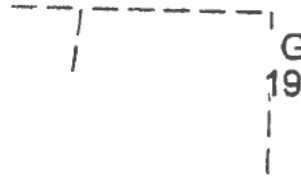
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WATER USE

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WATER LICENSE A

NO. 010039

ENT B

Deed

PART I – By Applicant for ULARA License

Property Address: None

Assessor Parcel Number: 5869-020-005

Property Owner(s) / Licensee(s): Steven siewicz and Connie Sylvia Lukasiewicz

Property Owner(s) Address: 8041 Foothill A Sunland, CA 91040

Lot Size (gross area in square feet): 15.78

Net Area Subject to Water Use (square feet): ,000 ft²

Current Zoning: A - 2 - 2

Current Land Use: Vacant Land

r 51-4393

Applicant's Mailing Address: 8041 Foothill A Sunland, CA 91040

Area Subject to Water Use Under This License

Maximum Allowable Annual ULARA Water
1 acre-foot per year

Annual ULARA License Fee: \$500.00 (Adminis) paid at the beginning of each year plus a
(Usage Fee) based on actual usage for the pre year.

The first Administrative Fee of \$500.00 is payable the City of Los Angeles Department of
Water and Power with this signed agreement.

Effective From: 3/14/18

To: 3/14/19

Licensee(s) agree to install and maintain Waterm -approved meter(s) to determine the total
amount of water produced monthly at the end of month and to report such amounts to the
following no later than 15 days after each month:

Office of the Watermaster of the Upper Angeles River Area
John Ferraro Office Building, Room 1450
P. O. Box 51111
Los Angeles, California 90051-0100

FOR RENEWALS

License Agreement No. 010039 was initially ex on 3/14/18 and will expire on
3/14/23 unless extended by agreement in the property owner and the City of Los
Angeles. The annual license fee is subject to Angeles based on the provisions of Paragraph 21
of this License Agreement. This License Agr is subject to cancellation based on the
provisions of Paragraph 24 and may be based on the provisions of Paragraph 26.

Annual renewal of License Agreement No. 010039 ; licensee(s) signatures executed for
this document and payment of the Annual ULARA Fee plus applicable charges under
Paragraph 22 of this License Agreement from the year payable to "City of Los Angeles,
Department of Water and Power".

Submit this signed document and payment by to the following address:

Los Angeles Department of Water and
John Ferraro Office Building, Room 1450
P. O. Box 51111
Los Angeles, California 90051-0100



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

APPLICATION FOR WELL PERMIT

SERVICE	FEE	QTY	TOTALS
PRODUCTION WELLS			
<input type="checkbox"/> residential drinking water, <input type="checkbox"/> public/municipal, <input type="checkbox"/> irrigation, <input type="checkbox"/> cathodic			
<input type="checkbox"/> Construction	\$ 844.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1103.00	x	= \$
NON-PRODUCTION WELLS <input type="checkbox"/> Construction, <input checked="" type="checkbox"/> Decommission			
<input type="checkbox"/> monitoring, <input type="checkbox"/> piezo, <input type="checkbox"/> injection, <input type="checkbox"/> water extraction, <input type="checkbox"/> sparge, <input type="checkbox"/> test			
each well, first 24 wells	\$ 519.00	x 20	= \$ 10,380
each additional well starting with the 25 th	\$ 130.00	x	= \$
CPT/HYDROPUNCH/SOIL BORINGS INTO GROUNDWATER (contact the Drinking Water Program for projects of 25 borings or more)	\$ 130.00	x	= \$
GEOTHERMAL HEAT EXCHANGE WELLS	\$ 519.00	x	= \$
WELL SITE PLAN REVIEW	\$ 584.00	x	= \$
WATER SUPPLY YIELD EVALUATION commercial facility	\$ 1038.00	x	= \$
WATER SUPPLY YIELD EVALUATION residential (1-4 service connections)	\$ 844.00	x	= \$
WATER SUPPLY YIELD EVALUATION Public Water Systems (5 or more service connections)	\$ 519.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING commercial food service facility for USDA certification	\$ 714.00	x	= \$

Applications are nontransferable. Field Personnel cannot accept payments. **DO NOT SEND CASH.**
Make checks or money orders payable to:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH

Allow **10** business days for work plan review and response. Cancellations of service requests are subject to a \$65.00 processing fee plus additional plan review fees (hourly rate as applicable).

2601 E. Imperial Hwy	LENWOOD	90262	Avenida/#58165	05/10/2018
WORK SITE ADDRESS	CITY	ZIP	CROSS STREET/PARCEL#	DATE

All application status inquiries should be emailed to waterquality@ph.lacounty.gov with the work site address above.

CONTACT OFFICE		DEPARTMENT STAMP	
SITE/PERMIT# SR0144782 Inspector: Jonas (signature) Date: 05/15/2018 (signature)		DATE:	CHECK # 277552
INSPECTOR:		RECEIPT # 110571216	AMOUNT: \$ 10,380



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706
 Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Application

WORK SITE ADDRESS 2601 E. IMPERIAL HWY	CITY LYNWOOD	ZIP 910262	NUMBER OF WELLS 20	START DATE 6/4/2018
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OWNER CALIFORNIA DEPARTMENT OF TRANSPORTATION		EMAIL MANDA.SZWAMENSKA@DOT.CA.GOV		
ADDRESS 100 S. MAIN ST., 12-297ms-16	CITY LOS ANGELES	ZIP 90012	TELEPHONE 213-897-7695	

DRILLER MOORE TWENING ASSOCIATES, INC.		PROJECT CONTACT ALLEN BUSHY	C-57 LICENSE NUMBER 506159
ADDRESS 2527 FRESNO STREET		CITY FRESNO	ZIP 93721
EMAIL ALLENB@MOORETWENING.COM		TELEPHONE 559-978-9566	MOBILE

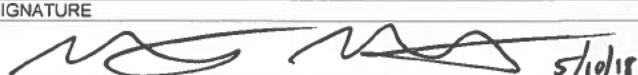
CONSULTANT GEOSYNTEC CONSULTANTS		PROJECT CONTACT GARRETT THORNTON	PROJECT MANAGER ARTHUR FORMA
ADDRESS 3043 GOLD CANYON DR. STE 100		CITY RANCHO CORDOVA	ZIP 95670
EMAIL GTHORNTON@GEOSYNTEC.COM		TELEPHONE 916-637-8334	MOBILE 208-301-8320

ATTACH ALL SUPPORTING DOCUMENTS, INCLUDING:

- written narrative describing work plan details
- vertical well diagram detailing depths, sizes, thicknesses, and materials of: (1) the casing, (2) the annular (sanitary) seal, (3) the screens/slotting, and (4) any pertinent geological features
- scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

FOR WELL DECOMMISSION: well construction logs, the method of assessment, type and amount of sealant, and the method of upper seal pressure application (including PSI and time applied)

PRODUCTION WELLS	
<input type="checkbox"/> PUBLIC (MUNICIPAL UTILITY)	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> IRRIGATION	<input type="checkbox"/> CATHODIC PROTECTION
<input type="checkbox"/> GEOTHERMAL HEAT EXCHANGE	
<input type="checkbox"/> OTHER _____	
NAME OF C-57 LICENSEE _____	
SIGNATURE _____	

NON-PRODUCTION WELLS	
<input checked="" type="checkbox"/> MONITORING	<input type="checkbox"/> PIEZOMETER
<input type="checkbox"/> INJECTION	<input type="checkbox"/> WATER EXTRACTION
<input type="checkbox"/> AIR SPARGE	<input type="checkbox"/> TEST HOLE (PRE-PRODUCTION)
<input type="checkbox"/> HYDROPUNCH	<input type="checkbox"/> CONE PENETROMETER (CPT)
<input type="checkbox"/> SOIL BORING INTO GROUNDWATER	
NAME OF APPLICANT GARRETT THORNTON	
SIGNATURE 	

BY SIGNING ABOVE, I HEREBY AGREE TO COMPLY IN EVERY RESPECT WITH ALL THE REGULATIONS, ORDINANCES, AND LAWS OF THE STATE OF CALIFORNIA, THE COUNTY OF LOS ANGELES, THE DEPARTMENT OF PUBLIC HEALTH, AND THE ENVIRONMENTAL HEALTH DRINKING WATER PROGRAM.



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706
 Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS <i>2601 E. Imperial Hwy</i>	CITY <i>LYNWOOD</i>	ZIP <i>90262</i>	EMAIL ADDRESS FOR WELL PERMIT APPROVAL <i>GTHORNTON@GEOSYNTEC.COM</i>
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NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- THIS WELL PERMIT APPROVAL IS LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- NOTIFY THE DRINKING WATER PROGRAM BY EMAIL 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

<input type="checkbox"/> WORK PLAN INCOMPLETE; SUBMIT THE FOLLOWING:	<input type="checkbox"/> WORK PLAN APPROVED	DATE:
	Los Angeles County Drinking Water stamp	ADDITIONAL APPROVAL CONDITIONS:

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
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WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
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WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
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Monitor Well Destruction

The existing twenty wells proposed for destruction include ten perched zone monitoring wells, two former remediation wells and eight deep groundwater monitoring wells (Table 1, Figures 2-4). These wells will be destroyed in accordance with state and local requirements and under an approved permit with the Los Angeles County Department of Environmental Health (LACDEH). Each well to be destroyed will be over-drilled to its total depth and backfilled to the surface with bentonite grout. The total depth of the well will be confirmed prior to over drilling to with a weighted measuring tape to ensure proper identification of the wells. The volume of grout for each destruction has been calculated (Table 1). The surface will be returned to a state matching the surrounding ground.

PROJECT NO.: 25-0573
 LOCATION: Caltrans Site 25-2
 Alameda Street and Imperial Highway
 Los Angeles, California

DATE DRILLED: July 22, 1992
 LOGGED BY: A. Lapostol
 APPROVED BY: B. Beck, RG
 DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE DEPTH (feet below grade)	DRILLING METHOD: Hollow-stem auger, 10" diameter SAMPLER TYPE: California-modified split-spoon TOTAL DEPTH: 35 feet DEPTH TO WATER: 25 feet		USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL	
				DESCRIPTION	WAS A WELL INSTALLED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> VES <input checked="" type="checkbox"/> GW <input type="checkbox"/> OTHER				
			0	Hand-augered to 5 feet. No asphalt or concrete.				lockable monument casing, mounted, 3 feet above grade with traffic protection	
4/7/9	0		5	ARTIFICIAL FILL: SILTY SAND: dark yellow-brown, loose, damp, fine- to medium-grained.		SM		4" diameter PVC casing	
4/6/6	10		10	Dark greenish gray.					
9/7/9	600 450		15	Moist NATIVE MATERIAL: CLAYEY SAND: dark greenish gray, soft, wet, fine-grained.		SC		4" diameter PVC casing 0.020" slotting	
7/12/15	500 200		20	SILTY SAND: dark greenish gray, medium dense, moist, some clay, fine- to medium-grained. CLAYEY SAND: dark greenish gray, medium stiff, wet, fine-grained.		SM SC			
11/12/14	550 100		25	SILTY SAND: dark greenish gray, medium dense, wet, fine- to medium-grained. CLAYEY SAND: dark greenish gray, medium stiff, wet, fine- to medium-grained. SILTY SAND: dark greenish gray, medium dense, wet, fine- to medium-grained.		SM SC SM			
9/21/17	500 50 10		30	CLAYEY SILT: olive-black, medium stiff, damp.		ML			
			35	SILTY SAND: dark greenish gray, medium dense, wet, fine- to medium-grained.		SM		end cap	



LOG OF EXPLORATORY BORING

SW-2
 PAGE 1 OF 1

PROJECT NO.: 25-0573

LOCATION: Caltrans Site 25-2

Alameda Street and Imperial Highway

Los Angeles, California

DATE DRILLED: July 23, 1992

LOGGED BY: A. Lapostol

APPROVED BY: B. Beck, RG

DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE DEPTH (feet below grade)	DRILLING METHOD: Hollow-stem auger, 10" diameter		USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL	
				SAMPLER TYPE: California-modified split-spoon				WAS A WELL INSTALLED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> VES <input checked="" type="checkbox"/> GW <input type="checkbox"/> OTHER	
				TOTAL DEPTH: 33 feet DEPTH TO WATER: 31 feet					
DESCRIPTION									
			0	Hand-augered to 5 feet. No asphalt or concrete.				0	lockable monument casing, mounted, 3 feet above grade with traffic protection
6/9/10		90	5	ARTIFICIAL FILL: SILTY SAND: olive-black, loose, moist, fine-grained.		SM		5	4" diameter PVC casing
10/9/10		36	10	Dark greenish gray, some clay.				10	
6/7/12		20	15	Grayish green, loose to medium dense.				15	
5/9/17		23	20	NATIVE MATERIAL: SILTY SAND: Dark greenish gray, loose to medium dense, moist, fine-grained.		SM		20	4" diameter PVC casing 0.020" slotted
18/18/25		10	25	Medium dense.				25	
8/28/32		0	30	SANDY CLAY: olive-black, medium stiff, wet, fine- to medium-grained.		CL		30	end cap
			35					35	
			40					40	



LOG OF EXPLORATORY BORING

SW-5

75CS71 10/6/92 X

PROJECT NO.: 25-0573
 LOCATION: Caltrans Site 25-2
 Alameda Street and Imperial Highway
 Los Angeles, California

DATE DRILLED: July 17, 1992
 LOGGED BY: A. Lapostol
 APPROVED BY: B. Beck, RG
 DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE DEPTH (feet below grade)	DRILLING METHOD: Hollow-stem auger, 10" diameter		USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL	
				SAMPLER TYPE: California-modified split-spoon				WAS A WELL INSTALLED?	
				TOTAL DEPTH: 71.5 feet DEPTH TO WATER: 49 feet					
DESCRIPTION									
			0	Hand-augered to 5 feet. No asphalt or concrete.				0	lockable monument casing, mounted, 3 feet above grade with traffic protection
12/15/20	0		5	ARTIFICIAL FILL: SILTY SAND: dusky yellow-brown, medium dense, damp, fine-grained.		SM		5	4" diameter PVC casing
4/9/9	0		10	Moderate brown, loose, moist.				10	
3/5/6	0		15	Wet, very fine-grained.				15	
5/5/8	60		20	NATIVE MATERIAL: SILTY SAND: dark greenish gray, loose, wet, some clay, very fine-grained.		SM		20	
5/7/10	300		25					25	
9/10/17	150		30	Saturated.				30	
7/12/28	100		35	Fine- to medium-grained.				35	
			40					40	4" diameter PVC casing 0.020" slotting



LOG OF EXPLORATORY BORING

MW-7

PAGE 1 OF 2

PROJECT NO.: 25-0573
 LOCATION: Caltrans Site 25-2
 Alameda Street and Imperial Highway
 Los Angeles, California

DATE DRILLED: July 17, 1992
 LOGGED BY: A. Lapostol
 APPROVED BY: B. Beck, RG
 DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: Hollow-stem auger, 10" diameter	USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL	
					SAMPLER TYPE: California-modified split-spoon			TOTAL DEPTH: 71.5 feet DEPTH TO WATER: 49 feet	WAS A WELL INSTALLED?
DESCRIPTION									
11/13/14		300		40	Wet. CLAYEY/SILTY SAND: dark greenish gray, medium dense, wet, very fine-grained.	SM SM			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
4/6/8		12		45	Loose, little or no clay.			<input type="checkbox"/> YES <input checked="" type="checkbox"/> GW <input type="checkbox"/> OTHER	
14/15/18		9		50	SAND: greenish gray, medium dense, saturated, fine- to medium-grained.	SP			
12/18/20		0		55	Medium- to coarse-grained.				
12/15/28		0		60					
15/23/29		1		65					
14/16/20		20		70				4" diameter PVC casing 0.020" slotting	
				75				end cap	
				80					



LOG OF EXPLORATORY BORING

PROJECT NO.: 25-0573
 LOCATION: Caltrans Site 25-2
 Alameda Street and Imperial Highway
 Los Angeles, California

DATE DRILLED: July 20, 1992
 LOGGED BY: A. Lapostol
 APPROVED BY: B. Beck, RG
 DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE DEPTH (feet below grade)	DRILLING METHOD: Hollow-stem auger, 10" diameter SAMPLER TYPE: California-modified split-spoon TOTAL DEPTH: 71.5 feet DEPTH TO WATER: 50 feet		USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL	
				DESCRIPTION	WAS A WELL INSTALLED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> VES <input checked="" type="checkbox"/> GW <input type="checkbox"/> OTHER				
			0	Hand-augered to 5 feet. No asphalt or concrete.				lockable monument casing, mounted, 3 feet above grade with traffic protection	
3/5/6		300	5	ARTIFICIAL FILL: SILTY SAND: grayish black to moderate brown, loose, damp, very fine-grained.		SM		4" diameter PVC casing	
5/8/9		300	10	Medium dark gray, moist.					
6/7/8		40	15	Wet, very fine-grained, some clay. NATIVE MATERIAL CLAY: medium dark gray, soft, wet, some silt.		CL			
5/7/8		250	20	CLAYEY/SILTY SAND: medium dark gray, loose, wet, very fine-grained.		SM			
3/4/5		20	25	SANDY CLAY: grayish black, soft, wet, very fine-grained.		CL			
				SILTY SAND: medium dark gray, loose, wet, fine-grained.		SM			
		40	30	Saturated. CLAYEY SAND: medium dark gray, loose, wet, fine-grained.		SC			
		50		SILTY SAND: medium dark gray, loose, wet, fine-grained.		SM			
		10	35	SAND: light gray, loose to medium dense, moist fine- to medium-grained.		SP			
			40						4" diameter PVC casing 0.020" string



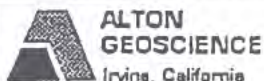
LOG OF EXPLORATORY BORING

MW-8
 PAGE 1 OF 2

PROJECT NO.: 25-0573
 LOCATION: Caltrans Site 25-2
 Alameda Street and Imperial Highway
 Los Angeles, California

DATE DRILLED: July 20, 1992
 LOGGED BY: A. Lapostol
 APPROVED BY: B. Beck, RG
 DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE DEPTH (feet below grade)	DRILLING METHOD: Hollow-stem auger, 10" diameter	USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL	
				SAMPLER TYPE: California-modified split-spoon			TOTAL DEPTH: 71.5 feet DEPTH TO WATER: 50 feet	WAS A WELL INSTALLED?
DESCRIPTION								
11/16/20		30	40	CLAYEY/SILTY SAND: medium dark gray to light gray, medium dense, wet, fine- to very fine-grained.	SW SC		40	4" diameter PVC casing 0.020" slotting end cap
9/12/15		8	45	CLAYEY SAND: dark greenish gray, medium dense, wet, very fine-grained.	SC		45	
12/13/17		0	50	Saturated. SAND: grayish orange, medium dense, saturated, some silt, fine- to medium-grained.	SP		50	
12/13/15		0	55	Grayish orange to light gray.			55	
6/10/15		0	60	Coarse-grained.			60	
20/50		0	65	Greenish gray, medium to dense, medium- to very coarse-grained.			65	
25/50		0	70	Fine gravel.			70	
			75				75	
			80				80	



LOG OF EXPLORATORY BORING

MW-8

PAGE 2 OF 2

PROJECT NO.: 25-0573
 LOCATION: Caltrans Site 25-2
 Alameda Street and Imperial Highway
 Los Angeles, California

DATE DRILLED: July 21, 1992
 LOGGED BY: A. Lapostol
 APPROVED BY: B. Beck, RG
 DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE DEPTH (feet below grade)	DRILLING METHOD: Hollow-stem auger, 12" diameter SAMPLER TYPE: California-modified split-spoon TOTAL DEPTH: 71.5 feet DEPTH TO WATER: 45 feet		USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL	
				DESCRIPTION	WAS A WELL INSTALLED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> VES <input checked="" type="checkbox"/> GW <input type="checkbox"/> OTHER				
			0	Hand-augered to 5 feet. No asphalt or concrete.				lockable monument casing, mounted, 3 feet above grade with traffic protection	
5/11/19	0		5	ARTIFICIAL FILL: SILTY SAND: dusky yellowish brown, medium dense, damp, fine- to medium-grained.		SM		6" diameter PVC casing	
4/4/5	2		10	Dark greenish gray, loose.					
7/8/8	2		15	NATIVE MATERIAL: CLAYEY/SILTY SAND: light olive-gray, loose, moist, very fine-grained.		SC/SM			
9/10/12	90		20	SILTY SAND: dark greenish gray, medium dense, wet, some clay, fine- to very fine-grained.		SM			
5/7/10	200		25	Wet, little or no clay.					
9/10/12	150		30						
11/14/20	60		35	Some clay.					
			40					4" diameter PVC casing 0.020" slotting	



LOG OF EXPLORATORY BORING

MW-9

PROJECT NO.: 25-0573
 LOCATION: Caltrans Site 25-2
 Alameda Street and Imperial Highway
 Los Angeles, California

DATE DRILLED: July 21, 1992
 LOGGED BY: A. Lapostol
 APPROVED BY: B. Beck, RG
 DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	PID (ppm)	SAMPLE DEPTH (feet below grade)	DRILLING METHOD: Hollow-stem auger, 12" diameter SAMPLER TYPE: California-modified split-spoon TOTAL DEPTH: 71.5 feet DEPTH TO WATER: 45 feet		USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL	
				DESCRIPTION	USCS			GRAPHIC LOG	WAS A WELL INSTALLED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> GW <input type="checkbox"/> OTHER
13/17/22			40	SAND: medium light gray, medium dense, moist, fine- to medium-grained.		SP		6" diameter PVC casing 0.020" slotting	
			45	CLAYEY/SILTY SAND: light olive-gray, medium dense, moist, very fine-grained.		SC/SM			
11/19/28			45	Dark greenish gray, wet, decreased clay.					
			50	Olive-black, increased clay.					
10/11/17			50	SAND: dark greenish gray, medium dense, wet, some silt, very fine-grained.		SP			
			55	CLAYEY SILT: olive-black, medium stiff, moist, some very fine-grained sand.		ML			
12/13/15			55	SAND: dark greenish gray, medium dense, wet, fine-grained.		SP			
			60	Saturated.					
12/16/19			60	CLAYEY SILT: olive-black, medium stiff, saturated, some very fine-grained sand.		ML			
			60	SAND: dark greenish gray, medium dense, saturated, fine-grained.		SP			
			65	SANDY SILT: dark greenish gray, medium stiff, saturated, very fine-grained.		ML			
11/15/23			65	SAND: light olive-gray, dense, saturated, some clayey silt, fine- to very coarse-grained.		SW			
			70					end cap	
13/16/27			70						
			75						
			80						



LOG OF EXPLORATORY BORING

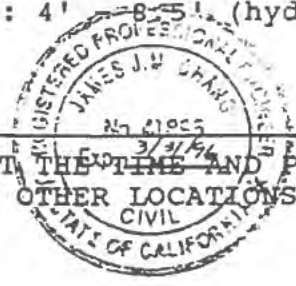
MW-9

PAGE 2 OF 2

BORING LOG - PREPARED BY INTEGRATED ENVIRONMENTAL MANAGEMENT, INC.
 Project: Caltrans Site 25.2
 Date: 6/12,13,15/95 Drilling Method: Brat Rig (Free drop hammer/2.5" ring)
 Location: Alameda/Imperial Lynwood, CA Logged By: JMC Depth to GW: Not Found
 Total Depth: 35'
 BORING NO.: SW-9 (inclined at 35 degrees)

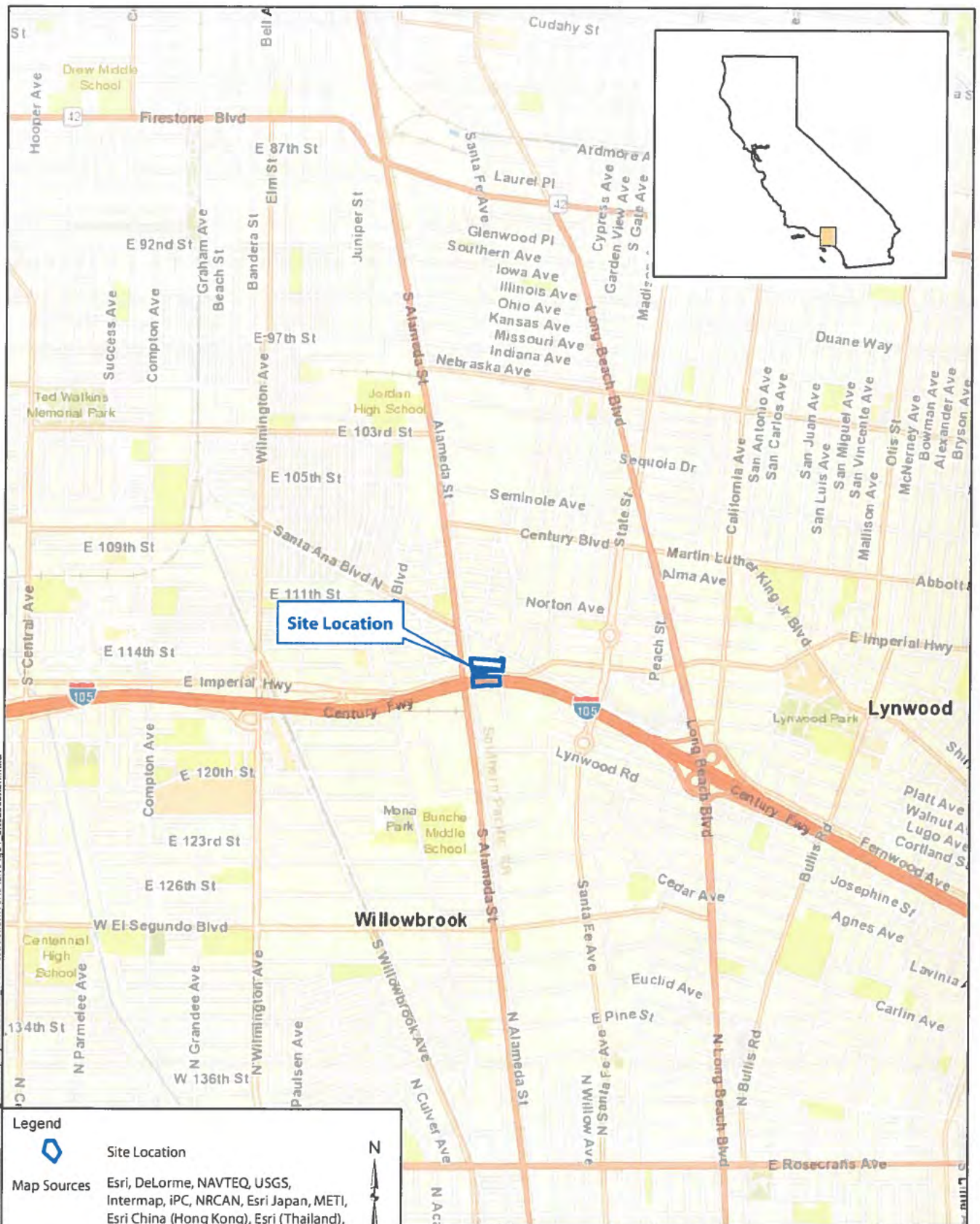
DEPTH	SAMPLE	USCS GROUP SYMBOL	SURFACE TOPOGRAPHY AND CONDITIONS: Soil (toe of slope)		GR AEA STD EICN HG
			BACKFILL INFO.: Well Installation in 12" hole		
DESCRIPTION					
0 -		SM		SILTY SAND: Dark brown, fine to medium grained, moist, medium dense, no odor.	
5 -	X	ML		CLAYEY SILT: Very dark brown, moist, stiff, no odor. At 6', asphalt concrete (AC) debris present	20 ppm
10 -		SM		SILTY SAND: Dark brown, fine to coarse grained, plenty of gravels, moist, dense. (Due to rocky units, no sample was collected.)	
15 -	X	ML	15 25	SANDY SILT: Dark brown, stiff, moist, no odor. (Black plastic sheeting present) At 16', asphalt concrete debris present	35 ppm
20 -	X	SM	13 13	SILTY SAND: Dark brown, fine grained, plenty of asphaltic concrete debris, moist, medium dense, no odor.	15 ppm
25 -	X	SM	13 14	At 25', becoming fine to medium grained Silty Sand with some AC debris, no odor.	35 ppm
30 -	X	ML		SANDY SILT: Dark blue-grey, moist to very moist stiff, slight odor.	50 ppm
35 -	X	ML		At 35', dark blue-grey Sandy Silt, slight odor.	40 ppm
Bottom of boring at 35'					
Well Installation:					
4" well screen (.02" slots): 12' - 35'					
4" blank casing: 0' - 12'					
Sand (#3): 8.5' - 35'					
Bentonite (chips, medium): 4' - 8.5' (hydrated)					

James J. Wang



THIS LOG IS A REPRESENTATION OF CONDITIONS AT THE TIME AND PLACE OF EXCAVATION. WITH THE PASSAGE OF TIME AND AT OTHER LOCATIONS, CONDITIONS MAY DIFFER.

\\sacramento-01\data\GIS\SAC212\SAC212D1Task_Order4\project\201706_WellDestructionWorkPlan\Fig01_SiteLocation.mxd



Legend



Site Location

Map Sources

Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012



0.5 0.25 0 0.5 Miles



Site Location Map

Monitoring Well Destruction and Installation Work Plan
Former Witco Facility
2601 Imperial Highway, Lynwood, California

Figure

1



- Legend**
- + Perched water zone monitoring well
 - + Deep groundwater zone monitoring well
 - ▲ Remediation well
 - ⊕ Horizontal well
 - Horizontal well run
 - Site Boundary

Notes

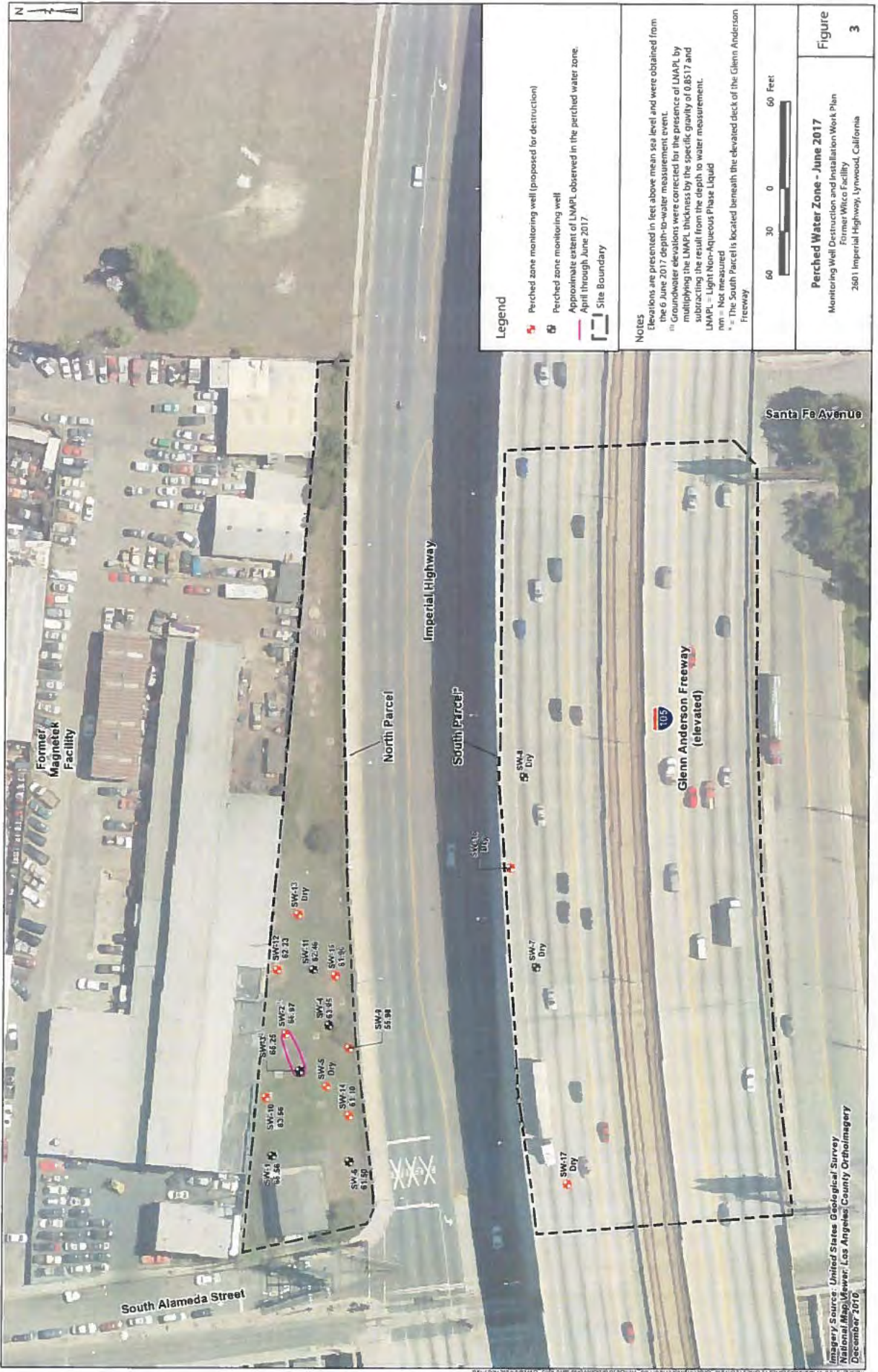
* = The South Parcel is located beneath the elevated deck of the Glenn Anderson Freeway.



Site Plan and Monitoring Well Network
 Monitoring Well Destruction and Installation Work Plan
 Former Witco Facility
 2601 Imperial Highway, Lynwood, California

Figure
2

Imagery Source: United States Geological Survey
 National Map Viewer, Los Angeles County Orthoimagery
 December 2010



Legend

- * Perched zone monitoring well (proposed for destruction)
- * Perched zone monitoring well
- * Approximate extent of LNAPL observed in the perched water zone, April through June 2017
- Site Boundary

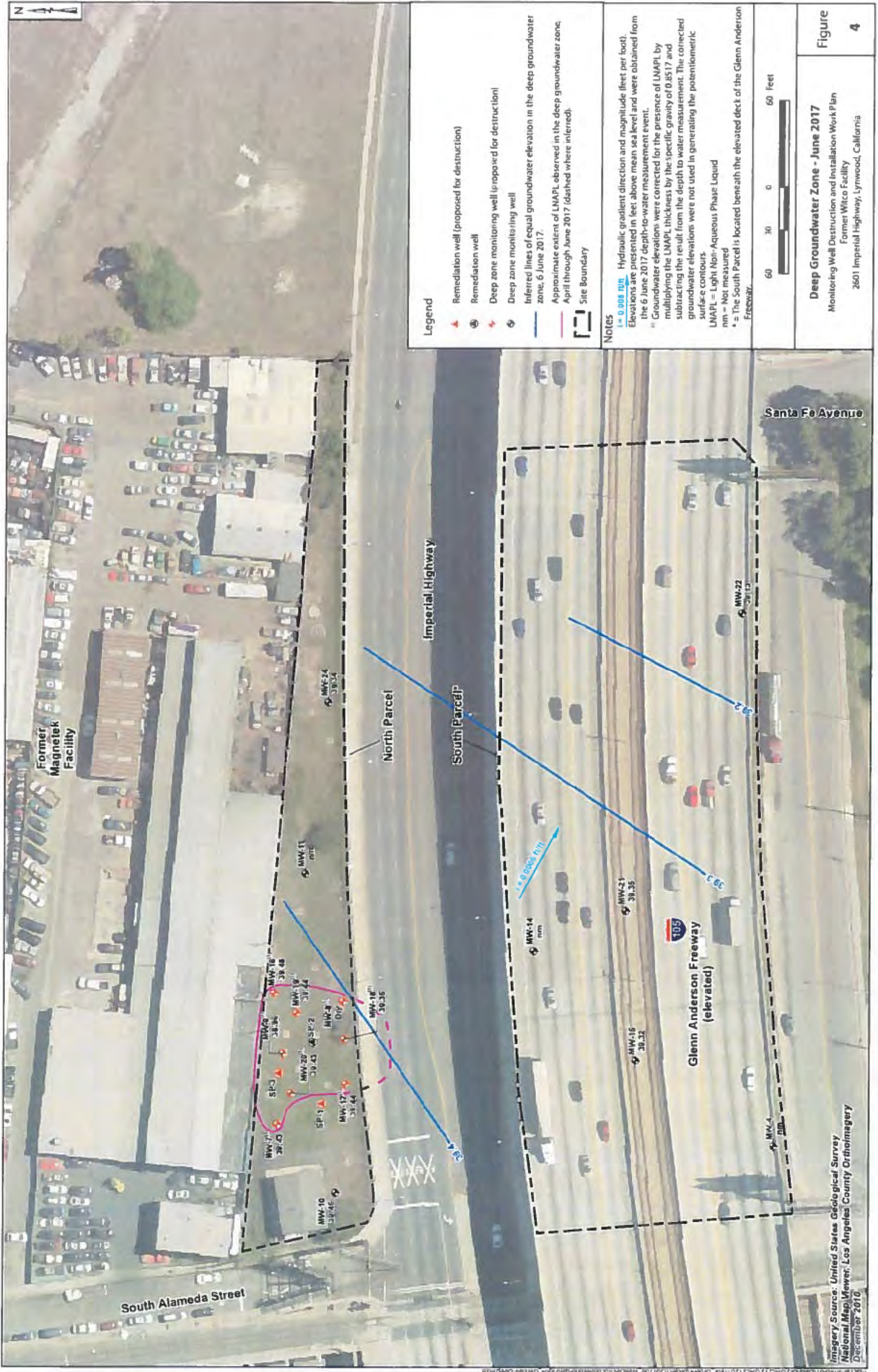
NOTES

Elevations are presented in feet above mean sea level and were obtained from the 6 June 2017 depth-to-water measurement event.
 * Groundwater elevations were corrected for the presence of LNAPL by multiplying the LNAPL thickness by the specific gravity of 0.8517 and subtracting the result from the depth to water measurement.
 LNAPL = Light Non-Aqueous Phase Liquid
 nm = Not measured
 * = The South Parcel is located beneath the elevated deck of the Glenn Anderson Freeway.



Perched Water Zone - June 2017
 Monitoring Well Destruction and Installation Work Plan
 Former Witco Facility
 2801 Imperial Highway, Lynwood, California

Imagery Source: United States Geological Survey
 National Map Viewer, Los Angeles County Orthomageary
 December 2010



Deep Groundwater Zone - June 2017
 Monitoring Well Destruction and Installation Work Plan
 Former Witco Facility
 2601 Imperial Highway, Lynwood, California

TABLE 1
WELL CONSTRUCTION DETAILS
Monitoring Well Network Evaluation and Installation / Destruction Work Plan
Former Witco Facility
Lynwood, California

Location ID	Site	Parcel	Location Type	Groundwater Zone	Screened Interval	Total Well Depth		Well Diameter	Assumed Borehole Diameter	Volume
						ft btoe	inches			
MW-7	Witco	North Parcel	Monitoring well	Deep	40 - 71.5	69.26	4	10	89.94181	
MW-8	Witco	North Parcel	Monitoring well	Deep	40 - 71.5	45.08	4	10	58.54139	
MW-9	Witco	North Parcel	Monitoring well	Deep	40 - 71.5	69.36	6	12	129.7032	
MW-16	Witco	North Parcel	Monitoring well	Deep	40 - 60	53.70	4	10	69.73542	
MW-17	Witco	North Parcel	Monitoring well	Deep	40 - 60	54.60	4	10	70.90417	
MW-18	Witco	North Parcel	Monitoring well	Deep	40 - 60	59.35	4	10	77.07257	
MW-19	Witco	North Parcel	Monitoring well	Deep	40 - 60	55.30	4	10	71.81319	
MW-20	Witco	North Parcel	Monitoring well	Deep	40 - 60	54.57	4	10	70.86521	
SW-2	Witco	North Parcel	Monitoring well	Perched	13.5 - 35	33.20	4	10	43.11389	
SW-5	Witco	North Parcel	Monitoring well	Perched	8 - 33	29.21	4	10	37.93243	
SW-9	Witco	North Parcel	Monitoring well	Perched	12 - 35	35.57	4	10	46.1916	
SW-10	Witco	North Parcel	Monitoring well	Perched	10 - 30	30.10	4	10	39.08819	
SW-12	Witco	North Parcel	Monitoring well	Perched	10 - 30	30.00	4	10	38.95833	
SW-13	Witco	North Parcel	Monitoring well	Perched	10 - 30	30.00	4	10	38.95833	
SW-14	Witco	North Parcel	Monitoring well	Perched	10 - 30	30.10	4	10	39.08819	
SW-15	Witco	North Parcel	Monitoring well	Perched	10 - 30	30.04	4	10	39.01028	
SW-16	Witco	South Parcel	Monitoring well	Perched	10 - 30	30.01	4	10	38.97132	
SW-17	Witco	South Parcel	Monitoring well	Perched	10 - 30	30.00	--	12	56.1	
SP-1	Witco	North Parcel	Remediation well	Remediation	--	44.16	2	10	57.34667	
SP-3	Witco	North Parcel	Remediation well	Remediation	--	44.97	2	10	58.39854	

Notes:

-- = not available

ft bgs = feet below ground surface

ft btoe = feet below top of casing

11 May 2018

Drinking Water Program
5050 Commerce Drive
Baldwin Park, CA 91706

SUBJECT: Application for Well Decommission Permit Former Witco Facility

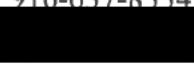
To Whom it may concern:

Geosyntec Consultants, Inc. has provided the following well decommission permit application and the applicable attachments as required by the Los Angeles County Department of Public Health. This work is being overseen by the California Department of Toxic Substances Control. Please find the enclosed check for \$10,380 to cover the permit fees associated with decommissioning 20 wells at the Former Witco Facility at 2601 East Imperial Highway in Lynwood, CA. Associated documents from the site can be found by referencing Envirostore #60000486.

If you have any questions regarding this request, please contact me at (916) 637-8334.

Sincerely,



Garrett Thornton, PG
Geologist
Email: gthornton@geosyntec.com
916-637-8334 (Office)
 (Cell)

Enclosures:

- Permit Application
- Check for \$10,380
- Work Plan Details
- Boring Logs
- Site Maps
- Table of Well Construction Details



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

APPLICATION FOR WELL PERMIT

SERVICE	FEE	QTY	TOTALS
PRODUCTION WELLS			
<input type="checkbox"/> residential drinking water, <input type="checkbox"/> public/municipal, <input type="checkbox"/> irrigation, <input type="checkbox"/> cathodic			
<input type="checkbox"/> Construction	\$ 844.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1103.00	x	= \$
NON-PRODUCTION WELLS <input type="checkbox"/> Construction, <input checked="" type="checkbox"/> Decommission			
<input type="checkbox"/> monitoring, <input type="checkbox"/> piezo, <input type="checkbox"/> injection, <input type="checkbox"/> water extraction, <input type="checkbox"/> sparge, <input type="checkbox"/> test			
each well, first 24 wells	\$ 519.00	x 1	= \$ 519
each additional well starting with the 25 th	\$ 130.00	x	= \$
CPT/HYDROPUNCH/SOIL BORINGS INTO GROUNDWATER (contact the Drinking Water Program for projects of 25 borings or more)			
	\$ 130.00	x	= \$
GEOHERMAL HEAT EXCHANGE WELLS			
	\$ 519.00	x	= \$
WELL SITE PLAN REVIEW			
	\$ 584.00	x	= \$
WATER SUPPLY YIELD EVALUATION commercial facility			
	\$ 1038.00	x	= \$
WATER SUPPLY YIELD EVALUATION residential (1-4 service connections)			
	\$ 844.00	x	= \$
WATER SUPPLY YIELD EVALUATION Public Water Systems (5 or more service connections)			
	\$ 519.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION			
	\$ 519.00	x	= \$
WATER SAMPLING commercial food service facility for USDA certification			
	\$ 714.00	x	= \$

Applications are nontransferable. Field Personnel cannot accept payments. **DO NOT SEND CASH.**
Make checks or money orders payable to:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH

Allow **10** business days for work plan review and response. Cancellations of service requests are subject to a \$65.00 processing fee plus additional plan review fees (hourly rate as applicable).

2001 E. Imperial Hwy Lynwood 90262 ALAMEDA/#58165 6/11/18
 WORK SITE ADDRESS CITY ZIP CROSS STREET/PARCEL# DATE

All application status inquiries should be emailed to waterquality@ph.lacounty.gov with the work site address above.

CONTACT OFFICE		DEPARTMENT STAMP	
SRO148177		DATE:	CHECK # 1116
SITE/PERMIT#	INSPECTOR: <i>Yonas</i>	RECEIPT # IN0574097	AMOUNT: \$ 519

Revised: October 2012

6/12/18
(LW)



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706
 Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/dw/dw_main.htm

Well Permit Application

WORK SITE ADDRESS 2601 E. Imperial Hwy	CITY LYNWOOD	ZIP 90262	NUMBER OF WELLS 1	START DATE 6/21/18
--	------------------------	---------------------	-----------------------------	------------------------------

OWNER CAUSAFRUDA PROT. OF TRANSPORTATION		EMAIL MARIA.SZWENIUKA@DOT.CA.GOV		
ADDRESS 100 S. MAIN ST., 12-222MS-16	CITY LOS ANGELES	ZIP 90012	TELEPHONE 213-897-7695	

DRILLER MOORE TRAINING ASSOCIATES, INC.		PROJECT CONTACT ALLEN BUSHY	C-57 LICENSE NUMBER 506159
ADDRESS 2507 Fresno St.	CITY FRESNO	ZIP 93721	MOBILE
EMAIL ALLEN B @ MOORETRAINING.COM		TELEPHONE 559-978-9566	

CONSULTANT GEOSYNTEC CONSULTANTS		PROJECT CONTACT GARRETT THORNTON	PROJECT MANAGER ARISTINA FORNA
ADDRESS 3043 GOLD CANAL DR. STE. 100	CITY RANCHO CERROSA	ZIP 95670	MOBILE
EMAIL GTHORNTON@GEOSYNTEC.COM		TELEPHONE 916-637-8334	208-301-8320

ATTACH ALL SUPPORTING DOCUMENTS, INCLUDING:

- written narrative describing work plan details
- vertical well diagram detailing depths, sizes, thicknesses, and materials of: (1) the casing, (2) the annular (sanitary) seal, (3) the screens/slotting, and (4) any pertinent geological features
- scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

FOR WELL DECOMMISSION: well construction logs, the method of assessment, type and amount of sealant, and the method of upper seal pressure application (including PSI and time applied)

PRODUCTION WELLS	
<input type="checkbox"/> PUBLIC (MUNICIPAL UTILITY)	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> IRRIGATION	<input type="checkbox"/> CATHODIC PROTECTION
<input type="checkbox"/> GEOTHERMAL HEAT EXCHANGE	
<input type="checkbox"/> OTHER _____	
NAME OF C-57 LICENSEE _____	
SIGNATURE _____	

NON-PRODUCTION WELLS	
<input checked="" type="checkbox"/> MONITORING	<input type="checkbox"/> PIEZOMETER
<input type="checkbox"/> INJECTION	<input type="checkbox"/> WATER EXTRACTION
<input type="checkbox"/> AIR SPARGE	<input type="checkbox"/> TEST HOLE (PRE-PRODUCTION)
<input type="checkbox"/> HYDROPUNCH	<input type="checkbox"/> CONE PENETROMETER (CPT)
<input type="checkbox"/> SOIL BORING INTO GROUNDWATER	
NAME OF APPLICANT GARRETT THORNTON	
SIGNATURE 	

BY SIGNING ABOVE, I HEREBY AGREE TO COMPLY IN EVERY RESPECT WITH ALL THE REGULATIONS, ORDINANCES, AND LAWS OF THE STATE OF CALIFORNIA, THE COUNTY OF LOS ANGELES, THE DEPARTMENT OF PUBLIC HEALTH, AND THE ENVIRONMENTAL HEALTH DRINKING WATER PROGRAM.



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS <i>2601 E. Imperial Hwy</i>	CITY <i>LYNWOOD</i>	ZIP <i>90262</i>	EMAIL ADDRESS FOR WELL PERMIT APPROVAL <i>GTHORNTON@GEASYMTEC.COM</i>
--	------------------------	---------------------	--

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- THIS WELL PERMIT APPROVAL IS LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- NOTIFY THE DRINKING WATER PROGRAM BY EMAIL 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

<input type="checkbox"/> WORK PLAN INCOMPLETE; SUBMIT THE FOLLOWING:	<input type="checkbox"/> WORK PLAN APPROVED Los Angeles County Drinking Water stamp	DATE:	ADDITIONAL APPROVAL CONDITIONS:
---	--	-------	---------------------------------

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: _____	REHS signature _____	DATE ACCEPTED: _____	REHS signature _____
----------------------	----------------------	----------------------	----------------------

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: _____	REHS signature _____	DATE ACCEPTED: _____	REHS signature _____
----------------------	----------------------	----------------------	----------------------

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: _____	REHS signature _____	DATE ACCEPTED: _____	REHS signature _____
----------------------	----------------------	----------------------	----------------------

Attached is the permit to decommission one additional well on the same site as our current well decommission permit SR0144782. Please direct these permits to Yonas Taye. He requested the permits be sent to him, because he is already handling the permit SR0144782 on this site for us.

Please see the attached payment, and documents showing the locations of the well, and the construction details for the well to be destroyed:

MW-4

Thanks,

Garrett

TABLE 5
PROPOSED MONITORING WELL NETWORK
 Monitoring Well Network Evaluation and Installation / Destruction Work Plan
 Former Witco Facility
 Lynwood, California

Location	Parcel	Location Type	Groundwater Zone	Screen Interval ft bgs	Proposed Action	Monitoring Objective
SW-1	North Parcel	Monitoring well	Perched	10 - 31.5	Retain	Dissolved-Phase Monitoring
SW-2	North Parcel	Monitoring well	Perched	13.5 - 35	Destroy	--
SW-3	North Parcel	Monitoring well	Perched	14 - 34	Retain	LNAPL Monitoring
SW-4	North Parcel	Monitoring well	Perched	13 - 33	Retain	Dissolved-Phase Monitoring
SW-5	North Parcel	Monitoring well	Perched	8 - 33	Destroy	--
SW-6	North Parcel	Monitoring well	Perched	10 - 34	Retain	Dissolved-Phase Monitoring
SW-7	South Parcel	Monitoring well	Perched	10 - 33	Retain	Dissolved-Phase Monitoring
SW-8	South Parcel	Monitoring well	Perched	18 - 33	Retain	Dissolved-Phase Monitoring
SW-9	North Parcel	Monitoring well	Perched	12 - 35	Destroy	--
SW-10	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-11	North Parcel	Monitoring well	Perched	10 - 30	Retain	Dissolved-Phase Monitoring
SW-12	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-13	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-14	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-15	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-16	South Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-17	South Parcel	Monitoring well	Perched	10 - 30	Destroy	--
MW-4	South Parcel	Monitoring well	Deep	40 - 71.5	Repair/Replace	Dissolved-Phase Monitoring
MW-6	North Parcel	Monitoring well	Deep	40 - 71.5	Retain	Dissolved-Phase Monitoring
MW-7	North Parcel	Monitoring well	Deep	40 - 71.5	Destroy	--
MW-8	North Parcel	Monitoring well	Deep	40 - 71.5	Destroy	--
MW-8R	North Parcel	Monitoring well	Deep	55 - 65	New Well	LNAPL Monitoring
MW-9	North Parcel	Monitoring well	Deep	40 - 71.5	Destroy	--
MW-10	North Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-11	North Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-14	South Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-15	South Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-16	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-17	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-17R	North Parcel	Monitoring well	Deep	55 - 65	New Well	LNAPL Monitoring
MW-18	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-19	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-20	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--

TABLE 5
PROPOSED MONITORING WELL NETWORK
 Monitoring Well Network Evaluation and Installation / Destruction Work Plan
 Former Witco Facility
 Lynwood, California

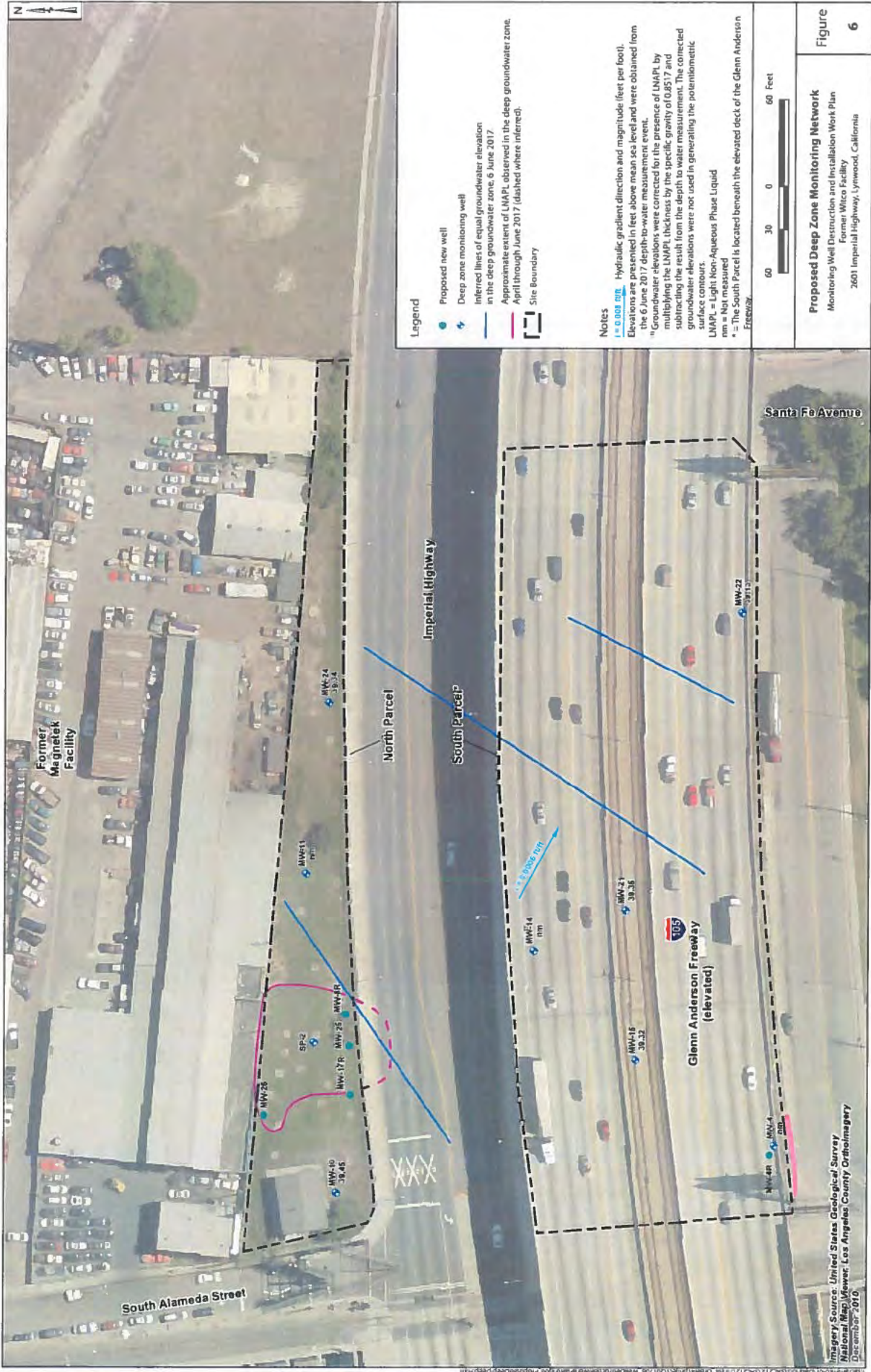
Location	Parcel	Location Type	Groundwater Zone	Screen Interval ft bgs	Proposed Action	Monitoring Objective
MW-21	South Parcel	Monitoring well	Deep	85 - 95	Retain	Dissolved-Phase Monitoring
MW-22	South Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-24	North Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-25	North Parcel	Monitoring well	Deep	40 - 45	New Well	LNAPL Monitoring
MW-26	North Parcel	Monitoring well	Deep	55 - 65	New Well	LNAPL Monitoring
SP-1	North Parcel	Remediation well	Deep	unknown	Destroy	--
SP-2	North Parcel	Remediation well	Deep	40 - 45	Retain	Dissolved-Phase Monitoring
SP-3	North Parcel	Remediation well	Deep	unknown	Destroy	--

Notes:

-- = not applicable

ft bgs = feet below ground surface

LNAPL = light non-aqueous phase liquid



- Legend**
- Proposed new well
 - ⬇ Deep zone monitoring well
 - Inferred lines of equal groundwater elevation in the deep groundwater zone, 6 June 2017
 - Approximate extent of LNAPL observed in the deep groundwater zone, April through June 2017 (dashed where inferred)
 - Site Boundary

Notes

1. Hydraulic gradient direction and magnitude (feet per foot). Elevations are presented in feet above mean sea level and were obtained from the 6 June 2017 depth-to-water measurement event.

2. Groundwater elevations were corrected for the presence of LNAPL by multiplying the LNAPL thickness by the specific gravity of 0.837 and subtracting the result from the depth to water measurement. The corrected groundwater elevations were not used in generating the potentiometric surface contours.

3. LNAPL: Light Non-Aqueous Phase Liquid

4. MW-22 was measured

5. The South Parcel is located beneath the elevated deck of the Glenn Anderson Freeway.



Proposed Deep Zone Monitoring Network
 Monitoring Well Destruction and Installation Work Plan
 Former Wico Facility
 2601 Imperial Highway, Lynwood, California

Figure 6

Imagery Source: United States Geological Survey
 National Map Viewer, Los Angeles County Orthoimagery
 December 2010



ENVIRONMENTAL HEALTH

Drinking Water Program



COUNTY OF LOS ANGELES
Public Health

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

APPLICATION FOR WELL PERMIT

SERVICE	FEE	QTY	TOTALS
PRODUCTION WELLS			
<input type="checkbox"/> residential drinking water, <input type="checkbox"/> public/municipal, <input type="checkbox"/> irrigation, <input type="checkbox"/> cathodic			
<input type="checkbox"/> Construction	\$ 844.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1103.00	x	= \$
NON-PRODUCTION WELLS <input type="checkbox"/> Construction, <input type="checkbox"/> Decommission			
<input checked="" type="checkbox"/> monitoring, <input type="checkbox"/> piezo, <input type="checkbox"/> injection, <input type="checkbox"/> water extraction, <input type="checkbox"/> sparge, <input type="checkbox"/> test			
each well, first 24 wells	\$ 519.00	x 5	= \$ 2595
each additional well starting with the 25 th	\$ 130.00	x	= \$
CPT/HYDROPUNCH/SOIL BORINGS INTO GROUNDWATER (contact the Drinking Water Program for projects of 25 borings or more)	\$ 130.00	x	= \$
GEOTHERMAL HEAT EXCHANGE WELLS	\$ 519.00	x	= \$
WELL SITE PLAN REVIEW	\$ 584.00	x	= \$
WATER SUPPLY YIELD EVALUATION commercial facility	\$ 1038.00	x	= \$
WATER SUPPLY YIELD EVALUATION residential (1-4 service connections)	\$ 844.00	x	= \$
WATER SUPPLY YIELD EVALUATION Public Water Systems (5 or more service connections)	\$ 519.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING commercial food service facility for USDA certification	\$ 714.00	x	= \$

Applications are nontransferable. Field Personnel cannot accept payments. **DO NOT SEND CASH.**
Make checks or money orders payable to:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH

Allow **10** business days for work plan review and response. Cancellations of service requests are subject to a \$65.00 processing fee plus additional plan review fees (hourly rate as applicable).

2601 E. Imperial Hwy Lynwood 90262 Alameda/#58115 6/11/18
WORK SITE ADDRESS CITY ZIP CROSS STREET/PARCEL# DATE

All application status inquiries should be emailed to waterquality@ph.lacounty.gov with the work site address above.

CONTACT OFFICE		DEPARTMENT STAMP	
SR0148179 - 1 well (MW-4R)		DATE:	CHECK # 1115
SR0148180 - 4 wells		RECEIPT # IN0574100	AMOUNT: \$ 2595.00
SITE/PERMIT#	INSPECTOR: <i>Yonas</i>		

Revised: October 2012

6/12/18
LMW



ENVIRONMENTAL HEALTH

Drinking Water Program



COUNTY OF LOS ANGELES
Public Health

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Application

WORK SITE ADDRESS 2601 E. IMPERIAL HWY	CITY LYNWOOD	ZIP 90262	NUMBER OF WELLS 5	START DATE 6/24/18
--	------------------------	---------------------	-----------------------------	------------------------------

OWNER CALIFORNIA DEPT. OF TRANSPORTATION		EMAIL MARSA.SZWENJASKA@DOT.CA.GOV		
ADDRESS 100 S. MAIN ST., 12-221 MS-16	CITY LOS ANGELES	ZIP 90012	TELEPHONE 213-897-7695	

DRILLER GREGG DRILLING & TESTING INC.		PROJECT CONTACT MICHAEL CRAMER	C-57 LICENSE NUMBER 485165
ADDRESS 950 HOWE ROAD		CITY MANTENIZ	ZIP 94553
EMAIL MCRAMER@GREGGDRILLING.COM		TELEPHONE 925-313-5800	MOBILE 909-663-7488

CONSULTANT GEOSYNTEL CONSULTANTS		PROJECT CONTACT GARRETT THORMAN	PROJECT MANAGER ARTHUR FERNA
ADDRESS 3043 CORD CANYON PR. STE 100		CITY RANCHO CERRITA	ZIP 95670
EMAIL GTHORMAN@GEOSYNTEL.COM		TELEPHONE 916-637-8334	M [REDACTED]

ATTACH ALL SUPPORTING DOCUMENTS, INCLUDING:

- written narrative describing work plan details
- vertical well diagram detailing depths, sizes, thicknesses, and materials of: (1) the casing, (2) the annular (sanitary) seal, (3) the screens/slotting, and (4) any pertinent geological features
- scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

FOR WELL DECOMMISSION: well construction logs, the method of assessment, type and amount of sealant, and the method of upper seal pressure application (including PSI and time applied)

PRODUCTION WELLS	
<input type="checkbox"/> PUBLIC (MUNICIPAL UTILITY)	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> IRRIGATION	<input type="checkbox"/> CATHODIC PROTECTION
<input type="checkbox"/> GEOTHERMAL HEAT EXCHANGE	
<input type="checkbox"/> OTHER _____	
NAME OF C-57 LICENSEE	
SIGNATURE	

NON-PRODUCTION WELLS	
<input checked="" type="checkbox"/> MONITORING	<input type="checkbox"/> PIEZOMETER
<input type="checkbox"/> INJECTION	<input type="checkbox"/> WATER EXTRACTION
<input type="checkbox"/> AIR SPARGE	<input type="checkbox"/> TEST HOLE (PRE-PRODUCTION)
<input type="checkbox"/> HYDROPUNCH	<input type="checkbox"/> CONE PENETROMETER (CPT)
<input type="checkbox"/> SOIL BORING INTO GROUNDWATER	
NAME OF APPLICANT	
GARRETT THORMAN	
SIGNATURE	

BY SIGNING ABOVE, I HEREBY AGREE TO COMPLY IN EVERY RESPECT WITH ALL THE REGULATIONS, ORDINANCES, AND LAWS OF THE STATE OF CALIFORNIA, THE COUNTY OF LOS ANGELES, THE DEPARTMENT OF PUBLIC HEALTH, AND THE ENVIRONMENTAL HEALTH DRINKING WATER PROGRAM.



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS <i>2601 E. Imperial Hwy</i>	CITY <i>LYNNWOOD</i>	ZIP <i>90242</i>	EMAIL ADDRESS FOR WELL PERMIT APPROVAL <i>GTHORNTON@GEOSYNTEC.COM</i>
--	-------------------------	---------------------	--

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- THIS WELL PERMIT APPROVAL IS LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- NOTIFY THE DRINKING WATER PROGRAM BY EMAIL 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

<input type="checkbox"/> WORK PLAN INCOMPLETE; SUBMIT THE FOLLOWING:	<input type="checkbox"/> WORK PLAN APPROVED Los Angeles County Drinking Water stamp	DATE: ADDITIONAL APPROVAL CONDITIONS:
---	--	--

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

Attached is the permit to install 5 new wells on the same site as our current well decommission permit SR0144782. Please direct these permits to Yonas Taye. He requested the permits be sent to him, because he is already handling the permit SR0144782 on this site for us.

Please see the attached payment, and documents showing the locations of the wells, and the construction details for the five wells to be installed:

MW-4R SR0148179

MW-8R)
MW-17R)
MW-25)
MW-26) SR0148180

Thanks,
Garrett

TABLE 5
PROPOSED MONITORING WELL NETWORK
 Monitoring Well Network Evaluation and Installation / Destruction Work Plan
 Former Witco Facility
 Lynwood, California

Location	Parcel	Location Type	Groundwater Zone	Screen Interval ft bgs	Proposed Action	Monitoring Objective
SW-1	North Parcel	Monitoring well	Perched	10 - 31.5	Retain	Dissolved-Phase Monitoring
SW-2	North Parcel	Monitoring well	Perched	13.5 - 35	Destroy	--
SW-3	North Parcel	Monitoring well	Perched	14 - 34	Retain	LNAPL Monitoring
SW-4	North Parcel	Monitoring well	Perched	13 - 33	Retain	Dissolved-Phase Monitoring
SW-5	North Parcel	Monitoring well	Perched	8 - 33	Destroy	--
SW-6	North Parcel	Monitoring well	Perched	10 - 34	Retain	Dissolved-Phase Monitoring
SW-7	South Parcel	Monitoring well	Perched	10 - 33	Retain	Dissolved-Phase Monitoring
SW-8	South Parcel	Monitoring well	Perched	18 - 33	Retain	Dissolved-Phase Monitoring
SW-9	North Parcel	Monitoring well	Perched	12 - 35	Destroy	--
SW-10	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-11	North Parcel	Monitoring well	Perched	10 - 30	Retain	Dissolved-Phase Monitoring
SW-12	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-13	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-14	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-15	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-16	South Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-17	South Parcel	Monitoring well	Perched	10 - 30	Destroy	--
MW-4	South Parcel	Monitoring well	Deep	40 - 71.5	Repair/Replace	Dissolved-Phase Monitoring
MW-6	North Parcel	Monitoring well	Deep	40 - 71.5	Retain	Dissolved-Phase Monitoring
MW-7	North Parcel	Monitoring well	Deep	40 - 71.5	Destroy	--
MW-8	North Parcel	Monitoring well	Deep	40 - 71.5	Destroy	--
MW-8R	North Parcel	Monitoring well	Deep	55 - 65	New Well	LNAPL Monitoring
MW-9	North Parcel	Monitoring well	Deep	40 - 71.5	Destroy	--
MW-10	North Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-11	North Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-14	South Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-15	South Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-16	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-17	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-17R	North Parcel	Monitoring well	Deep	55 - 65	New Well	LNAPL Monitoring
MW-18	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-19	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-20	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--

TABLE 5
PROPOSED MONITORING WELL NETWORK
 Monitoring Well Network Evaluation and Installation / Destruction Work Plan
 Former Witco Facility
 Lynwood, California

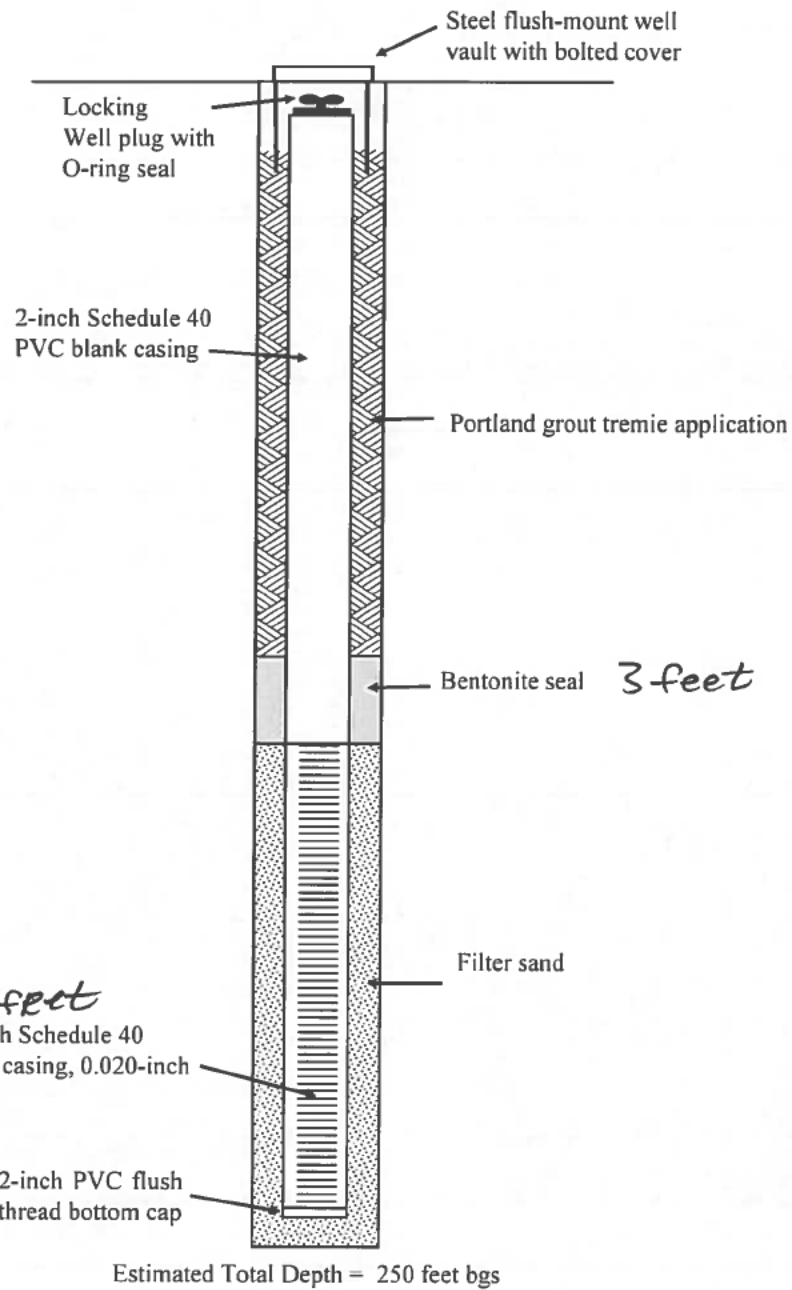
Location	Parcel	Location Type	Groundwater Zone	Screen Interval ft bgs	Proposed Action	Monitoring Objective
MW-21	South Parcel	Monitoring well	Deep	85 - 95	Retain	Dissolved-Phase Monitoring
MW-22	South Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-24	North Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-25	North Parcel	Monitoring well	Deep	40 - 45	New Well	LNAPL Monitoring
MW-26	North Parcel	Monitoring well	Deep	55 - 65	New Well	LNAPL Monitoring
SP-1	North Parcel	Remediation well	Deep	unknown	Destroy	--
SP-2	North Parcel	Remediation well	Deep	40 - 45	Retain	Dissolved-Phase Monitoring
SP-3	North Parcel	Remediation well	Deep	unknown	Destroy	--

Notes:

-- = not applicable

ft bgs = feet below ground surface

LNAPL = light non-aqueous phase liquid



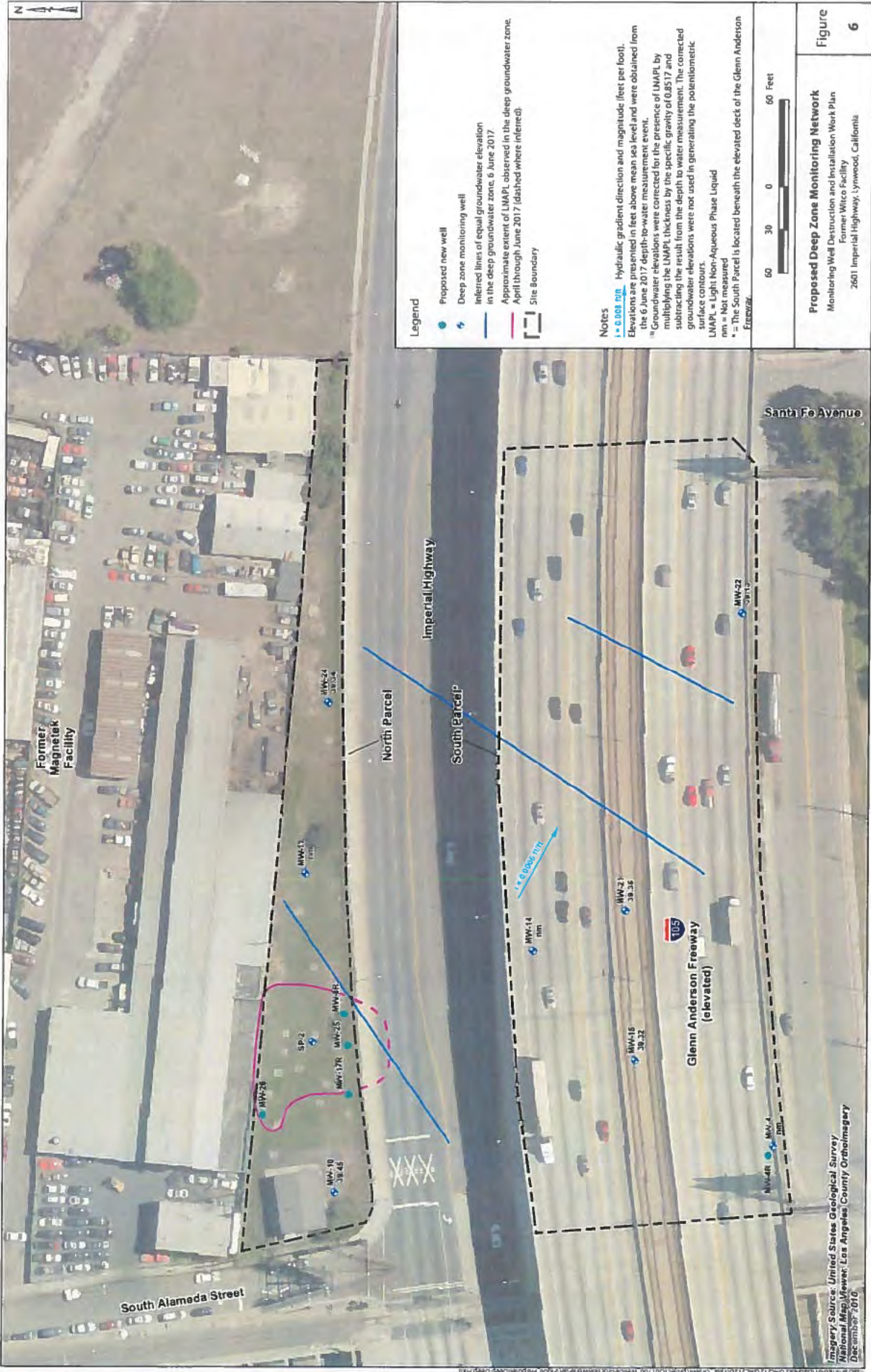
Notes:
 bgs – below ground surface
 Actual depths will be determined based on field conditions during installation.

Figure 4
 Typical Monitoring Well Construction Diagram

June 2018
 2018

Caltrans Witco Site
 Lynwood, California

Geosyntec[®]
 consultants



- Legend**
- Proposed new well
 - ➔ Deep zone monitoring well
 - Inferred lines of equal groundwater elevation in the deep groundwater zone, 6 June 2017
 - Approximate extent of LMAPL observed in the deep groundwater zone, April through June 2017 (dashed where inferred)
 - ⬡ Site Boundary

Notes

1 = 0.006 ft/ft Hydraulic gradient direction and magnitude (feet per foot). Elevations are presented in feet above mean sea level and were obtained from the 6 June 2017 depth-to-water measurement event.

➔ Groundwater elevations were corrected for the presence of LMAPL by multiplying the LMAPL thickness by the specific gravity of 0.8317 and subtracting the result from the depth to water measurement. The corrected groundwater elevations were not used in generating the potentiometric surface contours.

LMAPL = Light Non-Aqueous Phase Liquid

nm = Not Measured

* = The South Parcel is located beneath the elevated deck of the Glenn Anderson Freeway.



Proposed Deep Zone Monitoring Network
 Monitoring Well Destruction and Installation Work Plan
 Former Witco Facility
 2601 Imperial Highway, Lynwood, California

Figure 6

Imagery Source: United States Geological Survey
 National Map Viewer, Los Angeles County Orthimagery
 December 2010



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

APPLICATION FOR WELL PERMIT

SERVICE	FEE	QTY	TOTALS
PRODUCTION WELLS			
<input type="checkbox"/> residential drinking water, <input type="checkbox"/> public/municipal, <input type="checkbox"/> irrigation, <input type="checkbox"/> cathodic			
<input type="checkbox"/> Construction	\$ 844.00	x	= \$

<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1103.00	x	= \$
NON-PRODUCTION WELLS <input type="checkbox"/> Construction, <input type="checkbox"/> Decommission			
<input checked="" type="checkbox"/> monitoring, <input type="checkbox"/> piezo, <input type="checkbox"/> injection, <input type="checkbox"/> water extraction, <input type="checkbox"/> sparge, <input type="checkbox"/> test			
each well, first 24 wells	\$ 519.00	x 5	= \$ 2595

each additional well starting with the 25 th	\$ 130.00	x	= \$
CPT/HYDROPUNCH/SOIL BORINGS INTO GROUNDWATER			
(contact the Drinking Water Program for projects of 25 borings or more)	\$ 130.00	x	= \$
GEOHERMAL HEAT EXCHANGE WELLS			
	\$ 519.00	x	= \$
WELL SITE PLAN REVIEW			
	\$ 584.00	x	= \$
WATER SUPPLY YIELD EVALUATION			
commercial facility	\$ 1038.00	x	= \$
WATER SUPPLY YIELD EVALUATION			
residential (1-4 service connections)	\$ 844.00	x	= \$
WATER SUPPLY YIELD EVALUATION			
Public Water Systems (5 or more service connections)	\$ 519.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION			
	\$ 519.00	x	= \$
WATER SAMPLING			
commercial food service facility for USDA certification	\$ 714.00	x	= \$

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LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH

Allow **10** business days for work plan review and response. Cancellations of service requests are subject to a \$65.00 processing fee plus additional plan review fees (hourly rate as applicable).

2601 E. Imperial Hwy Lynwood 90262 Alameda/#5815 6/11/18
WORK SITE ADDRESS CITY ZIP CROSS STREET/PARCEL# DATE

All application status inquiries should be emailed to waterquality@ph.lacounty.gov with the work site address above.

CONTACT OFFICE		DEPARTMENT STAMP	
SR0148179 - 1 well (MW-4R)		DATE:	CHECK # 1115
SR0148180 - 4 wells		RECEIPT # IN0574100	AMOUNT: \$ 2595.00
SITE/PERMIT#	INSPECTOR: <i>Yonas</i>		

Revised: October 2012

6/12/18
LMW



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Drinking Water Program



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http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Application

WORK SITE ADDRESS 2601 E. IMPERIAL HWY	CITY LYNWOOD	ZIP 90262	NUMBER OF WELLS 5	START DATE 6/24/18
--	------------------------	---------------------	-----------------------------	------------------------------

OWNER CALIFORNIA DEPT. OF TRANSPORTATION		EMAIL MARSA.SZWENJASKA@DOT.CA.GOV		
ADDRESS 100 S. MAIN ST., 12-22/MS-16	CITY LOS ANGELES	ZIP 90012	TELEPHONE 213-897-7695	

DRILLER GREGG DRILLING & TESTING INC.		PROJECT CONTACT MICHAEL CRAMER	C-57 LICENSE NUMBER 485165
ADDRESS 950 HOWE ROAD		CITY MANTENIZ	ZIP 94553
EMAIL MCRAMER@GREGGDRILLING.COM		TELEPHONE 925-313-5800	MOBILE [REDACTED]

CONSULTANT GEOSYNTEL CONSULTANTS		PROJECT CONTACT GARRETT THORMAN	PROJECT MANAGER ARTHUR FERNA
ADDRESS 3043 CORD CANYON PR. STE 100		CITY RANCHO CERRITA	ZIP 95670
EMAIL GTHORMAN@GEOSYNTEL.COM		TELEPHONE 916-637-8334	MOBILE [REDACTED]

ATTACH ALL SUPPORTING DOCUMENTS, INCLUDING:

- written narrative describing work plan details
- vertical well diagram detailing depths, sizes, thicknesses, and materials of: (1) the casing, (2) the annular (sanitary) seal, (3) the screens/slotting, and (4) any pertinent geological features
- scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

FOR WELL DECOMMISSION: well construction logs, the method of assessment, type and amount of sealant, and the method of upper seal pressure application (including PSI and time applied)

PRODUCTION WELLS	
<input type="checkbox"/> PUBLIC (MUNICIPAL UTILITY)	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> IRRIGATION	<input type="checkbox"/> CATHODIC PROTECTION
<input type="checkbox"/> GEOTHERMAL HEAT EXCHANGE	
<input type="checkbox"/> OTHER _____	
NAME OF C-57 LICENSEE	
SIGNATURE	

NON-PRODUCTION WELLS	
<input checked="" type="checkbox"/> MONITORING	<input type="checkbox"/> PIEZOMETER
<input type="checkbox"/> INJECTION	<input type="checkbox"/> WATER EXTRACTION
<input type="checkbox"/> AIR SPARGE	<input type="checkbox"/> TEST HOLE (PRE-PRODUCTION)
<input type="checkbox"/> HYDROPUNCH	<input type="checkbox"/> CONE PENETROMETER (CPT)
<input type="checkbox"/> SOIL BORING INTO GROUNDWATER	
NAME OF APPLICANT	
GARRETT THORMAN	
SIGNATURE	

BY SIGNING ABOVE, I HEREBY AGREE TO COMPLY IN EVERY RESPECT WITH ALL THE REGULATIONS, ORDINANCES, AND LAWS OF THE STATE OF CALIFORNIA, THE COUNTY OF LOS ANGELES, THE DEPARTMENT OF PUBLIC HEALTH, AND THE ENVIRONMENTAL HEALTH DRINKING WATER PROGRAM.



ENVIRONMENTAL HEALTH

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http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS <i>2601 E. Imperial Hwy</i>	CITY <i>LYNNWOOD</i>	ZIP <i>90242</i>	EMAIL ADDRESS FOR WELL PERMIT APPROVAL <i>GTHORNTON@GEOSYNTEC.COM</i>
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- NOTIFY THE DRINKING WATER PROGRAM BY EMAIL 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

<input type="checkbox"/> WORK PLAN INCOMPLETE; SUBMIT THE FOLLOWING:	<input type="checkbox"/> WORK PLAN APPROVED Los Angeles County Drinking Water stamp	DATE: ADDITIONAL APPROVAL CONDITIONS:
---	--	--

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT


DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature

Attached is the permit to install 5 new wells on the same site as our current well decommission permit SR0144782. Please direct these permits to Yonas Taye. He requested the permits be sent to him, because he is already handling the permit SR0144782 on this site for us.

Please see the attached payment, and documents showing the locations of the wells, and the construction details for the five wells to be installed:

MW-4R SR0148179

MW-8R  SR0148180

MW-17R

MW-25

MW-26

Thanks,

Garrett

TABLE 5
PROPOSED MONITORING WELL NETWORK
 Monitoring Well Network Evaluation and Installation / Destruction Work Plan
 Former Witco Facility
 Lynwood, California

Location	Parcel	Location Type	Groundwater Zone	Screen Interval ft bgs	Proposed Action	Monitoring Objective
SW-1	North Parcel	Monitoring well	Perched	10 - 31.5	Retain	Dissolved-Phase Monitoring
SW-2	North Parcel	Monitoring well	Perched	13.5 - 35	Destroy	--
SW-3	North Parcel	Monitoring well	Perched	14 - 34	Retain	LNAPL Monitoring
SW-4	North Parcel	Monitoring well	Perched	13 - 33	Retain	Dissolved-Phase Monitoring
SW-5	North Parcel	Monitoring well	Perched	8 - 33	Destroy	--
SW-6	North Parcel	Monitoring well	Perched	10 - 34	Retain	Dissolved-Phase Monitoring
SW-7	South Parcel	Monitoring well	Perched	10 - 33	Retain	Dissolved-Phase Monitoring
SW-8	South Parcel	Monitoring well	Perched	18 - 33	Retain	Dissolved-Phase Monitoring
SW-9	North Parcel	Monitoring well	Perched	12 - 35	Destroy	--
SW-10	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-11	North Parcel	Monitoring well	Perched	10 - 30	Retain	Dissolved-Phase Monitoring
SW-12	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-13	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-14	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-15	North Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-16	South Parcel	Monitoring well	Perched	10 - 30	Destroy	--
SW-17	South Parcel	Monitoring well	Perched	10 - 30	Destroy	--
MW-4	South Parcel	Monitoring well	Deep	40 - 71.5	Repair/Replace	Dissolved-Phase Monitoring
MW-6	North Parcel	Monitoring well	Deep	40 - 71.5	Retain	Dissolved-Phase Monitoring
MW-7	North Parcel	Monitoring well	Deep	40 - 71.5	Destroy	--
MW-8	North Parcel	Monitoring well	Deep	40 - 71.5	Destroy	--
MW-8R	North Parcel	Monitoring well	Deep	55 - 65	New Well	LNAPL Monitoring
MW-9	North Parcel	Monitoring well	Deep	40 - 71.5	Destroy	--
MW-10	North Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-11	North Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-14	South Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-15	South Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-16	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-17	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-17R	North Parcel	Monitoring well	Deep	55 - 65	New Well	LNAPL Monitoring
MW-18	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-19	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--
MW-20	North Parcel	Monitoring well	Deep	40 - 60	Destroy	--

TABLE 5
PROPOSED MONITORING WELL NETWORK
 Monitoring Well Network Evaluation and Installation / Destruction Work Plan
 Former Witco Facility
 Lynwood, California

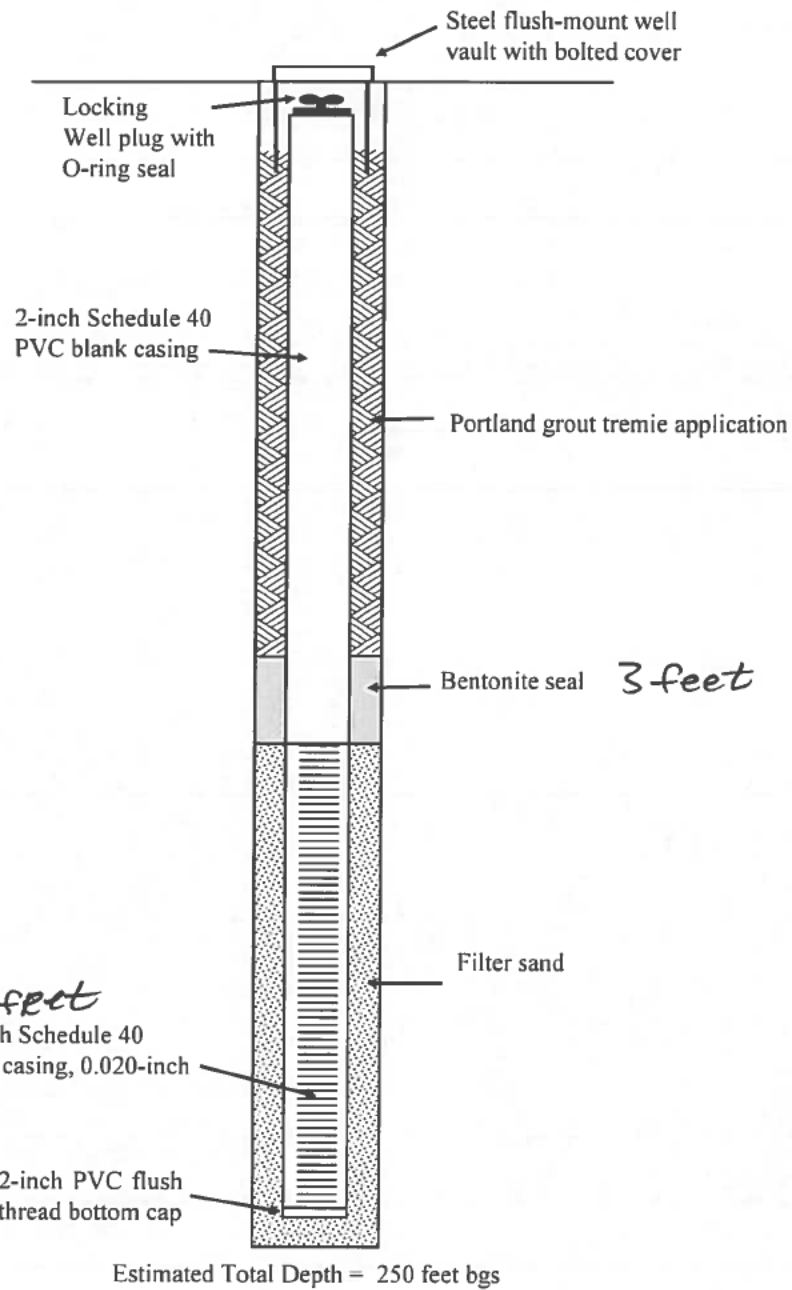
Location	Parcel	Location Type	Groundwater Zone	Screen Interval ft bgs	Proposed Action	Monitoring Objective
MW-21	South Parcel	Monitoring well	Deep	85 - 95	Retain	Dissolved-Phase Monitoring
MW-22	South Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-24	North Parcel	Monitoring well	Deep	40 - 60	Retain	Dissolved-Phase Monitoring
MW-25	North Parcel	Monitoring well	Deep	40 - 45	New Well	LNAPL Monitoring
MW-26	North Parcel	Monitoring well	Deep	55 - 65	New Well	LNAPL Monitoring
SP-1	North Parcel	Remediation well	Deep	unknown	Destroy	--
SP-2	North Parcel	Remediation well	Deep	40 - 45	Retain	Dissolved-Phase Monitoring
SP-3	North Parcel	Remediation well	Deep	unknown	Destroy	--

Notes:

-- = not applicable

ft bgs = feet below ground surface

LNAPL = light non-aqueous phase liquid



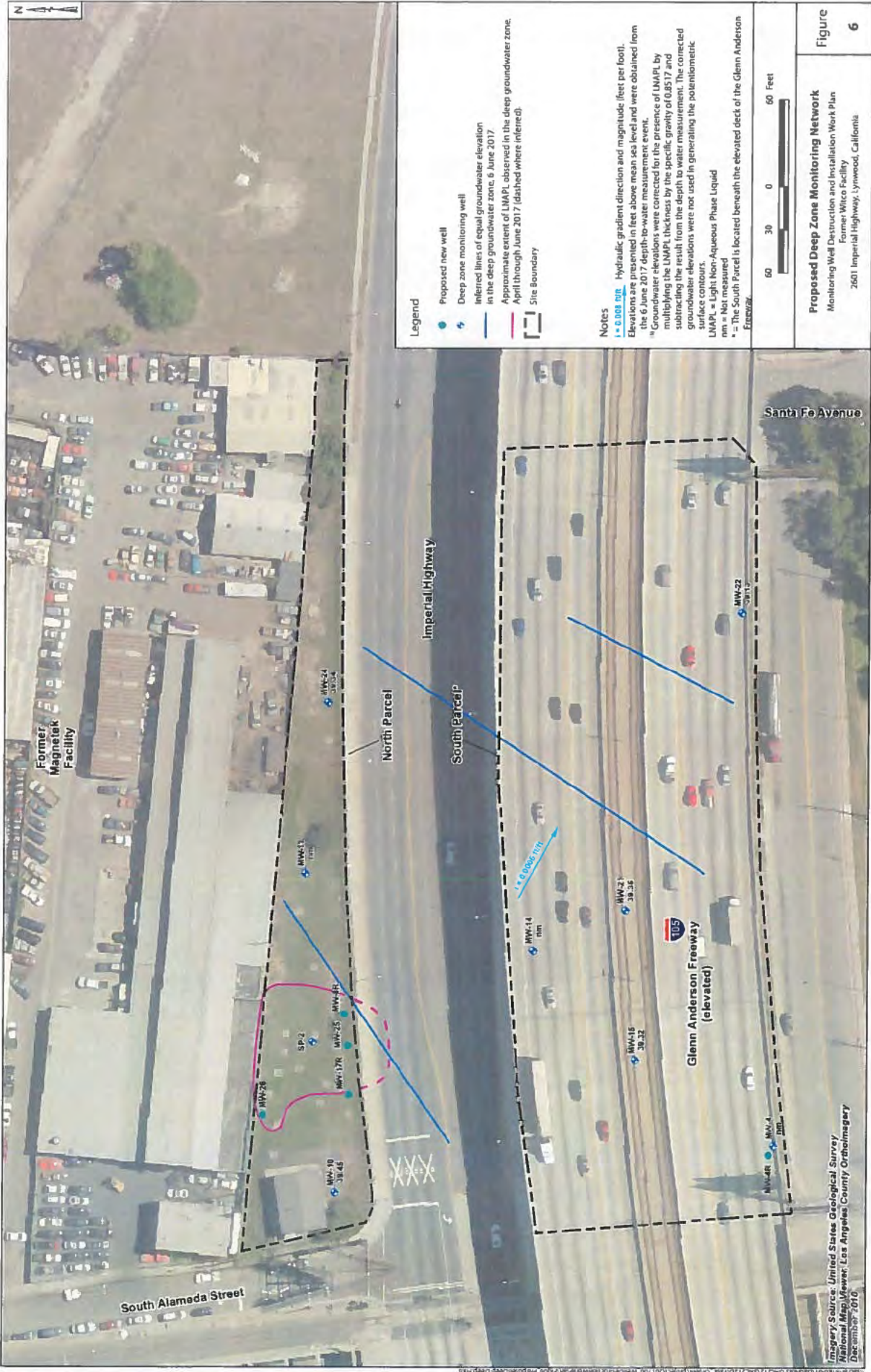
Notes:
 bgs – below ground surface
 Actual depths will be determined based on field conditions during installation.

Figure 4
 Typical Monitoring Well Construction Diagram

June 2018
 2018

Caltrans Witco Site
 Lynwood, California

Geosyntec[®]
 consultants



- Legend**
- Proposed new well
 - ➔ Deep zone monitoring well
 - Inferred lines of equal groundwater elevation in the deep groundwater zone, 6 June 2017
 - Approximate extent of LMARL observed in the deep groundwater zone, April through June 2017 (dashed where inferred)
 - ⬠ Site Boundary

Notes

1 = 0.006 ft/ft Hydraulic gradient direction and magnitude (feet per foot). Elevations are presented in feet above mean sea level and were obtained from the 6 June 2017 depth-to-water measurement event.

➔ Deep zone monitoring wells were corrected for the presence of LMARL by multiplying the LMARL thickness by the specific gravity of 0.8317 and subtracting the result from the depth to water measurement. The corrected groundwater elevations were not used in generating the potentiometric surface contours.

LMARL = Light Non-Aqueous Phase Liquid

mw = Not monitored

* = The South Parcel is located beneath the elevated deck of the Glenn Anderson Freeway.



Proposed Deep Zone Monitoring Network
 Monitoring Well Destruction and Installation Work Plan
 Former Witco Facility
 2601 Imperial Highway, Lynwood, California

Figure 6

Imagery Source: United States Geological Survey
 National Map Viewer, Los Angeles County Orthoimagery
 December 2010



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

APPLICATION FOR WELL PERMIT

SERVICE	FEE	QTY	TOTALS
PRODUCTION WELLS			
<input type="checkbox"/> residential drinking water, <input type="checkbox"/> public/municipal, <input type="checkbox"/> irrigation, <input type="checkbox"/> cathodic			
<input type="checkbox"/> Construction	\$ 844.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1103.00	x	= \$
NON-PRODUCTION WELLS <input type="checkbox"/> Construction, <input type="checkbox"/> Decommission			
<input type="checkbox"/> monitoring, <input type="checkbox"/> piezo, <input type="checkbox"/> injection, <input type="checkbox"/> water extraction, <input type="checkbox"/> sparge, <input type="checkbox"/> test			
each well, first 24 wells	\$ 519.00	x	= \$
each additional well starting with the 25 th	\$ 130.00	x	= \$
CPT/HYDROPUNCH/SOIL BORINGS INTO GROUNDWATER (contact the Drinking Water Program for projects of 25 borings or more)	\$ 130.00	x	= \$
GEOTHERMAL HEAT EXCHANGE WELLS	\$ 519.00	x	= \$
WELL SITE PLAN REVIEW	\$ 584.00	x	= \$
WATER SUPPLY YIELD EVALUATION commercial facility	\$ 1038.00	x	= \$
WATER SUPPLY YIELD EVALUATION residential (1-4 service connections)	\$ 844.00	x 1	= \$ 844.00
WATER SUPPLY YIELD EVALUATION Public Water Systems (5 or more service connections)	\$ 519.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING commercial food service facility for USDA certification	\$ 714.00	x	= \$

Applications are nontransferable. Field Personnel cannot accept payments. DO NOT SEND CASH.
Make checks or money orders payable to:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH

Allow 10 business days for work plan review and response. Cancellations of service requests are subject to a \$65.00 processing fee plus additional plan review fees (hourly rate as applicable).

APN 5869-020-005 *Tujunga* *Stuntanel* 91042 5869-020-005 6-18-18
 WORK SITE ADDRESS CITY ZIP CROSS STREET/PARCEL# DATE

All application status inquiries should be emailed to waterquality@ph.lacounty.gov with the work site address above.

CONTACT OFFICE		DEPARTMENT STAMP	
SR0150118		DATE:	CHECK # 009508
SITE/PERMIT#	INSPECTOR: <i>Belinda</i>	RECEIPT # <i>IN0515733</i>	AMOUNT: \$ <i>844</i>

Revised: October 2012

6/25/18
LNW



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Application

WORK SITE ADDRESS APN 5869-020-005	CITY Tujunga/Sunland	ZIP 91042	NUMBER OF WELLS 1	START DATE
---------------------------------------	-------------------------	--------------	----------------------	------------

OWNER Nick Lukasiewicz		EMAIL		
ADDRESS 8041 Foothill Blvd #A	CITY Sunland	ZIP 91041	TELEPHONE 818-951-4393	

DRILLER Vic's Well Drilling		PROJECT CONTACT Vic	C-57 LICENSE NUMBER 886439	
ADDRESS 3807 Sierra Hwy box 4504	CITY Acton	ZIP 93510	MOBILE	
EMAIL vicswelldrilling@yahoo.com		TELEPHONE 661-917-7560		

CONSULTANT Roadrunner Pump Service		PROJECT CONTACT Archie	PROJECT MANAGER	
ADDRESS P.O. Box 1052	CITY Pearblossom	ZIP 93553	MOBILE	
EMAIL roadrunnerpump@roadrunner.com		TELEPHONE 601-944-5073		

ATTACH ALL SUPPORTING DOCUMENTS, INCLUDING:

- written narrative describing work plan details
- vertical well diagram detailing depths, sizes, thicknesses, and materials of: (1) the casing, (2) the annular (sanitary) seal, (3) the screens/slotting, and (4) any pertinent geological features
- scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

FOR WELL DECOMMISSION: well construction logs, the method of assessment, type and amount of sealant, and the method of upper seal pressure application (including PSI and time applied)

PRODUCTION WELLS	
<input type="checkbox"/> PUBLIC (MUNICIPAL UTILITY)	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> IRRIGATION	<input type="checkbox"/> CATHODIC PROTECTION
<input type="checkbox"/> GEOTHERMAL HEAT EXCHANGE	
<input checked="" type="checkbox"/> OTHER <u>private residence well</u>	
NAME OF C-57 LICENSEE <u>Archie Floyd.</u>	
SIGNATURE	

NON-PRODUCTION WELLS	
<input type="checkbox"/> MONITORING	<input type="checkbox"/> PIEZOMETER
<input type="checkbox"/> INJECTION	<input type="checkbox"/> WATER EXTRACTION
<input type="checkbox"/> AIR SPARGE	<input type="checkbox"/> TEST HOLE (PRE-PRODUCTION)
<input type="checkbox"/> HYDROPUNCH	<input type="checkbox"/> CONE PENETROMETER (CPT)
<input type="checkbox"/> SOIL BORING INTO GROUNDWATER	
NAME OF APPLICANT	
SIGNATURE	

BY SIGNING ABOVE, I HEREBY AGREE TO COMPLY IN EVERY RESPECT WITH ALL THE REGULATIONS, ORDINANCES, AND LAWS OF THE STATE OF CALIFORNIA, THE COUNTY OF LOS ANGELES, THE DEPARTMENT OF PUBLIC HEALTH, AND THE ENVIRONMENTAL HEALTH DRINKING WATER PROGRAM



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Well Permit Approval

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS APN 5869 020 005	CITY Tujunga	ZIP 91042	EMAIL ADDRESS FOR WELL PERMIT APPROVAL roadrunnerpump@roadrunner.com
---------------------------------------	-----------------	--------------	---

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- THIS WELL PERMIT APPROVAL IS LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- **NOTIFY THE DRINKING WATER PROGRAM BY EMAIL 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

<input type="checkbox"/> WORK PLAN INCOMPLETE; SUBMIT THE FOLLOWING:	<input type="checkbox"/> WORK PLAN APPROVED	DATE:
	Los Angeles County Drinking Water stamp	ADDITIONAL APPROVAL CONDITIONS:

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
-------------------------------	-------------------------------

WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED

WATER QUALITY—CHEMICAL STANDARDS REQUIRED

DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
-------------------------------	-------------------------------

WATER SUPPLY YIELD REQUIRED

OTHER REQUIREMENT

DATE ACCEPTED: REHS signature	DATE ACCEPTED: REHS signature
-------------------------------	-------------------------------

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **1083497**

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

Well with DWR

Page **1** of **1**

Owner's Well No. **1**

Work Began _____ Ended _____

Local Permit Agency **LA County Environmental Health**

Permit No. _____ Permit Date _____

GEOLOGIC LOG

Orientation (°) VERTICAL _____ HORIZONTAL _____ ANGLE _____ (SPECIFY)
 Drilling Method **AIR** FLUID _____

DEPTH FROM SURFACE		DESCRIPTION
R	FL.	
0	87	SAND AND GRAVEL
17	220	GRAY GRANITE
20	407	GRAY GRANITE

TOTAL DEPTH OF BORING **407** (Feet)
 TOTAL DEPTH OF COMPLETED WELL **407** (Feet)

WELL OWNER

Name **Nick Wnasiewicz**
 Mailing Address _____

CITY _____ STATE _____ ZIP _____

Address **5869 - 020 - 005**

City _____ County _____

APN Book _____ Page _____ Parcel _____
 Township _____ Range _____ Section _____

Lat _____ Long _____

LOCATION SKETCH

WEST EAST

ACTIVITY (°)

NEW WELL

MODIFICATION/REPAIR
 _____ Deepen
 _____ Other (Specify) _____

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

USES (°)

WATER SUPPLY
 Domestic _____ Public
 Irrigation _____ Industrial

MONITORING _____
 TEST WELL _____
 CATHODIC PROTECTION _____
 HEAT EXCHANGE _____
 DIRECT PUSH _____
 INJECTION _____
 VAPOR EXTRACTION _____
 SPARGING _____
 REMEDIATION _____
 OTHER (SPECIFY) _____

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER **110** (FL) BELOW SURFACE
 DEPTH OF STATIC WATER LEVEL **80** (FL) & DATE MEASURED **5/29/18**
 ESTIMATED YIELD **2.5** (GPM) & TEST TYPE **AIR**
 TEST LENGTH **2** (Hrs.) TOTAL DRAWDOWN **400** (FL)
 * May not be representative of a well's long-term yield.

DEPTH FROM SURFACE	BORE-HOLE DIA. (Inches)	TYPE (°)			CASING (S)			
		BLANK	SCREEN	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0 to 200	10	X			SDR 17	4.5	SDR 17	
200 to 220	10	X			PVC SDR 17	4.5	.25	.0035
220 to 240	10	X			PVC	4.5	.25	.0035
240 to 400	10	X			PVC	4.5	.25	.0035

DEPTH FROM SURFACE	ANNULAR MATERIAL TYPE			
	CE-MENT (°)	BEN-TONITE (°)	FILL (°)	FILTER PACK (TYPE/SIZE)
0 to 60	X			10 SACK
60 to 407			X	3/8 GRAVEL

- ATTACHMENTS (°)**
- Geologic Log
 - Well Construction Diagram
 - Geophysical Log(s)
 - Soil/Water Chemical Analyses
 - Other _____
- Each additional information, if it exists.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME **Wics Well Drilling Inc.**
 (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS **3807 Sierra Canyon Box 4504 Acton CA 93510**
 CITY STATE ZIP

Signed **[Signature]** DATE SIGNED **6-13-18** C-57 LICENSE NUMBER **886439**
 C-57 LICENSED WATER WELL CONTRACTOR



ENVIRONMENTAL HEALTH

Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	St. Francis		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://eosisgcs.lsd.lacounty.gov/slv/?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel. 5823-001-010		
WORK SITE ADDRESS:	ADDRESS 200 Foothill Blvd	CITY La Cañada Flintridge	ZIP CODE 91011
CROSS STREET(S):	Daleridge Road		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		126.00
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): _____			
Estimated groundwater depth: _____			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 126.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>leni</i>
DATE: <i>7/21/18</i>
SUPERVISOR'S INITIAL: <i>He</i>
SITE / PERMIT NO.: SR 0192844
INVOICE NO.: IN 0764743



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

♦ Telephone: (626) 430-5420 ♦

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS 200 Foothill Blvd		CITY La Cañada Flintridge	ZIP CODE 91011	QUANTITY (QTY) 4
CALIFORNIA STATE REGISTERED DRILLER I 2R		C-57 LICENSE HOLDER NAME 2R	C-57 LICENSE NUMBER 709029	C-57 EXPIRATION DATE 6/30/2021
TELEPHONE NO	MOBILE (909) 490-0530	E-MAIL ADDRESS info@2rdrilling.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO	MOBILE	E-MAIL ADDRESS		
OWNER NAME St. Francis High School		TELEPHONE / MOBILE 1-818-790-0325	E-MAIL	
CONSULTANT Converse Consultants		OFFICE NUMBER (626) 930-1200		
PROJECT CONTACT Victor Nguyen	TELEPHONE NO Ext.	MOBILE [REDACTED]	E-MAIL ADDRESS vnguyen@converseconsultants.com	
PROJECT MANAGER	TELEPHONE NO Ext.	MOBILE	E-MAIL ADDRESS	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

SITE/PROJECT DESCRIPTION

Based on our review of the Phase I Master Plan Option 1 Project at St. Francis High School, Converse understands the following developments are proposed:

- Addition of a new multi-purpose building.
- Addition of a new elevator adjacent to the new multi-purpose building.
- Expansion of the concession deck to provide more outdoor seating with the addition of a storage room underneath.
- Improvements to the amphitheater consisting of stepped seating.
- Addition of new service roads to access lower levels for events and maintenance.
- Expansion of the home side bleachers to seat an additional 300 people and addition of a storage unit underneath.
- Addition of new concrete bleachers on the guest side of the existing field.

EXPLORATION DESCRIPTION

The field investigation will consist of a subsurface exploration program consisting of drilling a total of eight (8) exploratory borings. The borings will be made by a standard hollow-stem drill rig to depths of 6 to 50 feet below the existing ground surface (bgs) or to refusal, whichever is shallower.

The purpose of the field exploration is to:

- Obtain subsurface information at the site.
- Obtain undisturbed and bulk samples of the various soils and bedrock types for laboratory testing.
- Determine the excavatability and rippability of the earth materials.

Soils will be continuously logged and classified by the geologist/engineer in the field by visual examination in accordance with the Unified Soil Classification System.

Undisturbed ring samples of the subsurface materials will be obtained at five-foot intervals, at changes in soil profiles, or where unusual conditions are encountered. The relatively undisturbed ring samples will be obtained using a Modified California Sampler (2.4 inches inside diameter and 3.0 inches outside diameter) lined with thin-walled sample rings. The sampler will be driven into the bottom of the borehole with successive drops of a 140-pound hammer falling 30 inches. The number of successive drops of the driving weight ("blows") required for one foot of penetration will be shown on the boring summary sheet in the "blow/6-inch" column. The soil will be retained in brass rings (2.4 inches in diameter and one inch in height). The central portion of the sample will be retained and carefully sealed in waterproof plastic containers for shipment to the laboratory. Bulk samples of representative soil types will be collected in plastic bags. Groundwater levels, where encountered in the borings during drilling, will be recorded.

Standard Penetration Tests (SPTs) will be performed at regular intervals to a depth of 50 feet bgs. SPT data will be utilized in evaluating the liquefaction potential and providing design recommendations.

Boreholes terminating at a depth of 10 foot or below without encountering groundwater will be backfilled with soil cuttings and tamped. Boreholes terminating at depths greater than 10 foot or that extend into groundwater shall be backfilled with grout in accordance with LA County Department of Public Health requirements.



St Francis HS

200 Foothill Blvd
La Canada - Flintridge

BH3 50'x14' 30"

BH2 30'

BH6 30'



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION

PROJECT NAME / NUMBER:	Jet Propulsion Lab - B350 Flight Integration Technology Building		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://egisgcs.isd.lacounty.gov/glv/Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel. 5817-025-901		
WORK SITE ADDRESS:	ADDRESS 4800 Oak Grove Drive	CITY Pasadena	ZIP CODE 91109
CROSS STREET(S):	N/A		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation <input type="checkbox"/> Construction <input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 970.00	x	= \$
	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole <input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange <input type="checkbox"/> Construction <input type="checkbox"/> Decommission <input type="checkbox"/> 1-10 Wells <input type="checkbox"/> 11-24 Wells <input type="checkbox"/> 25+ Wells	\$ 735.00		
	\$ 825.00		
	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): <u>10, 20, 20, 30, 50</u>			
Estimated groundwater depth: <u>Not anticipated in 10' boring.</u>			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 0.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>Belinda</i>
DATE: <i>8/21/19</i>
SUPERVISOR'S INITIAL: <i>LM</i>
SITE / PERMIT NO.: SR 0195575
INVOICE NO.: IN 0707090



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS 4800 Oak Grove Drive		CITY Pasadena	ZIP CODE 91109	QUANTITY (QTY) 4
CALIFORNIA STATE REGISTERED DRILLER I 2R Drilling		C-57 LICENSE HOLDER NAME 2R Drilling	C-57 LICENSE NUMBER 709029	C-57 EXPIRATION DATE 6/30/2021
TELEPHONE NO (626) 930-1263	MOBILE 909-490-0530	E-MAIL ADDRESS brian@2rdrilling.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO	MOBILE	E-MAIL ADDRESS		
OWNER NAME Jet Propulsion Laboratory		TELEPHONE / MOBILE (626) 590-3023	E-MAIL n.n.tom@jpl.nasa.gov	
CONSULTANT Converse Consultants		OFFICE NUMBER (626) 930-1200		
PROJECT CONTACT Victor Nguyen	TELEPHONE NO (626) 930-1263 Ext.	MOBILE	E-MAIL ADDRESS vnguyen@converseconsultants.com	
PROJECT MANAGER Victor Nguyen	TELEPHONE NO (626) 930-1263 Ext.		E-MAIL ADDRESS vnguyen@converseconsultants.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

19-31-179-02

Field Investigation Memo: Jet Propulsion Laboratory Flight Electronics Integration Building

Permit No: LA – Public Health (PENDING)

USA Ticket No: A192310928-00A

Client: Jet Propulsion Laboratory

Contacts: Victor Nguyen – (626) – 807 – 3401

Backfill: **SOIL CUTTINGS MUST BE STORED IN 55-GALLON DRUMS FOR ANALYTICAL TESTING AND SUBSEQUENT DISPOSAL. ALL BOREHOLES MUST BE BACKFILLED WITH 2-SAC SLURRY THROUGH THE USE OF A TREMIE PIPE.**

Pictures taken of nearby utilities, asphalt patch and any thing else that may be questionable.

Check to make sure all utilities have been marked.

Bulk samples will be taken anywhere there is a drastic change in soil material.

Borings will be backfilled with soil cuttings, tamped, and cold asphalt patched where appropriate

Look for changes from fill to alluvium to bedrock, etc.

Groundwater is not anticipated however may be encountered. Handle appropriately.

Soil classifications will be in accordance with the USCS method. Noting:

- Well-graded/Poorly-graded sand
- Type of soil
- Density
- Moisture
- Gravel, cobbles and boulders- Size, shape, portion of soil
- Cementation
- Fines – portion of soil, plasticity
- Odor

Table 1, Depth and Sampling of Anticipated Borings

Boring No.	Location	Approx. Depth (ft) ¹	Ring Sampling	SPT Sampling	TC Required	Bulk Sample
BH-1	See Map	20'	5,15	10, 20	-	0-5'
BH-2	See Map	20'	5,15	10, 20	-	0-5'
BH-3	See Map	30'	5,15, 25	10, 20, 30	-	0-5'
BH-4	See Map	50'	5,15, 25, 35, 45	10, 20, 30, 40, 50	-	0-5'
BH-5	See Map	10'	5	10	-	0-5'

Jet Propulsion Laboratory

Flight Electronics Integration Building (B350)

Legend
Boring Locations

BH-5 20'

BH-4 50 FEET

BH-2 20 FEET

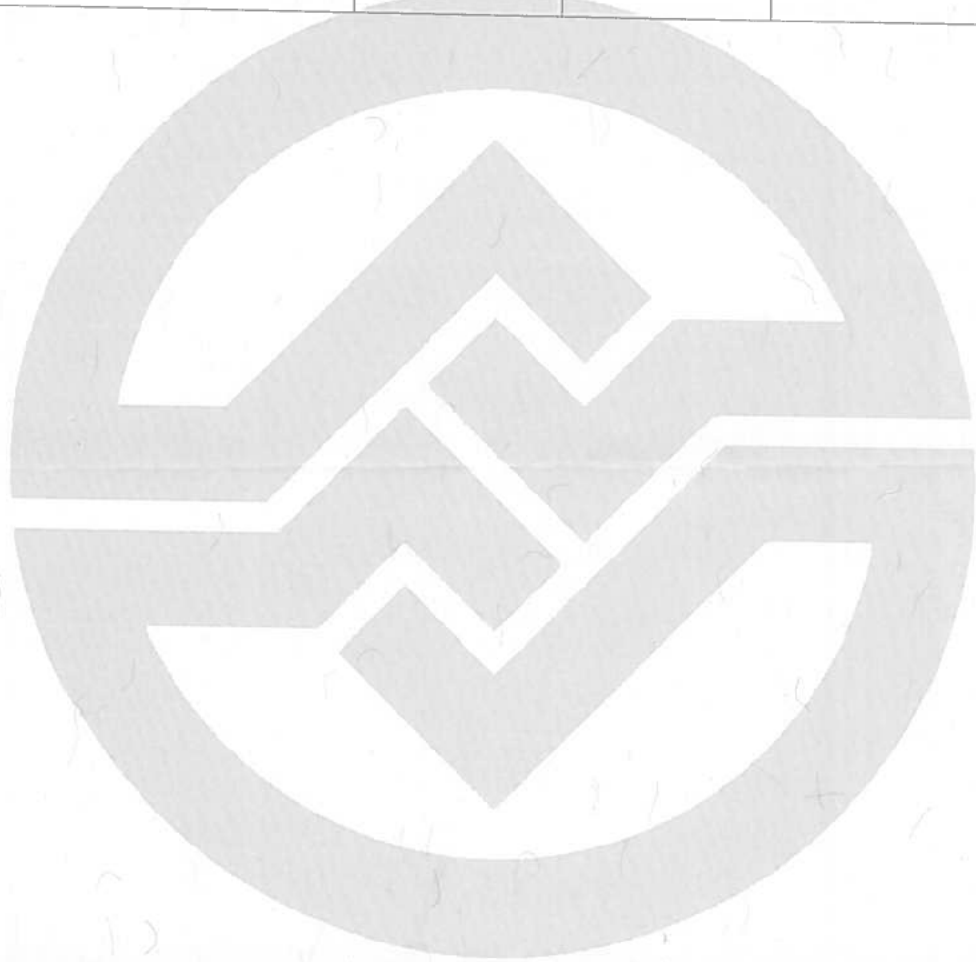
BH-3 30'

BH-1 20 FEET



300 ft

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
CHK RQT 8.20.19 (2)	8/20/19	0233529	126.00			126.00
Los Angeles County Public Health MAIN 2			Totals	126.00		126.00





ENVIRONMENTAL HEALTH Drinking Water Program

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◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



COUNTY OF LOS ANGELES
Public Health

APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	96368 - Well Installation		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://eqisocx.lsd.lacounty.gov/slv/7?View=GISView#</small>	MONITORING WELLS - Submit separate application(s) for each parcel. 5815-020-023		
WORK SITE ADDRESS:	ADDRESS 623 Foothill Blvd	CITY La Cañada	ZIP CODE 91011
CROSS STREET(S):	Foothill Blvd and Rinetti Ln		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole <input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange <input checked="" type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input checked="" type="checkbox"/> 1-10 Wells	\$ 735.00		735.00
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): _____			
Estimated groundwater depth: _____			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 735.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>Belinola</i>
DATE: <i>9/19/19</i>
SUPERVISOR'S INITIAL: <i>LM</i>
SITE / PERMIT NO.: SR <i>0199014</i>
INVOICE NO.: IN <i>071008600</i>



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
 ♦ Telephone: (626) 430-5420 ♦
http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS 623 Foothill Blvd		CITY La Cañada	ZIP CODE 91011	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I J&H Drilling Co., Inc.		C-57 LICENSE HOLDER NAME Troy Robinson	C-57 LICENSE NUMBER 740854	C-57 EXPIRATION DATE 9/30/2021
TELEPHONE NO (714) 994-0402	MOBILE (714) 655-7792	E-MAIL ADDRESS jhdrillco@aol.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO	MOBILE	E-MAIL ADDRESS		
OWNER NAME Chevron Environmental Management Company		TELEPHONE / MOBILE (714) 671-3248	E-MAIL kbewley@chevron.com	
CONSULTANT Arcadis U.S., Inc.		OFFICE NUMBER (714) 508-2648		
PROJECT CONTACT Gianne Schull	TELEPHONE NO (714) 508-2648 Ext.	MOBILE [REDACTED]	E-MAIL ADDRESS gianne.schull@arcadis.com	
PROJECT MANAGER Arianne Terry	TELEPHONE NO (714) 508-3136 Ext.	MOBILE [REDACTED]	E-MAIL ADDRESS Arianne.Terry@arcadis.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input checked="" type="checkbox"/> Written narrative describing work plan details <input checked="" type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features <input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details <input type="checkbox"/> Well construction logs <input type="checkbox"/> Type and amount of sealant <input type="checkbox"/> Method of assessment <input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied) <input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input type="checkbox"/> Written narrative describing work plan details <input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Statement of Work

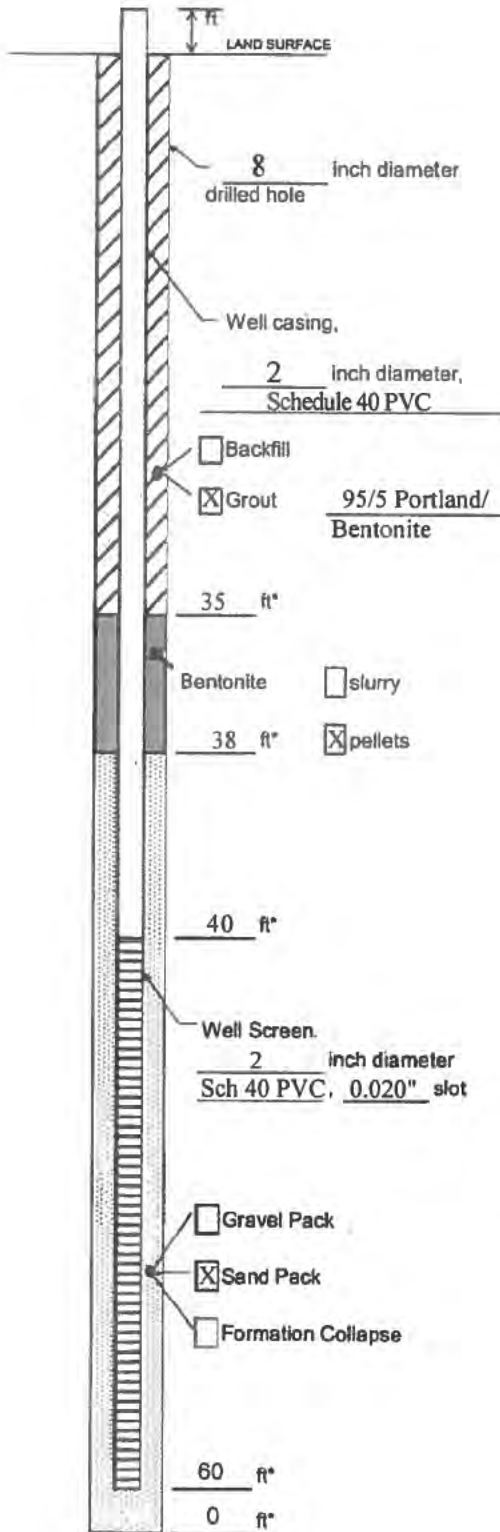
**Chevron Site No. 96368
623 Foothill Boulevard
La Canada, California**

As required by the Los Angeles Regional Water Control Board (LA-RWQCB), on behalf of Chevron Environmental Management Company, Arcadis U.S., Inc. (Arcadis) plans to undertake activities to define the offsite extent of tertiary butyl alcohol (TBA), southeast of existing monitoring wells MW-3 and MW-5.

Underground Service Alert (USA) will be notified at least two working days in advance of commencement of work. In addition to the USA notification, Arcadis will also retain a private utility locating company to identify and mark underground utilities to be avoided during planned subsurface activities.

Arcadis will advance one boring to a depth of approximately 60 feet below ground surface (bgs) and install the off-site groundwater monitoring well with a hydraulically operated hollow-stem-auger drill rig equipped with an 8-inch-diameter, continuous-flight, hollow-stem auger. The well will be constructed with a 2-inch diameter Schedule 40 polyvinyl chloride (PVC) casing. The well screen interval is proposed from 40 to 60 feet bgs with 0.02-inch slots. The screen interval may be modified in the field based on the lithology encountered at the time of drilling. A threaded well cap will be installed on the bottom of the well casing. The annular space will be filled by a sand pack of Monterey #3 from bottom of the screen to approximately 2 feet above the top of the screen, followed by a 3-foot-thick seal of hydrated bentonite chips. The remaining annular space will be filled with bentonite grout. The well will then be completed with a traffic-rated well box and locking well cap. The surface around the well will be restored to match surrounding conditions.

WELL CONSTRUCTION LOG
(Unconsolidated)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.
* Depth Below Land Surface

Project 96368 Well MW-X
Town/City 623 Foothill Boulevard
County Los Angeles County State CA
Permit No. --

Land-Surface (LS) Elevation and Datum:
-- feet Surveyed
 Estimated

Installation Date(s) _____
Drilling Method _____
Drilling Contractor J. & H. Drilling Co., Inc.
Drilling Fluid --

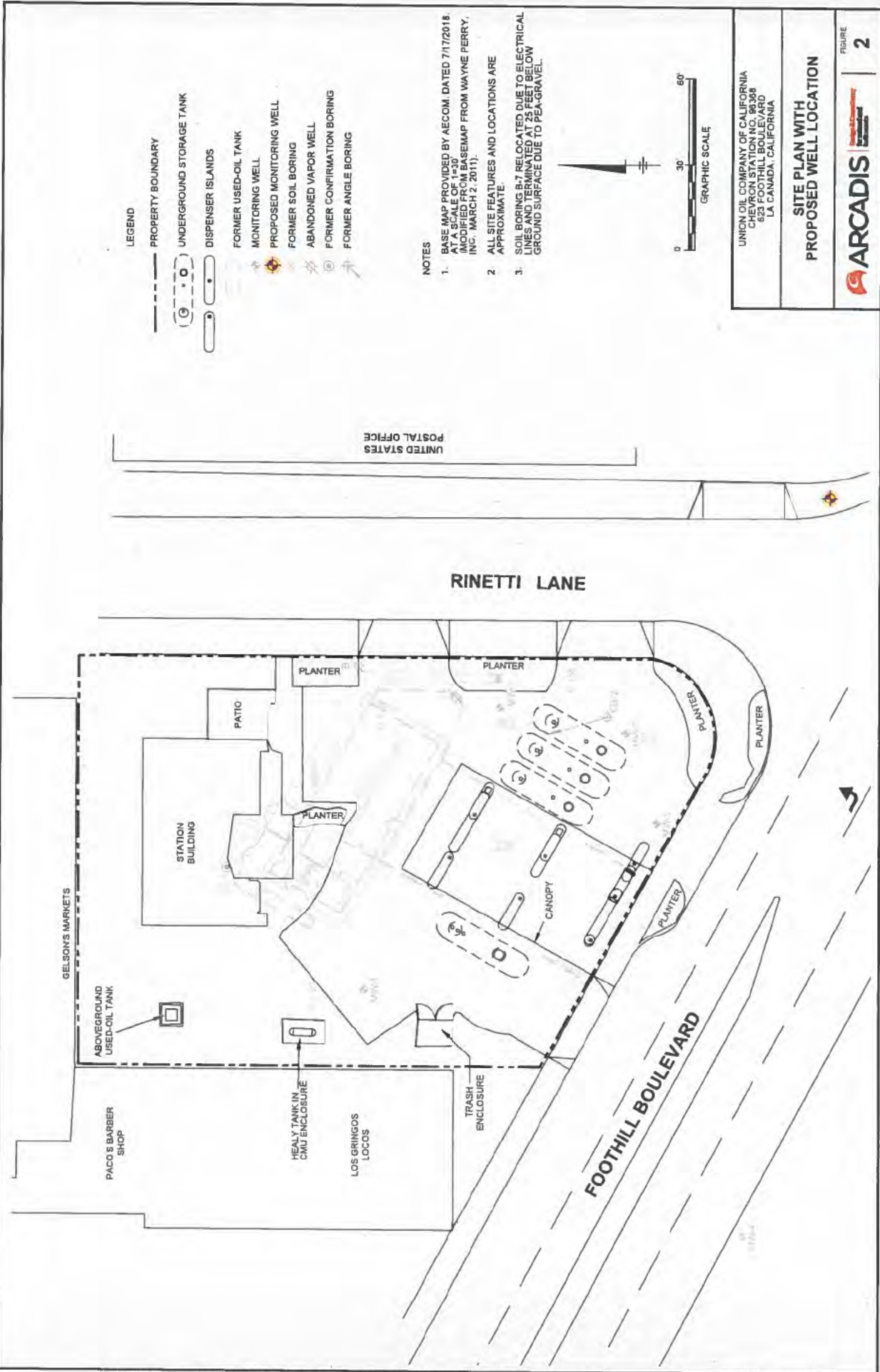
Development Technique(s) and Date(s)

Fluid Loss During Drilling -- gallons
Water Removed During Development -- gallons
Static Depth to Water -- feet below M.P.
Pumping Depth to Water -- feet below M.P.
Pumping Duration -- hours
Yield -- gpm Date --
Specific Capacity -- gpm/ft

Well Purpose Groundwater Monitoring

Remarks --

Prepared by Edward I Westerband



UNION OIL COMPANY OF CALIFORNIA
 CHEVRON STATION NO. 88368
 623 FOOTHILL BOULEVARD
 LA CANADA, CALIFORNIA

**SITE PLAN WITH
 PROPOSED WELL LOCATION**

ARCADIS

FIGURE | **2**

1. BENCH MARK: ARCADIS 10.000' ELEVATION. 2. BENCH MARK: ARCADIS 10.000' ELEVATION. 3. BENCH MARK: ARCADIS 10.000' ELEVATION. 4. BENCH MARK: ARCADIS 10.000' ELEVATION. 5. BENCH MARK: ARCADIS 10.000' ELEVATION. 6. BENCH MARK: ARCADIS 10.000' ELEVATION. 7. BENCH MARK: ARCADIS 10.000' ELEVATION. 8. BENCH MARK: ARCADIS 10.000' ELEVATION. 9. BENCH MARK: ARCADIS 10.000' ELEVATION. 10. BENCH MARK: ARCADIS 10.000' ELEVATION.



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	96368 - Well Installation		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://eqisocx.lsd.lacounty.gov/slv/?View=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel. 5815-020-023		
WORK SITE ADDRESS:	ADDRESS	CITY	ZIP CODE
	623 Foothill Blvd	La Cañada	91011
CROSS STREET(S):	Foothill Blvd and Rinetti Ln		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole <input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange <input checked="" type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input checked="" type="checkbox"/> 1-10 Wells	\$ 735.00		735.00
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<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input type="checkbox"/> Up to four (4) borings	\$ 126.00		
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Depth of boring (Min. to Max.): _____			
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CATHODIC WELLS			
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WATER SUPPLY YIELD			
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TOTAL COST			\$ 735.00

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ASSIGNED INSPECTOR: <i>Belinola</i>
DATE: <i>9/19/19</i>
SUPERVISOR'S INITIAL: <i>LM</i>
SITE / PERMIT NO.: SR <i>0199014</i>
INVOICE NO.: IN <i>071008600</i>



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



COUNTY OF LOS ANGELES
Public Health

APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

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CALIFORNIA STATE REGISTERED DRILLER I J&H Drilling Co., Inc.		C-57 LICENSE HOLDER NAME Troy Robinson	C-57 LICENSE NUMBER 740854	C-57 EXPIRATION DATE 9/30/2021
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TELEPHONE NO	MOBILE	E-MAIL ADDRESS		
OWNER NAME Chevron Environmental Management Company		TELEPHONE / MOBILE (714) 671-3248	E-MAIL kbewley@chevron.com	
CONSULTANT Arcadis U.S., Inc.		OFFICE NUMBER (714) 508-2648		
PROJECT CONTACT Gianne Schull	TELEPHONE NO (714) 508-2648 Ext.	MOBILE [REDACTED]	E-MAIL ADDRESS gianne.schull@arcadis.com	
PROJECT MANAGER Arianne Terry	TELEPHONE NO (714) 508-3136 Ext.	MOBILE [REDACTED]	E-MAIL ADDRESS Arianne.Terry@arcadis.com	

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Statement of Work

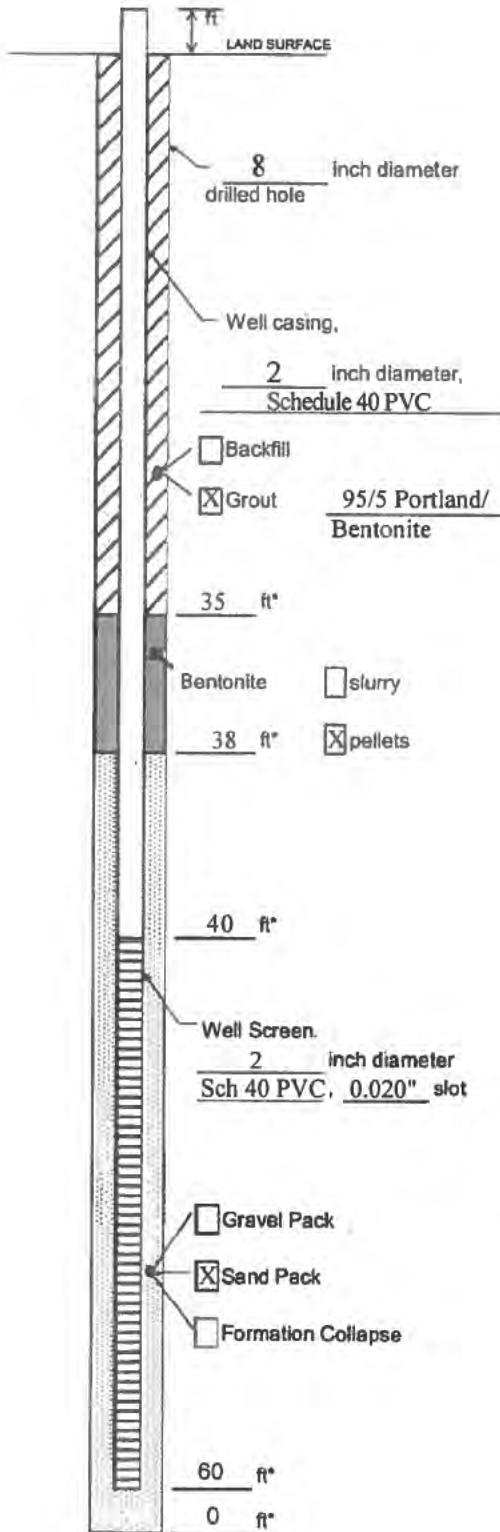
**Chevron Site No. 96368
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WELL CONSTRUCTION LOG
(Unconsolidated)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.
* Depth Below Land Surface

Project 96368 Well MW-X
Town/City 623 Foothill Boulevard
County Los Angeles County State CA
Permit No. --

Land-Surface (LS) Elevation and Datum:
-- feet Surveyed
 Estimated

Installation Date(s) _____
Drilling Method _____
Drilling Contractor J. & H. Drilling Co., Inc.
Drilling Fluid --

Development Technique(s) and Date(s)

Fluid Loss During Drilling -- gallons
Water Removed During Development -- gallons
Static Depth to Water -- feet below M.P.
Pumping Depth to Water -- feet below M.P.
Pumping Duration -- hours
Yield -- gpm Date --
Specific Capacity -- gpm/ft

Well Purpose Groundwater Monitoring

Remarks --

Prepared by Edward I Westerband



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Foothill Gas Mart		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://eqisgcs.isd.lacounty.gov/slv?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel.	5801-022-041	
WORK SITE ADDRESS:	ADDRESS 2660 West Foothill Blvd.	CITY La Crescenta	ZIP CODE 91214
CROSS STREET(S):	Raymond Street		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (<i>into saturated zone / groundwater</i>) <input type="checkbox"/> Geothermal Heat Exchange			
<input type="checkbox"/> Construction <input checked="" type="checkbox"/> Decommission			
<input checked="" type="checkbox"/> 1-10 Wells	\$ 735.00		735.00
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<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): _____			
Estimated groundwater depth: _____			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
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WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 735.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>Yonas</i>
DATE: <i>11/13/19</i>
SUPERVISOR'S INITIAL: <i>LM</i>
SITE / PERMIT NO.: SR 0204652
INVOICE NO.: IN 07742916



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

♦ Telephone: (626) 430-5420 ♦

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS 2660 West Foothill Blvd.		CITY La Crescenta	ZIP CODE 91214	QUANTITY (QTY) 6
CALIFORNIA STATE REGISTERED DRILLER I ABC Liovin Drilling, Inc.		C-57 LICENSE HOLDER NAME Ivan Liovin	C-57 LICENSE NUMBER 422904	C-57 EXPIRATION DATE 9/30/2020
TELEPHONE NO. -(562) 981-8575	MOBILE	E-MAIL ADDRESS ivan@abcdrilling.com		
CALIFORNIA STATE REGISTERED DRILLER II Choice Drilling, Inc.		C-57 LICENSE HOLDER NAME Sean Pichinson	C-57 LICENSE NUMBER 903335	C-57 EXPIRATION DATE 9/30/20
TELEPHONE NO. (818) 899-2019	MOBILE	E-MAIL ADDRESS debbie@choicedrill.com		
OWNER NAME Quoc (Sean) Trieu		TELEPHONE / MOBILE (818) 957-1693	E-MAIL ustfund@sbcglobal.net	
CONSULTANT A.C.C.E.S., Inc.		OFFICE NUMBER (310) 822-3800		
PROJECT CONTACT Hamid R. Assadi	TELEPHONE NO. -(310)822-3800 Ext.	MOBILE	E-MAIL ADDRESS hassadi@acesengineering.com	
PROJECT MANAGER Hamid R. Assadi	TELEPHONE NO. -(310)822-3800 Ext.	MOBILE	E-MAIL ADDRESS hassadi@acesengineering.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Well construction logs
<input checked="" type="checkbox"/> Type and amount of sealant
<input checked="" type="checkbox"/> Method of assessment
<input checked="" type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

WORK PLAN NARRATIVE

Job Description: Decommissioning of Groundwater Monitoring Wells

Site Address: 2660 West Foothill Boulevard, La Crescenta, CA 91214

Details of Work Plan

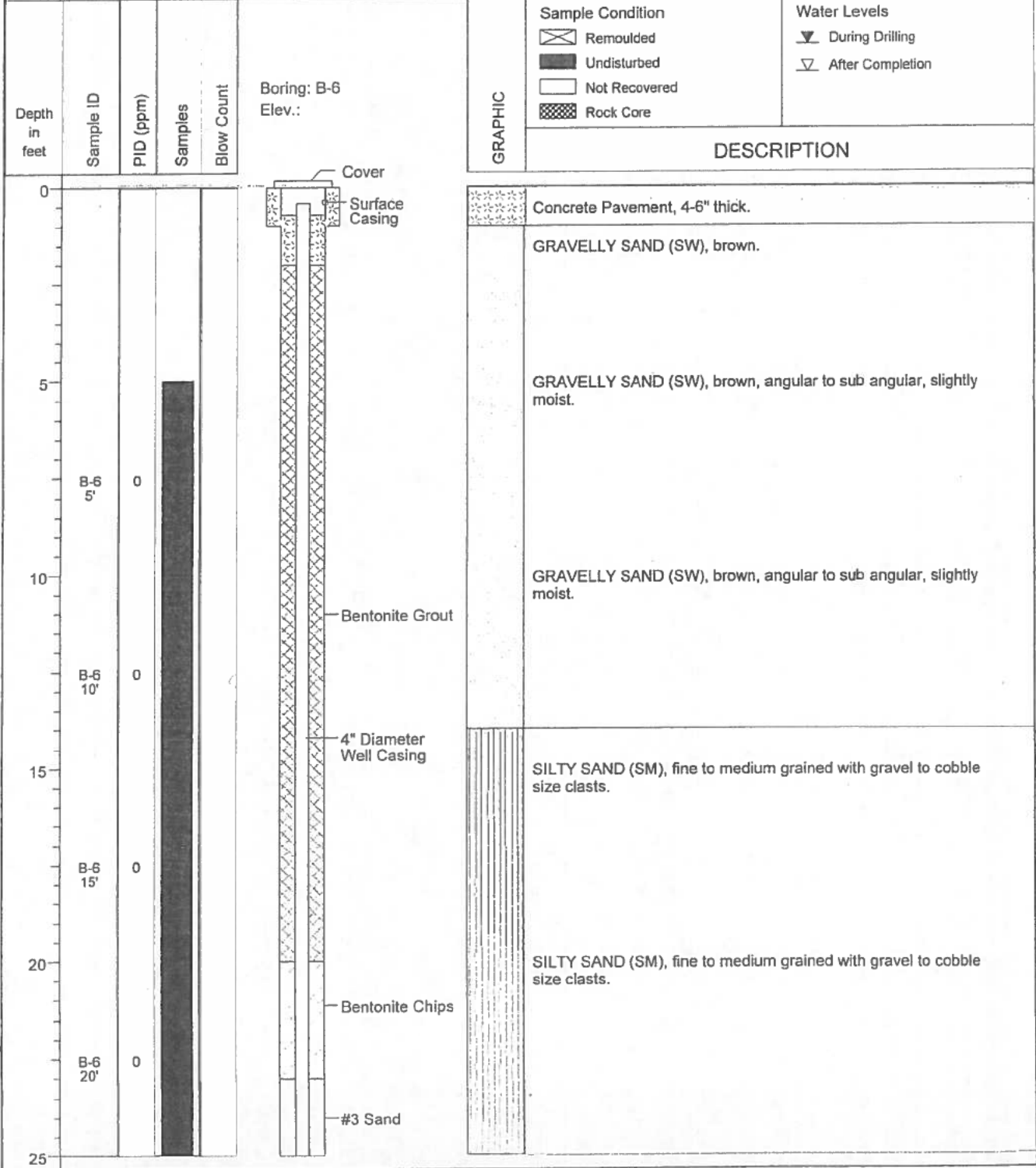
Six (6) groundwater monitoring wells will be abandoned (decommissioned) using Pressure Grouting Method in accordance with California Department of Water Resources Bulletins 74-81 and 74-91. Before the start of well abandonment, the depth of each well will be measured. Each well will be plugged and sealed with grout composed of 95% Portland cement and 5% bentonite at 20-40 psi for 10-20 minutes from the bottom to the top of the well and the upper five feet of the casings will be removed. The boreholes will be sealed with neat cement from 2 feet below ground surface (bgs) to approximately six inches from surface level. The top of the borings will be resurfaced to match the surrounding surface.

LOG OF BORING B-6

(Page 1 of 4)

Foothill Gas Mart
 2660 Foothill Boulevard
 La Crescenta, CA

Drilled By: : Boart Longyear
 Drill Method: : Sonic
 Date: : 08/24/2007
 Hole Size: : 12 inch
 Geologist: : Fred Bigony
 Total Depth: : 88 Feet



10-03-2007 C:\Program Files\ntech532\Foothill Gas Mart\MW-1.BOR



LOG OF BORING B-6

(Page 2 of 4)

Foothill Gas Mart
2660 Foothill Boulevard
La Crescenta, CA

Drilled By: : Boart Longyear Total Depth: : 88 Feet
 Drill Method: : Sonic
 Date: : 08/24/2007
 Hole Size: : 12 inch
 Geologist: : Fred Bigony

Depth in feet	Sample ID	PID (ppm)	Samples	Blow Count	Boring: B-6 Elev.:	GRAPHIC		DESCRIPTION
						Sample Condition	Water Levels	
						<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	▽ During Drilling ▽ After Completion	
25	B-6 25'	0						SAND (SW), light brown, fine to medium graine, low moisture, with gravel to cobble size clasts.
30	B-6 30'	0						SANDY SILT (ML), grayish brown, with gravel, no cobble size material.
35	B-6 35'	0						SAND (SW), light brown, fine to coarse with gravel to cobble size clasts, low moisture.
40	B-6 40'	0						SAND AND GRAVEL (SW), light brown, fine to coarse with gravel to cobble size clasts, low moisture.
45	B-6 45'	0						SANDY GRAVEL (GW), brown, to light gray, large cobble to boulder size clasts.
50								

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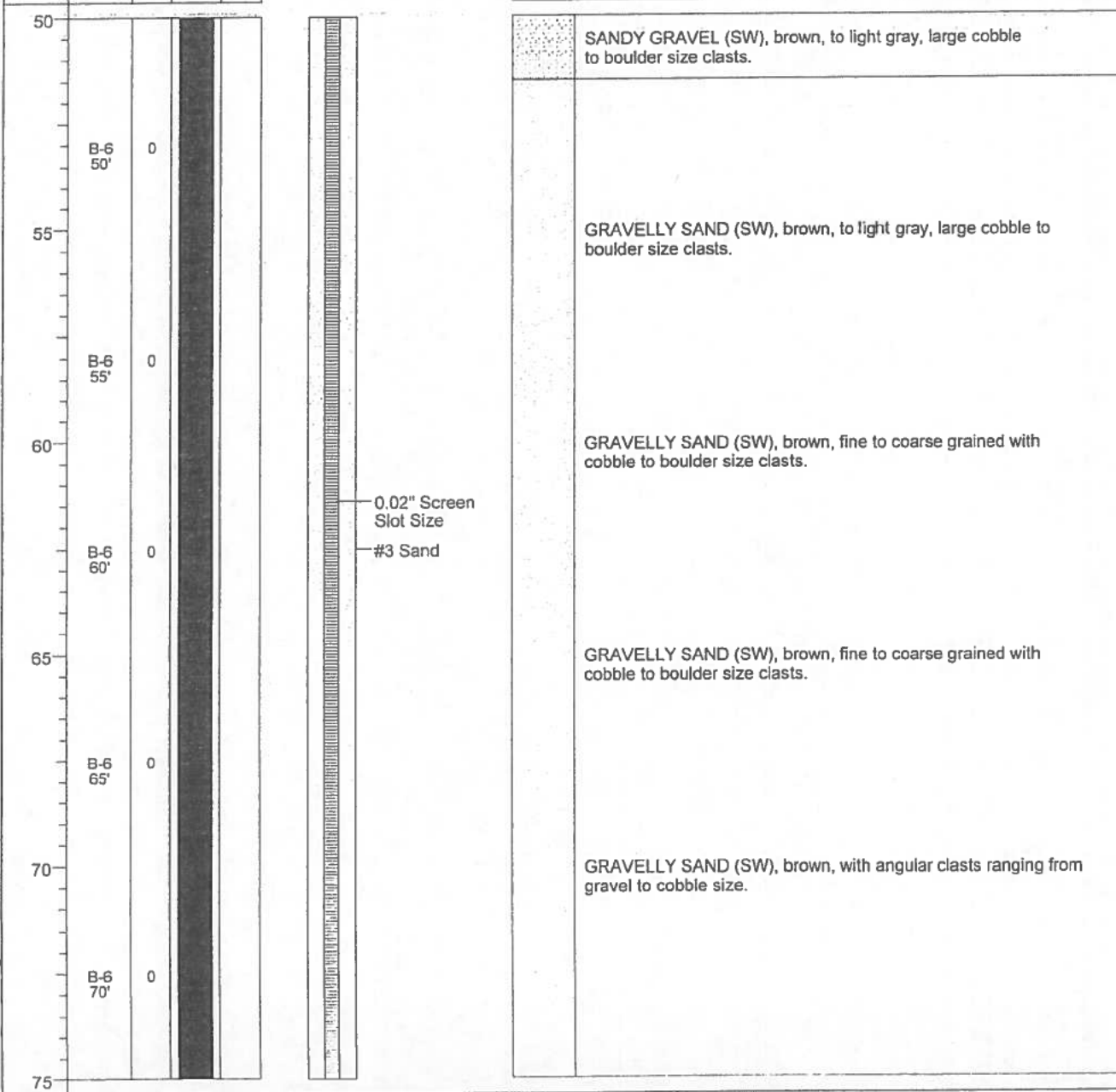
LOG OF BORING B-6

(Page 3 of 4)

Foothill Gas Mart
 2660 Foothill Boulevard
 La Crescenta, CA

Drilled By: : Boart Longyear
 Drill Method: : Sonic
 Date: : 08/24/2007
 Hole Size: : 12 inch
 Geologist: : Fred Bigony
 Total Depth: : 88 Feet

Depth in feet	Sample ID	PID (ppm)	Samples	Blow Count	Boring: B-6 Elev.:	GRAPHIC	Sample Condition	Water Levels
							<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input checked="" type="checkbox"/> After Completion
							DESCRIPTION	





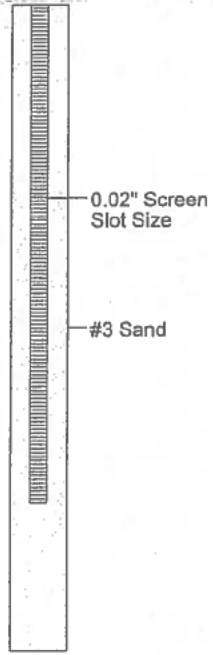
LOG OF BORING B-6

(Page 4 of 4)

Foothill Gas Mart
2660 Foothill Boulevard
La Crescenta, CA

Drilled By: : Boart Longyear
Drill Method: : Sonic
Date: : 08/24/2007
Hole Size: : 12 inch
Geologist: : Fred Bigony
Total Depth: : 88 Feet

Depth in feet	Sample ID	PID (ppm)	Samples	Blow Count	Boring: B-6 Elev.:	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
							<input type="checkbox"/> Remoulded <input type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input type="checkbox"/> Rock Core	<input type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
75	B-6 75'	0							GRAVELLY SAND (SW), brown, with angular clasts ranging from gravel to cobble size.
80	B-6 80'	0							SANDY SILT (ML), with red clay, grayish brown, possible weathering rind over bedrock.
85	B-6 85'	0							GRAVELLY SAND (SW), gray brown, dry.
									Weathered diorite rock material rich in biotite breaking down to silt to sand sized material. Possible top of bedrock.



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Geo-Cal, inc.
 Environmental & Geotechnical Engineering
 4370 Holmbeck Parkway, Suite 101
 San Bernardino, CA 92407
 (909) 890-1148

LOG OF BORING B-7

(Page 1 of 3)

Foothill Gas Mart
 2660 Foothill Boulevard
 La Crescenta, CA

Drilled By: : Boart Longyear Total Depth: : 87 Feet
 Drill Method: : Sonic
 Date: : 08/27/2007
 Hole Size: : 12 inch
 Geologist: : Fred Bigony

Depth in feet	Sample ID	PID (ppm)	Samples	Blow Count	Boring: B-7 Elev.:	Sample Condition		Water Levels		DESCRIPTION
						Remoulded	Undisturbed	During Drilling	After Completion	
0						Concrete Pavement, 4-6" thick.				
5	B-7 5'	0				GRAVELLY SAND (SW), brown, fine to coarse grained with gravel to boulder size clasts, slightly moist.				
10	B-7 10'	0				GRAVELLY SAND (SW), brown, fine to coarse grained with gravel to boulder size clasts, slightly moist.				
15	B-7 15'	0				GRAVELLY SAND (SW), brown, fine to coarse grained with gravel to boulder size clasts, slightly moist.				
20	B-7 20'	0				GRAVELLY SAND (SW), brown, fine to coarse grained with gravel to boulder size clasts, slightly moist.				
25	B-7 25'	0				GRAVELLY SAND (SW), brown, with fines, low moisture, angular clasts.				
30										

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LOG OF BORING B-7

(Page 2 of 3)

Foothill Gas Mart
2660 Foothill Boulevard
La Crescenta, CA

Drilled By: : Boart Longyear
 Drill Method: : Sonic
 Date: : 08/27/2007
 Hole Size: : 12 inch
 Geologist: : Fred Bigony
 Total Depth: : 87 Feet

Depth in feet	Sample ID	PID (ppm)	Samples	Blow Count	Boring: B-7 Elev.:	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
							<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input type="checkbox"/> During Drilling <input checked="" type="checkbox"/> After Completion	
30									GRAVELLY SAND (SW), light brown to yellowish orange, fine to coarse grained gravel size and larger angular clasts.
30-35	B-7 30'	0							
35-40	B-7 35'	0							GRAVELLY SAND (SW), light brown to yellowish orange, fine to coarse grained gravel size and 80 larger angular clasts.
40-45	B-7 40'	0							GRAVELLY SAND (SW), light brown to yellowish orange, fine to coarse grained gravel size and larger angular clasts.
45-50	B-7 45'	0							GRAVELLY SAND (SW), brown, low moisture, angular gravels and cobbles.
50-55	B-7 50'	0							SANDY CLAY (SC), gray brown, moist, with cobbles.
55-60	B-7 55'	0							GRAVELLY SAND (SW), brown, low moisture, angular gravels and cobbles.
60-67	B-7 60'	0							GRAVELLY SAND (SW), fine to coarse grained, slightly moist, strong gasoline odor.

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LOG OF BORING B-7

Foothill Gas Mart
 2660 Foothill Boulevard
 La Crescenta, CA

Drilled By: : Boart Longyear
 Drill Method: : Sonic
 Date: : 08/27/2007
 Hole Size: : 12 inch
 Geologist: : Fred Bigony
 Total Depth: : 87 Feet

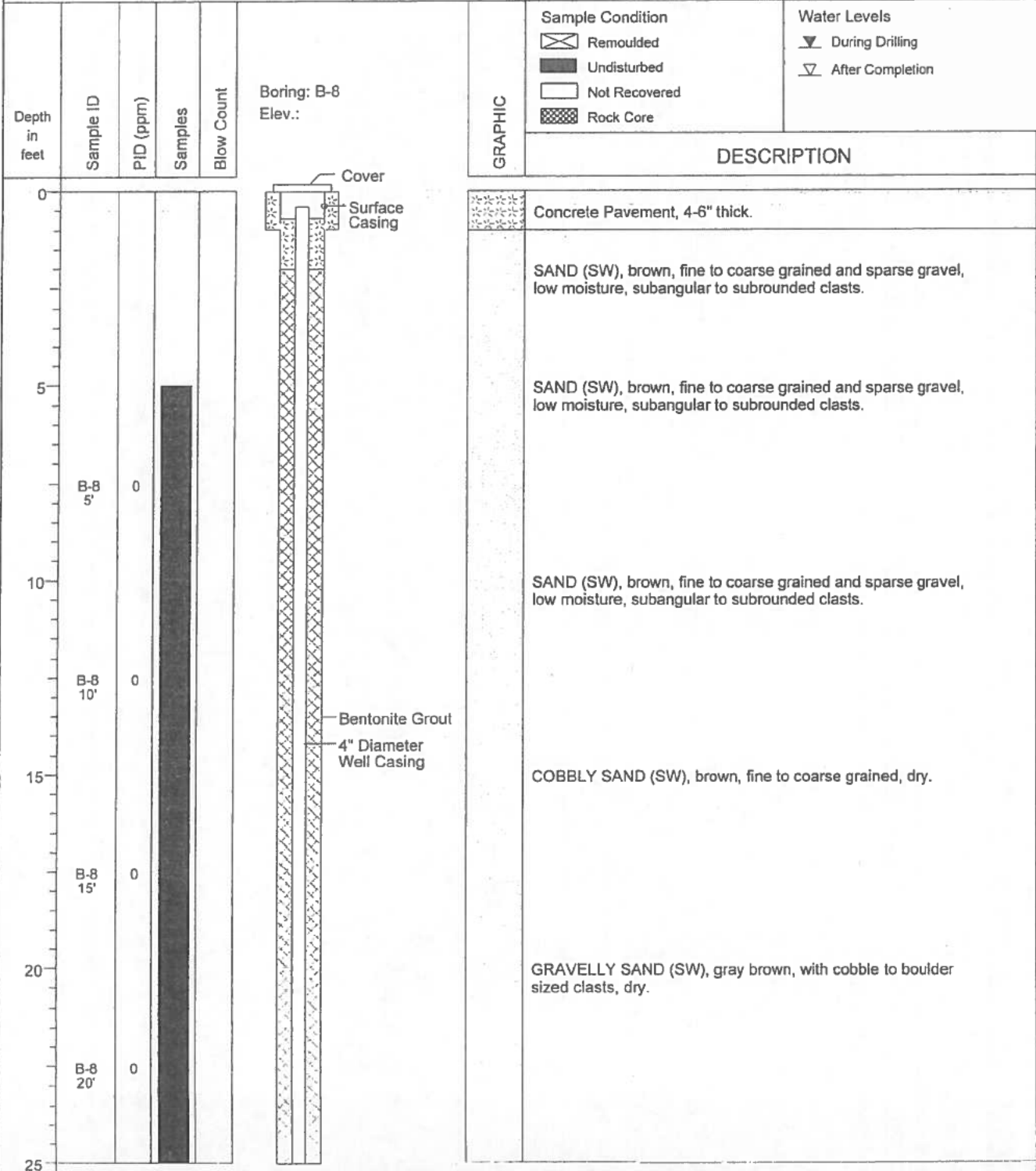
Depth in feet	Sample ID	PID (ppm)	Samples	Blow Count	Boring: B-7 Elev.:	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
							<input type="checkbox"/> Remoulded <input type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input type="checkbox"/> Rock Core	<input type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
60	B-7 60'	5000							GRAVELLY SAND (SW), fine to coarse grained with little clay, slightly moist, strong gasoline odor.
65	B-7 65'	5000							SANDY CLAY with SILT (CL), brown to gray brown, moist, strong gasoline odor.
70	B-7 70'	5000							Weathered diorite with fuel odor.
75	B-7 75'	5000							CLAYEY SAND (SC), gray-brown, very moist to saturated.
80	B-7 80'								Saturated sand.
85	B-7 85'								Dry weathered diorite.

LOG OF BORING B-8

(Page 1 of 4)

Foothill Gas Mart
 2660 Foothill Boulevard
 La Crescenta, CA

Drilled By: : Boart Longyear Total Depth: : 88 Feet
 Drill Method: : Sonic
 Date: : 08/28/2007
 Hole Size: : 12 inch
 Geologist: : Fred Bigony



LOG OF BORING B-8

Foothill Gas Mart
 2660 Foothill Boulevard
 La Crescenta, CA

Drilled By: : Boart Longyear
 Drill Method: : Sonic
 Date: : 08/28/2007
 Hole Size: : 12 inch
 Geologist: : Fred Bigony
 Total Depth: : 88 Feet

Depth in feet	Sample ID	PID (ppm)	Samples	Blow Count	Boring: B-8 Elev.:	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
							<input type="checkbox"/> Remoulded <input type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input type="checkbox"/> Rock Core	<input type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
25									COBBLY SAND (SW), gray brown, dry.
	B-8 25'	0							
30									COBBLY SAND (SW), gray brown, dry.
	B-8 30'	0							
35					Bentonite Grout				COBBLY SAND (SW), gray brown, dry.
	B-8 35'	0			4" Diameter Well Casing				
40									GRAVELLY SAND (SW), brown, fine to coarse grained with gravel to cobble size clasts.
	B-8 40'	0							
45					Bentonite Chips				CLAYEY SAND (SC), yellowish gray to red, with gravel, slightly moist.
	B-8 45'	0							
50					0.02" Screen Slot Size #3 Sand				CLAYEY SAND (SC), yellowish gray to red, with gravel, slightly moist.

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LOG OF BORING B-8

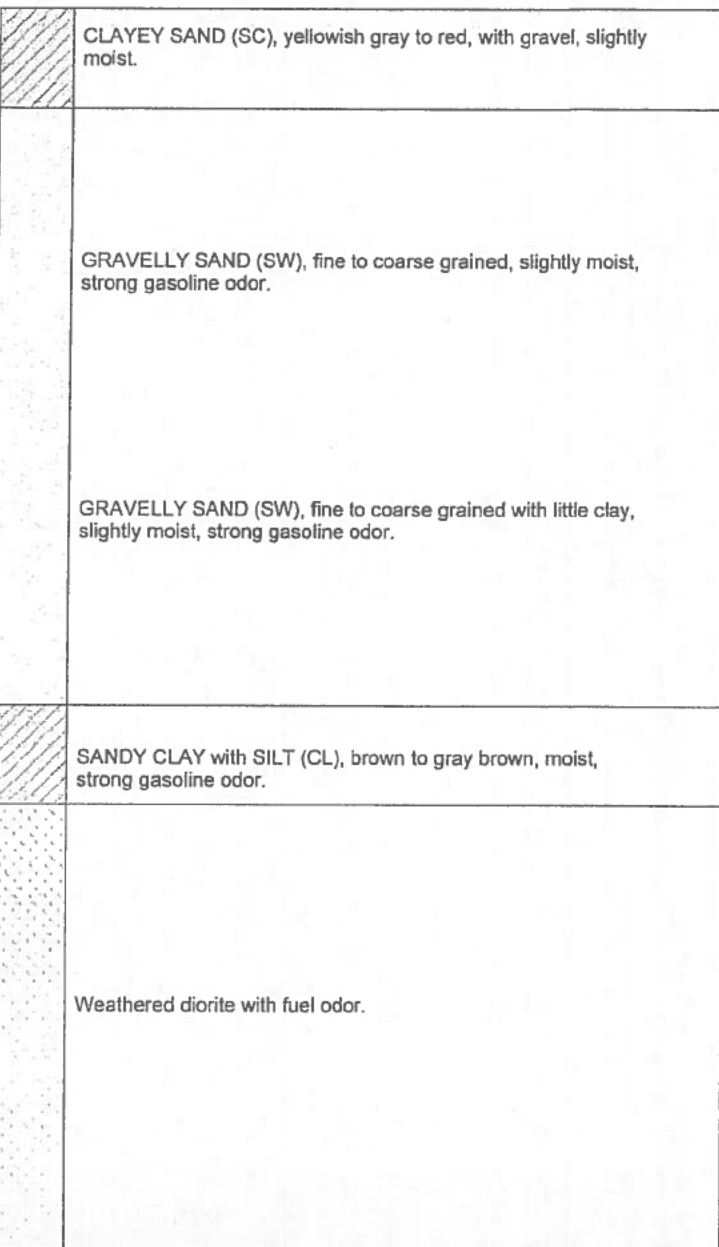
(Page 3 of 4)

Foothill Gas Mart
2660 Foothill Boulevard
La Crescenta, CA

Drilled By: : Boart Longyear
Drill Method: : Sonic
Date: : 08/28/2007
Hole Size: : 12 inch
Geologist: : Fred Bigony

Total Depth: : 88 Feet

Depth in feet	Sample ID	PID (ppm)	Samples	Blow Count	Boring: B-8 Elev.:	GRAPHIC	Sample Condition	Water Levels
							<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion
							DESCRIPTION	
50							<input checked="" type="checkbox"/> Remoulded	<input checked="" type="checkbox"/> During Drilling
50	B-8 50'	0					<input checked="" type="checkbox"/> Undisturbed	<input type="checkbox"/> After Completion
55							<input type="checkbox"/> Not Recovered	
55	B-8 55'	0					<input checked="" type="checkbox"/> Rock Core	
60								
60	B-8 60'	0						
65								
65	B-8 65'	0						
70								
70	B-8 70'	0						
75								

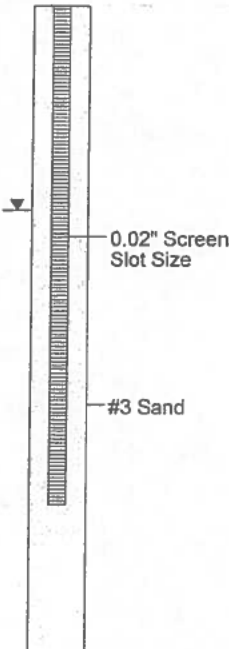


LOG OF BORING B-8

Foothill Gas Mart
 2660 Foothill Boulevard
 La Crescenta, CA

Drilled By: : Boart Longyear Total Depth: : 88 Feet
 Drill Method: : Sonic
 Date: : 08/28/2007
 Hole Size: : 12 inch
 Geologist: : Fred Bigony

Depth in feet	Sample ID	PID (ppm)	Samples	Blow Count	Boring: B-8 Elev.:	GRAPHIC	Sample Condition	Water Levels
							<input type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion
						DESCRIPTION		
75							Weathered diorite with fuel odor.	
B-8 75'	0						CLAYEY SAND (SC), gray-brown, very moist to saturated.	
80							Saturated sand.	
B-8 80'	0						Dry weathered diorite.	
B-8 85'	0							
90								
95								
100								





LOG OF BORING MW-4

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/12-14/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 198 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion
								DESCRIPTION	
0								4-Inch rolled AC. Hand Auger down to 5 feet	
5	MW-4-5	0		50+	12:00			Brown to dark brown SAND-GRAVEL mixture (GW), med-coarse sand and fine to medium gravel, dry to damp, very dense, no stain or odor.	
10	MW-4-10	0		50+	12:25			Brown to dark brown well graded SAND (SW) with trace gravel, dry to damp, slightly orange-brown mottling and possible trace of caliche, no stain or odor	
15	MW-4-15	0		50+	12:35			Same as above	
20	MW-4-20	0		50+	12:58			Light brown, medium GRAVEL (GP) with trace to minor fine sand, dry, very dense, no stain or odor	
25									

11-21-2010



LOG OF BORING MW-4

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/12-14/2010
 Hole Size: : 8-In Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 198 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion
DESCRIPTION									
25		0		50+	1:15				No Recovery
30		0		50+	1:30				No Recovery
35	MW-4-35	0		50+	2:03				Light brown to brown, well graded SAND (SW) with trace to minor gravel, dry, no stain or odor.
40	MW-4-40	0		50+	2:22				Same as above
45	MW-4-45	0		50+	2:43				Same as above
50									

11-21-2010



LOG OF BORING MW-4

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/12-14/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 198 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								Remoulded Undisturbed Not Recovered Rock Core	During Drilling After Completion
DESCRIPTION									
50	MW-4-50	0	50+	3:04					Same as above
55	MW-4-55	0	50+	4:00					Same as above
60	MW-4-60	0	50+	4:10					Same as above
65	MW-4-65	0	50+	9:03					Same as above
70	MW-4-70	0	50+	9:08					Same as above
75									

10/12/2010
10/13/2010



Geo-Cal, inc.
 Environmental & Geotechnical Engineering
 4370 Hallmark Parkway, Suite 101
 San Bernardino, CA 92407

LOG OF BORING MW-4

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/12-14/2010
 Hole Size: : 8-In Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.

Total Depth: : 198 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion
DESCRIPTION									
75		0		50+	9:20				
								No recovery, cyclone discharge suggests fine to medium sand SAND (SW) with fines and no gravel	
80	MW-4-80	0		50+	9:35				
								Brown medium and coarse SAND (SW) with gravel, dry, very dense No stain or odor.	
								Possible cobbles	
85	MW-4-85	0		50+	9:45				
								Same as above	
90	MW-4-90	0		50+	10:00				
								Same as above, but with minor gravel and fines	
95	MW-4-95	0		50+	10:20				
								Brown SAND-GRAVEL mixture (GW), well graded sand and fine to medium gravel and trace fines, dry to damp, very dense no stains or odor.	
								Possible cobbles	
100									

11-21-2010



LOG OF BORING MW-4

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/12-14/2010
 Hole Size: : 8-In Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 198 ft.

Depth In Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input checked="" type="checkbox"/> After Completion
DESCRIPTION									
100	MW-4-100	0	50+	10:35					Same as above
105	MW-4-105	0	50+	10:58					Same as above
110	MW-4-110	0	50+	11:30					Brown, fine and coarse SAND (SW), little or no fines, trace gravel, dry, very dense, no stain or odor
115	MW-4-115	0	50+	2:45					Light brown SAND-GRAVEL mixture (GW) fine-medium-coarse sand and medium-coarse gravel, very dense, dry, no stains or odor
120	MW-4-120	0	50+	3:09					Same as above, but darker in color
125									

LOG OF BORING MW-4

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America Total Depth: : 198 ft.
Drill Method: : Direct Air Rotary
Date: : 10/12-14/2010
Hole Size: : 8-in Diam
Geologist: : Kenneth W. Pitchford, C.E.G.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion
DESCRIPTION									
125	MW-4-125	0		50+	3:35				
								Same as above, but damp (possible formation moisture or drill mist)	
130	MW-4-130	0		50+	4:03				
								Brown, well graded SAND (SW) with fines, very dense, dry to damp, no stain or odor	
135	No Recovery								
									Cobble zone
140	MW-4-140	0		50+	4:25				
								Same as above, with orange FeOx mottling, damp	
145	MW-4-145	0		50+	4:40				
								Same as above	
150									



LOG OF BORING MW-4

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
Drill Method: : Direct Air Rotary
Date: : 10/12-14/2010
Hole Size: : 8-In Diam
Geologist: : Kenneth W. Pitchford, C.E.G.
Total Depth: : 198 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
175	MW-4-175	0		50+	10:25					Same as above, but with fines and gravel, wet, very dense, no stain, no sheen, or odor
180	MW-4-180	0		50+	10:45					Same as above, but no gravel, saturated, collected the 180 ft. sample, retracted drill bit to 170 feet, sounded borehole, static water level at 172.70 feet
185	MW-4-185	0		50+	11:37					Same as above, but with trace gravel
190	MW-4-190	0		50+	11:48					Same as above, but with silt
										Brown, medium SAND (SF), saturated, no stain, very dense, no sheen or odor
195	MW-4-195	0		50+	12:00					Brown, fine-medium-coarse SAND (SW) with appreciable fines, saturated, very dense, no stain, sheen, or odor
200										

11-29-2010



LOG OF BORING MW-5

FOOTHILL GAS MART
2860 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/15-17/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 201.5 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input checked="" type="checkbox"/> After Completion
DESCRIPTION									
0								SAND, 6-Inch concrete over base, Hand Auger down to 5'	
5	MW-5-5	0	<input checked="" type="checkbox"/>	NA	1:30			Brown medium SAND (SP), little or no fines, dry to damp, medium dense no stainer odor	
10	MW-5-10	0	<input checked="" type="checkbox"/>	NA	2:00			Cobble zone Light gray SAND-GRAVEL (GP) mixture, medium and coarse sand, medium to coarse gravel, grandiorite rock, dry, dense, no stain or odor	
20	MW-5-20	0	<input checked="" type="checkbox"/>	NA	2:30			Brown, well graded, SAND (SW) with trace gravel, dry, dense, no stain or odor	
25								Gray GRAVEL (GP) with sand	



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LOG OF BORING MW-5

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/15-17/2010
 Hole Size: : E-in Diam
 Geologist: : Kenneth W. Fitchford, C.E.G.
 Total Depth: : 201.5 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion
								DESCRIPTION	
25	MW-5-25		<input checked="" type="checkbox"/>						
30	MW-5-30		<input checked="" type="checkbox"/>		3:10				
35	MW-5-35		<input checked="" type="checkbox"/>						
40	MW-5-40		<input checked="" type="checkbox"/>		3:30				
45	MW-5-45		<input checked="" type="checkbox"/>						
50									

11-22-2010



LOG OF BORING MW-5

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/15-17/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 201.5 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
50	MW-4-50	0		50+	3:55					Gray-brown fine SAND (SP), with trace coarse sand and fine gravel, dry, very dense, possible faint HC odor.
55	MW-4-55	0		50+	4:10					
60	MW-4-60	0		50+	4:25					Same as above, but more brownish color and moderate HC odor
65	MW-4-65	0		50+	4:38					
70	MW-4-70	0		50+	4:50					Same as above, but with strong HC odor
75										

11-22-2010

LOG OF BORING MW-5

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/15-17/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 201.5 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition		Water Levels		DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded	<input type="checkbox"/> Undisturbed	<input checked="" type="checkbox"/> During Drilling	<input checked="" type="checkbox"/> After Completion	
								<input type="checkbox"/> Not Recovered				
								<input checked="" type="checkbox"/> Rock Core				
75												
												Cobble zone
80					5:05							Gray well graded SAND (SW) dry, very dense, no stain or odor
85												Gray fine SAND (SP) with trace gravel and silt, damp, very dense, possible faint HC odor.
90		0		55+	9:10							Cobble zone
												10/15/2010 10/16/2010
95	MW-5-95	0		55+	9:30							Gray-brown SAND-GRAVEL mixture (GP), fine and coarse sand and fine gravel, dry, very dense, no stain or odor
												Large boulder(s) and cobbles.
100												

11-22-2010



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LOG OF BORING MW-5

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/15-17/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.

Total Depth: : 201.5 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion
DESCRIPTION									
100	MW-5-100	0		50+	9:35			Same as above	
								Boulder(s) ?	
105	MW-5-105	0		50+	9:40			Same as above	
								Boulders(s)	
110	MW-5-110	0		50+	10:20			Same of above	
								Note: Drive additional conductor casing from 90 to 110 ft. Extreme resistance to conductor in boulder zone below 95 ft.	
115	MW-5-115	0		50+	11:35			Same as above	
								Boulder(s)?	
120	MW-5-120	0		50+	12:02			Same as above	
								Boulder(s)?	
125									

LOG OF BORING MW-5

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/15-17/2010
 Hole Size: : 10-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.

Total Depth: : 201.5 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition		Water Levels	
								Remoulded	Undisturbed	During Drilling	After Completion
								Not Recovered	Rock Core	DESCRIPTION	
125	MW-5-125	0	50+	12:15							Brown, well graded SAND(SW) with minor gravel, dry to damp, very dense no stain or odor. Boulder(s)?
130	MW-5-130	0	50+	12:40							Same as above, but with no gravel
135	MW-5-135										Same as above but darker brown in color
140	MW-5-140	0	50+	10:05							Dark brown SAND-GRAVEL mixture (SW-GW), dry, very dense, no stain or odor
145	MW-5-145	0	50+	10:35							Same as above
150											



LOG OF BORING MW-5

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/15-17/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 201.5 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
150	MW-4-150	0		50+	4:45					Same as above. Ferruginous mottling and some silty-clayey content
155	MW-4-155	0		50+	5:06					Brown, well graded SAND (SW), with trace of fine gravel, dry, very dense, no stains or odor
160		0		50+	9:20					Dark brown SAND-GRAVEL mixture (GW), fine-medium-coarse sand and gravel, dry to damp, very dense, no stain or odor
165		0		50+	9:50					Same as above Note: No recovery at 160' and 165'
170	MW-4-170	0		50+	10:10					Same as above
175										

11-29-2010



LOG OF BORING MW-5

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/15-17/2010
 Hole Size: : 8-In Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.

Total Depth: : 201.5ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
175	MW-5-175	0	50+	12:00		▼				Static water level at 175.5'
180	MW-5-180	0	50+	12:08						Dark brown medium SAND (SP), with trace fine and coarse sand, little or no fines, damp, very dense, no stain or odor.
185	MW-5-185	0	50+	1:38						Dark brown SAND-GRAVEL mixture (GW) Fine-medium, coarse sand and fine gravel, little or no fines, saturated, very dense, no stain, sheen, or odor.
190	MW-5-190	0	50+	1:52						Gray-brown, medium SAND (SP) with little or no fines, saturated, very dense, no stain, sheen, or odor.
195	MW-5-195	0	50+	2:10						Gray-brown SILTY SAND (SM). Fine to medium, with some clay, saturated, very dense, no stain, sheen, or odor
200										

11-25-2010



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LOG OF BORING MW-5

Foothill Gas Mart
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
Drill Method: : Direct Air Rotary
Date: : 10/15-17/2010
Hole Size: : 8-In Diam
Geologist: : Kenneth W. Pitchford, C.E.G.

Total Depth: : 201.5 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded <input type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input type="checkbox"/> Rock Core	<input type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
200	MW-5-200	0	<input checked="" type="checkbox"/>	50+	2:25				<input type="checkbox"/>	Same as above Drill chatter, possible cobbles
205										
210										
215										
220										
225										



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LOG OF BORING MW-6

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
Drill Method: : Direct Air Rotary
Date: : 10/20-21/2010
Hole Size: : 8-in Diam
Geologist: : Kenneth W. Pitchford, C.E.G.
Total Depth: : 205 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
0										6-Inch concrete pavement, over 4-in base gravel, hand augered down to 5'
5	MW-6-5	0	X	NA	11:55					Gray, SANDY GRAVEL (GW), little or no fines, dry, medium dense, no stains or odor.
10	MW-6-10	0	X	NA	12:12					Same as above
15	MW-6-15	0	X	NA	12:30					Dark brown, fine to medium SAND (SP), dry to damp.
20	MW-6-20	0	X	NA	12:40					Gray-brown SAND-GRAVEL mixture (GW), well graded, dry, no stain or odor.
25										

11-22-2010



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LOG OF BORING MW-6

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/20-21/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Fitchford, C.E.G.
 Total Depth: : 205 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input checked="" type="checkbox"/> After Completion	
DESCRIPTION										
25	MW-6-25	0	X	NA	12:50					Dark brown, well graded SAND (SW), little or no fines, dry, very dense
30	MW-6-30	0	X	NA	12:35					Same as above, but lighter brown color and trace gravel.
35	MW-6-35	0	X	NA	1:10					Same as above, but light gray color and coarse sand with broken rock fragments, and drill chatter suggest possible cobbles in 33-35 foot interval
40	MW-6-40	0	X	NA	3:00					Brown, fine SAND (SP) with trace fines and gravel, dry, very dense, no stain or odor.
45	MW-6-45	0	X	NA	3:05					Same as above
50										

11-22-2010



LOG OF BORING MW-6

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
Drill Method: : Direct Air Rotary
Date: : 10/20-21/2010
Hole Size: : 8-In Diam
Geologist: : Kenneth W. Pitchford, C.E.G.
Total Depth: : 205 ft.

Depth In Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition		Water Levels		DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded	<input checked="" type="checkbox"/> Undisturbed	<input type="checkbox"/> Not Recovered	<input checked="" type="checkbox"/> Rock Core	
50	MW-6-50	0	X	NA	3:15							Same as above
55	MW-6-55	0	X	NA	3:25							Medium brown, well graded SAND (SW). little or no fines, dry, very dense no stain or odor.
60	MW-6-60	0	X	NA	3:30							Same as above, but with some fines
65	MW-6-65	0	X	NA	3:45							Same as above
70	MW-6-70	0	X	NA	4:00							Gray-brown SAND-GRAVEL mixture (GW), very dense, dry, no stains, or odor Note: Abundant broken rock fragments suggest possible cobbles and/or boulder. Conductor at 70 feet
75												Brown, fine SAND (SP), with traces of fines, dry, very dense, no stains, or odor

11-21-2010



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LOG OF BORING MW-6

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/20-21/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.

Total Depth: : 205 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded <input type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
75	MW-6-75	0	<input checked="" type="checkbox"/>	NA	4:10					Same as above
80	MW-6-80	0	<input checked="" type="checkbox"/>	NA	4:20					Brown, fine SILTY SAND (SM), dry, very dense, no stain or odor
85	MW-6-85	0	<input checked="" type="checkbox"/>	NA	4:30					Same as above
										Trip in new bit and drill string
90	MW-6-90	0	<input type="checkbox"/>	55+	5:00					Gray-brown SAND-GRAVEL mixture (GW), with little or no fines, dry, very dense, no stain or odor
95	MW-6-95	0	<input type="checkbox"/>	55+	8:15					Gray-brown, medium GRAVEL (GP), angular clasts, little or no sand or fines, dry, very dense, no stain or odor.
100										

11-22-2010



LOG OF BORING MW-6

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Cresenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/20-21/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.

Total Depth: : 205 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
DESCRIPTION										
100	MW-6-100	0		55+	8:25					Gray SAND- GRAVEL mixture (GW), Fine-medium-coarse sand and fine-medium gravel, with some fines, dry, very dense, no stain or odor.
105	MW-6-105	0		55+	8:35					Same as above, but dark brown color and trace clay
110	MW-6-110	0		55+	8:49					Same as above
115	MW-6-115	0		55+	9:12					Same as above, but with more clay, damp (due to drill misting). Slightly cohesive, no stain or odor.
120	MW-6-120	0		55+	9:26					Same as above
125										Same as above

11-22-2010



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LOG OF BORING MW-6

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/20-21/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 205 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input checked="" type="checkbox"/> After Completion
								DESCRIPTION	
125	MW-6-125	0		50+	9:26				Same as above
130	MW-6-130	0		50+	9:43				Dark brown fine SAND (SP) with trace of silt, dry to damp, very dense no stain or odor
135	MW-6-135				9:58				Dark brown SAND-GRAVEL mixture (GW), well graded, dry, very dense, no stain or odor
140	MW-6-140	0		50+	10:11				Same as above
145	MW-6-145	0		50+	10:32				Gray GRAVEL(GP) with some medium and coarse sand and little or no fines, dry, very dense, no stain or odor
150									

11-22-2010

LOG OF BORING MW-6

FOOTHILL GAS MART
2660 W. Foothill Blvd.
La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/20-21/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 205 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								<input checked="" type="checkbox"/> Remoulded <input checked="" type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input checked="" type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion
DESCRIPTION									
150	MW-6-150	0		50+	10:45				
									Brown SAND-GRAVEL mixture (GW) well graded with silt, dry, very dense no stain or odor.
155	MW-6-155	0		50+	10:55				
									Brown fine SAND (SP) with trace medium sand and silt. Possible faint FeOx staining, dry, very dense, no stain or odor.
160	MW-6-160	0		50+	11:05				
									Dark brown SAND-GRAVEL mixture (GW) with trace fines, faint FeOx staining, dry, very dense no stain or odor.
165	MW-6-165	0		50+	11:20				
									Same as above
170	MW-6-170	0		50+	11:34				
									Light gray fine to medium GRAVEL (GP). Little or no sand or fines, dry, very dense, no stain or odor.
									Dark brown, well graded SAND (SW), very dense, no stain, or odor.
175									



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LOG OF BORING MW-6

FOOTHILL GAS MART
 2660 W. Foothill Blvd.
 La Crescenta, CA

Drilled By: : Test America
 Drill Method: : Direct Air Rotary
 Date: : 10/20-21/2010
 Hole Size: : 8-in Diam
 Geologist: : Kenneth W. Pitchford, C.E.G.
 Total Depth: : 205 ft.

Depth in Feet	Sample ID	PID (ppm)	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels
								☒ Remoulded ■ Undisturbed □ Not Recovered ▣ Rock Core	▼ During Drilling ▽ After Completion
DESCRIPTION									
175	MW-6-175	0	■	50+	11:50				
Dark brown well graded SAND (SW) with trace fines and fine gravel, dry to damp, very dense, no stain or odor.									
static water level at 177.5 feet									
180	MW-6-180	0	■	50+	12:04				
Gray-brown SAND-GRAVEL mixture (GW) well graded, little or no fines, dry, very dense, no stain or odor									
185	MW-6-185	0	■	50+	2:00				
190	MW-6-190	0	■	50+	2:10				
Same as above									
195	MW-6-195	0	☒	50+	3:20				
Cyclone grab samples 193-205 feet are rock fragments, suggesting dense cobble zone. No drive sample recovered, extreme drill resistance.									
200									

11-22-2010

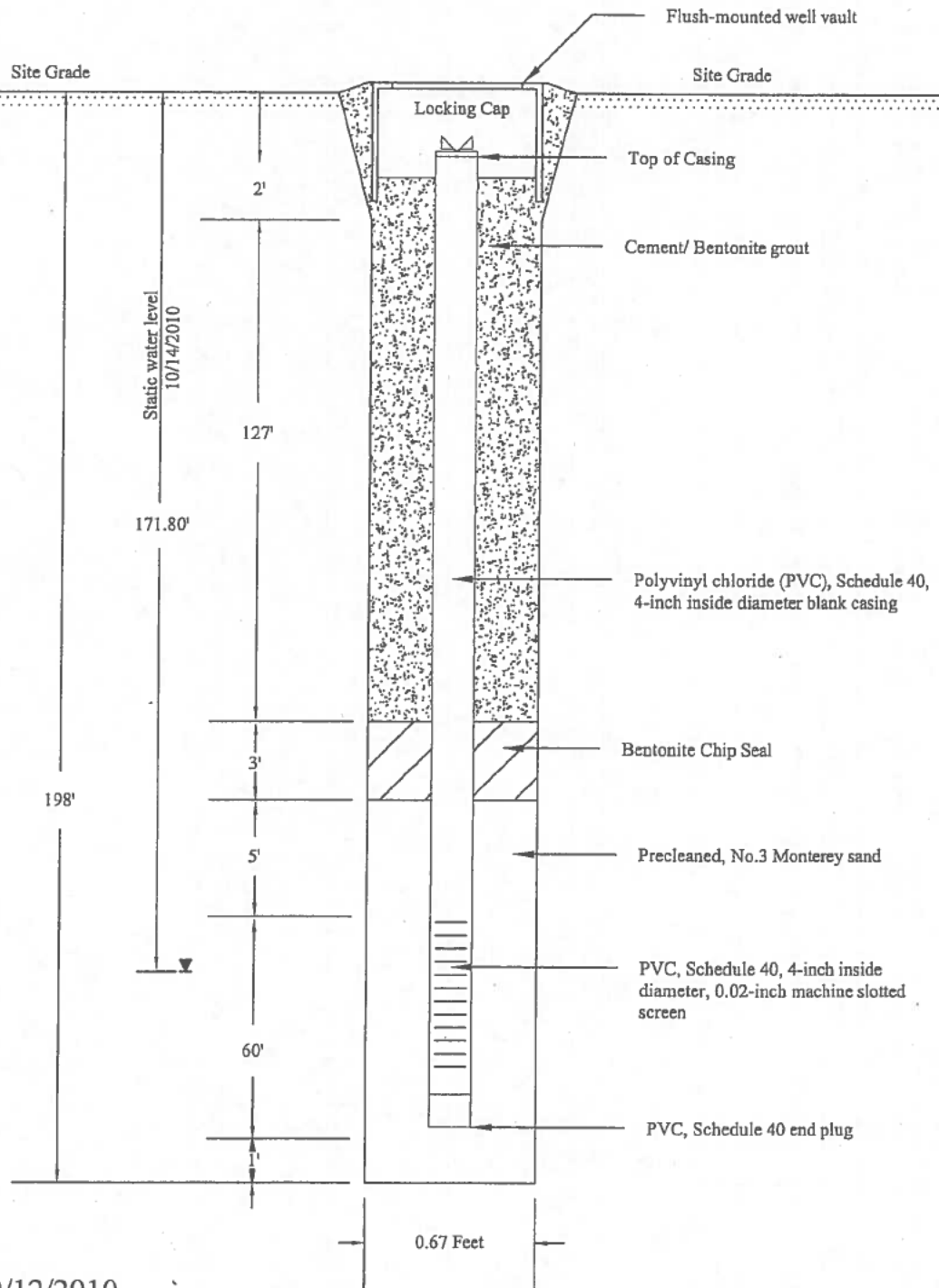


LOG OF BORING MW-6

<p style="text-align: center;">FOOTHILL GAS MART 2660 W. Foothill Blvd. La Crescenta, CA</p>	Drilled By: : Test America Drill Method: : Direct Air Rotery Date: : 10/20-21/10 Hole Size: : 8-in Diam Geologist: : Kenneth W. Pitchford, C.E.G.	Total Depth: : 205 ft.
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Depth in Feet	Sample ID	PID	Sample	Blow Count	Time	Water Level	GRAPHIC	Sample Condition	Water Levels	DESCRIPTION
								<input checked="" type="checkbox"/> Remoulded <input type="checkbox"/> Undisturbed <input type="checkbox"/> Not Recovered <input type="checkbox"/> Rock Core	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion	
200			X		3:40					Same as above
205										
210										
215										
220										
225										

11-21-2010



Drilling began : 10/12/2010
 Drilling ended : 10/14/2010
 Well installed : 10/14/2010

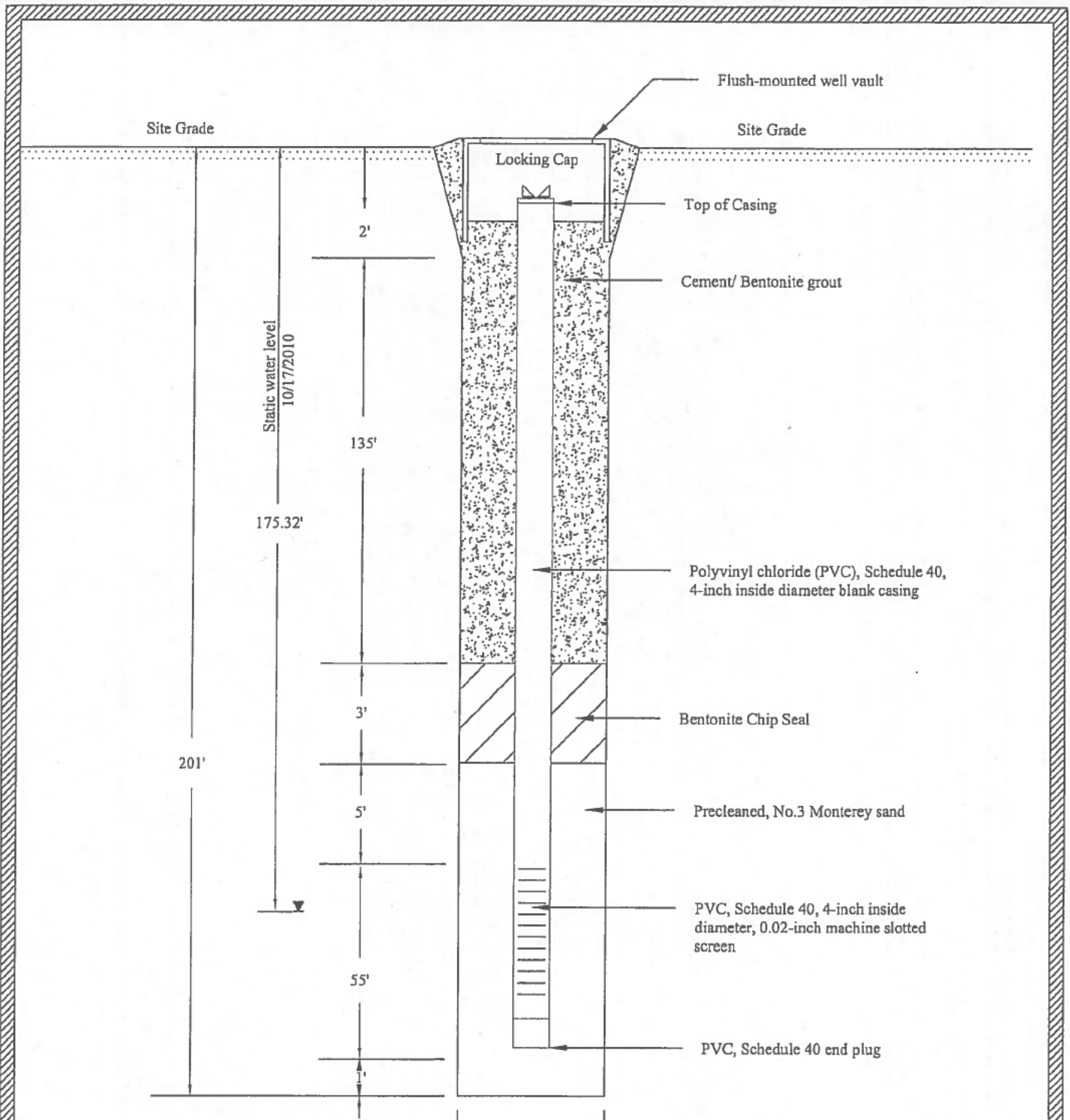


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Construction Detail of Groundwater Monitoring Well
 MW-4 (October 14, 2010)

Foothill Gas Mart
 2660 W. Foothill Blvd.
 La Crescenta, CA



Drilling began : 10/15/2010
 Drilling ended : 10/17/2010
 Well installed : 10/18/2010

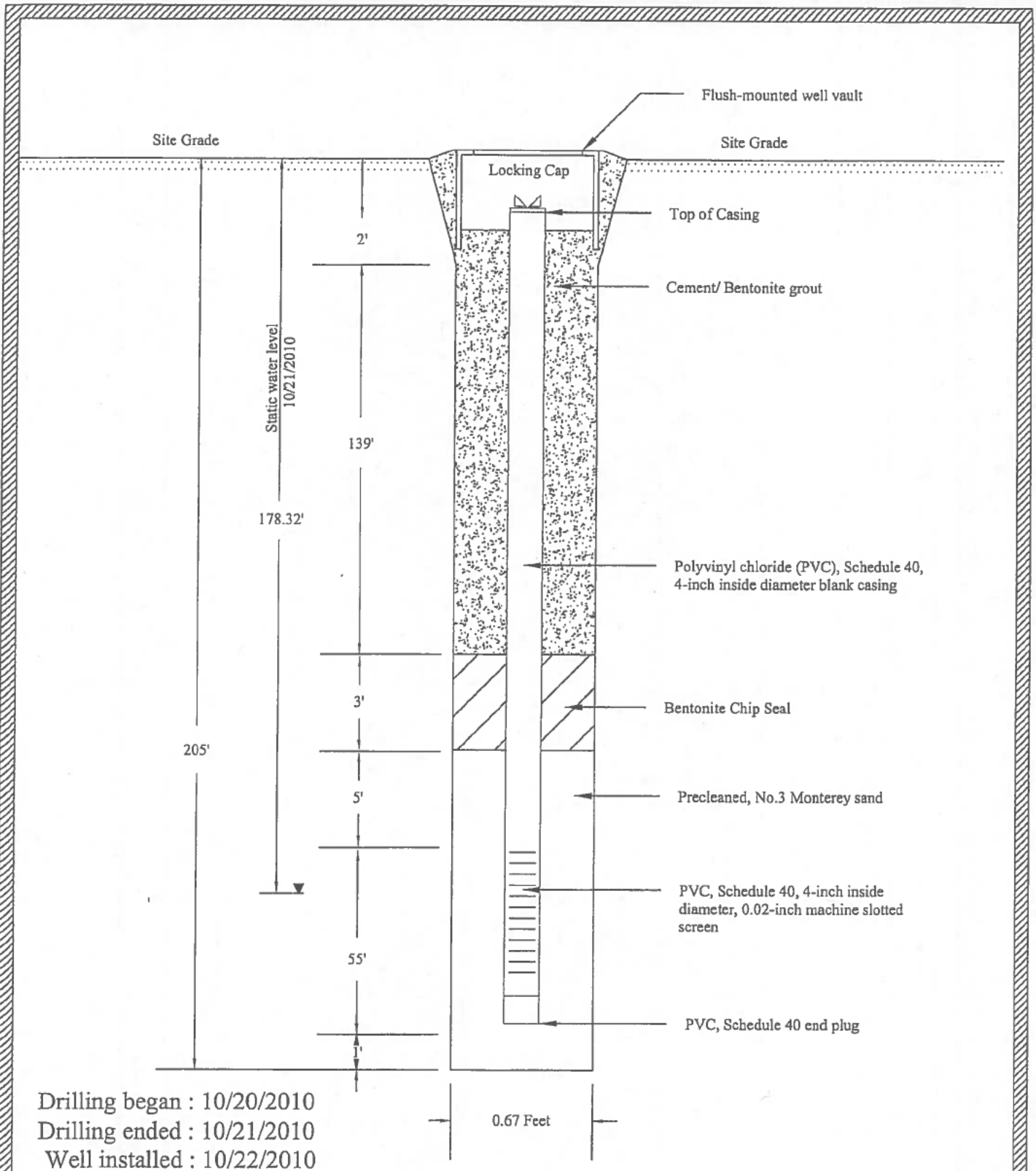


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 San Bernardino CA 92407

**Construction Detail of Groundwater Monitoring Well
 MW-5 (October 18, 2010)**

Foothill Gas Mart
 2660 W. Foothill Blvd.
 La Crescenta, CA

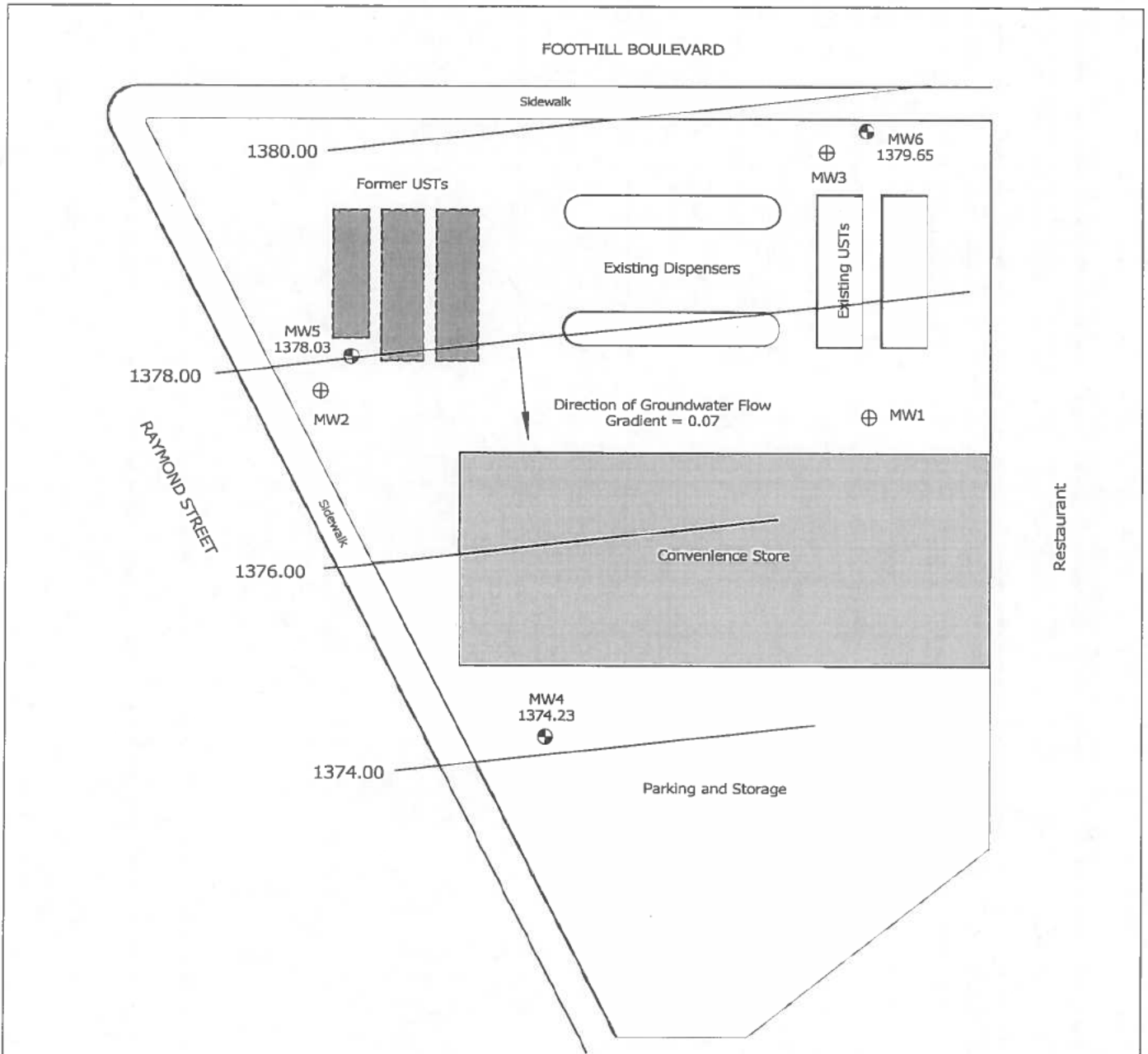


Drilling began : 10/20/2010
 Drilling ended : 10/21/2010
 Well installed : 10/22/2010

Construction Detail of Groundwater Monitoring Well
 MW-6 (October 22,2010)

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Foothill Gas Mart
 2660 W. Foothill Blvd.
 La Cresenta, CA



LEGEND

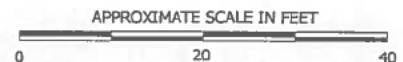
- ⊕ Groundwater Monitoring Wells
- ⊕ Groundwater Monitoring Wells (Dry)

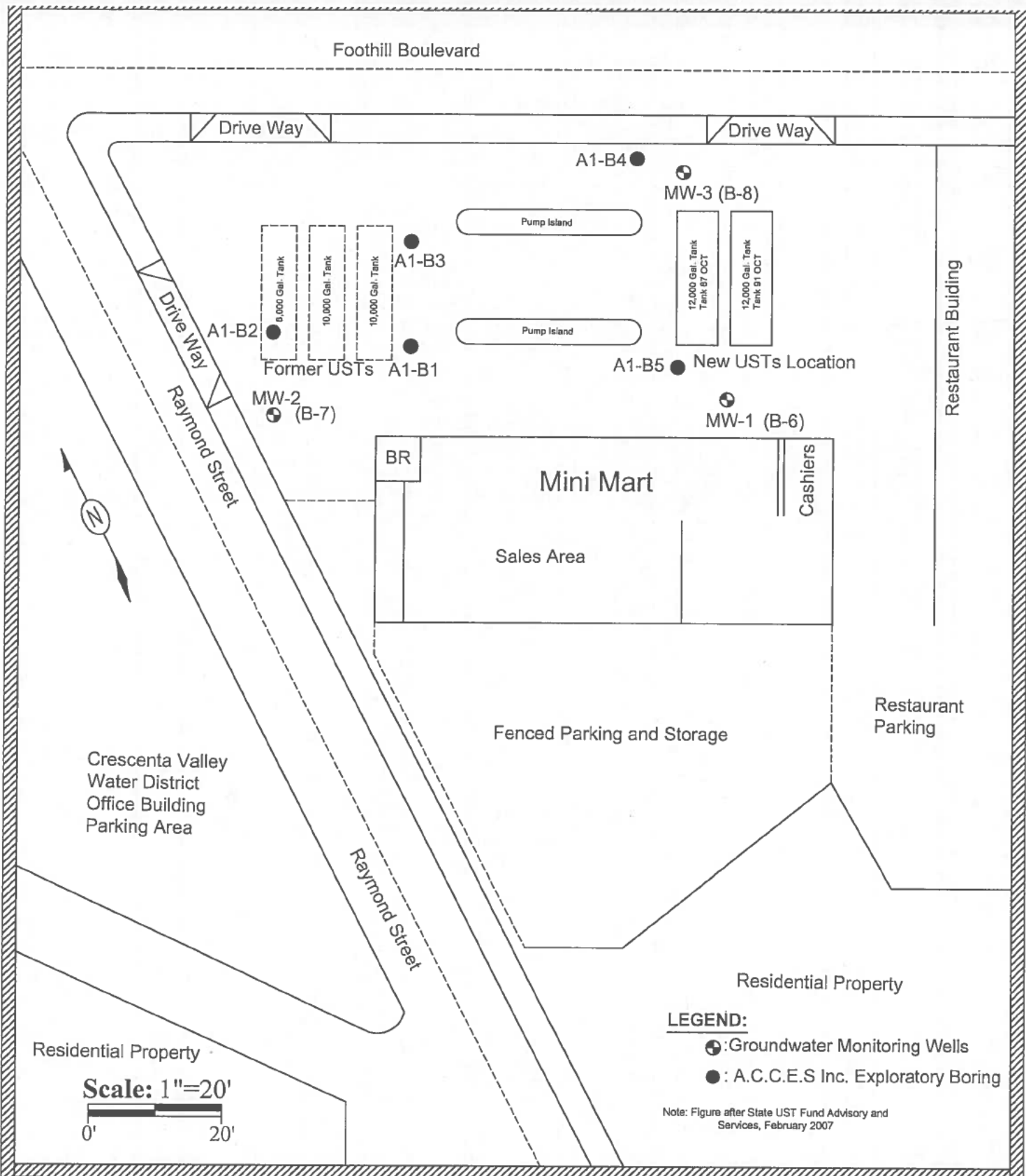
FIGURE 3
 GROUNDWATER GRADIENT MAP
 FOOTHILL GAS MART
 (VALERO SERVICE STATION)
 2660 West Foothill Boulevard
 La Crescenta, California

Groundwater Elevations Measured in Feet Above MSL (7/16/13).



GSA
 ENGINEERING, INC.





LEGEND:

- ⊕: Groundwater Monitoring Wells
- : A.C.C.E.S Inc. Exploratory Boring

Note: Figure after State UST Fund Advisory and Services, February 2007

Residential Property

Scale: 1"=20'

0' 20'

GEO-CAL, INC.
 Environmental & Geotechnical Engineering
 4370 Hallmark Prkwy. Ste #101
 San Bernardino CA 92407

**Figure 2
 Site Plan**

Foothill Gas Mart, Inc.
 2660 Foothill Boulevard
 La Crescenta, CA 91214

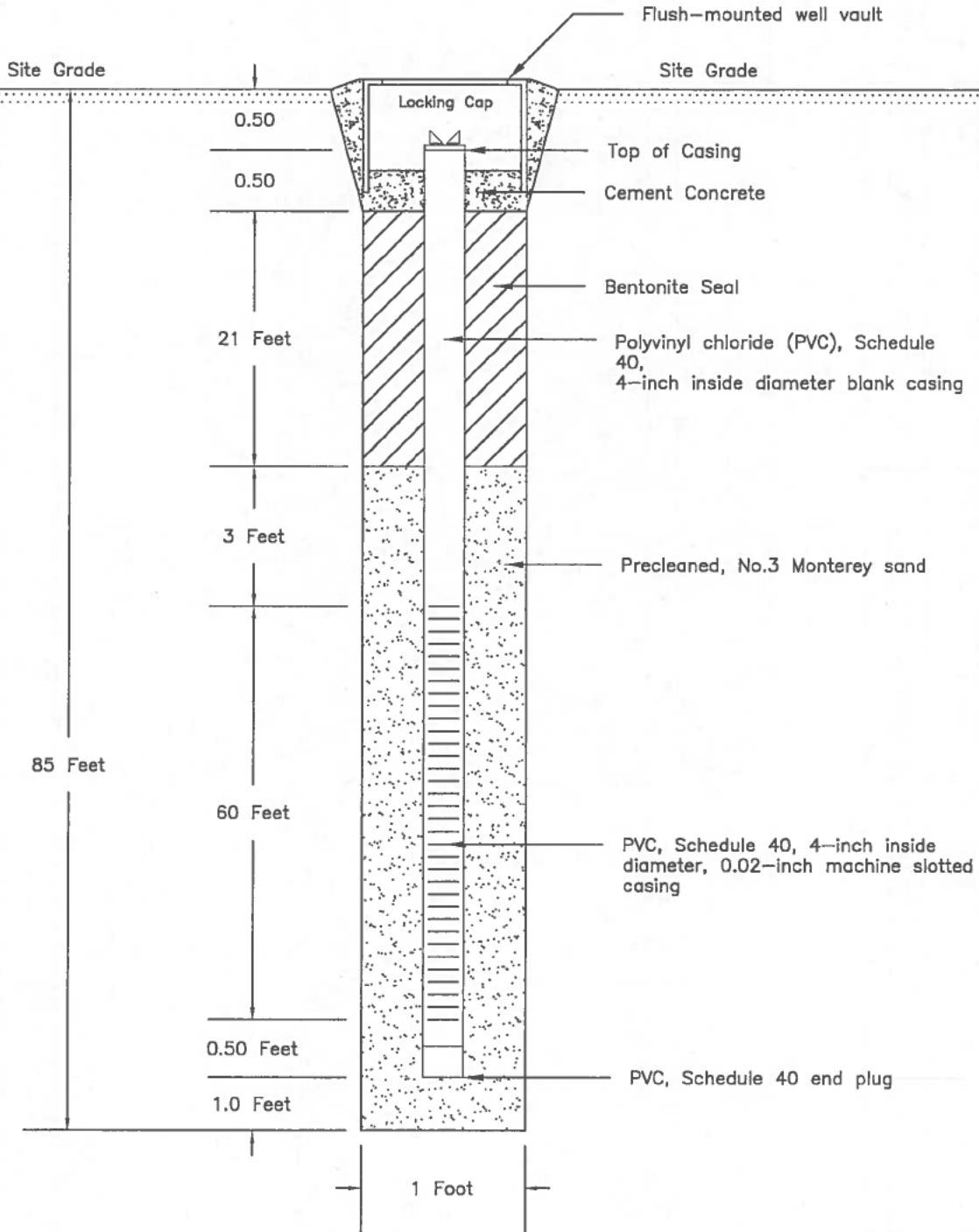


Figure 3
Groundwater Monitoring Well MW-1



GEO-CAL, INC.
Environmental & Geotechnical Engineering

4370 Hallmark Prkwy. Ste #101
San Bernardino CA 92407

Foothill Gas Mart
2660 Foothill Blvd
La Crescenta, CA

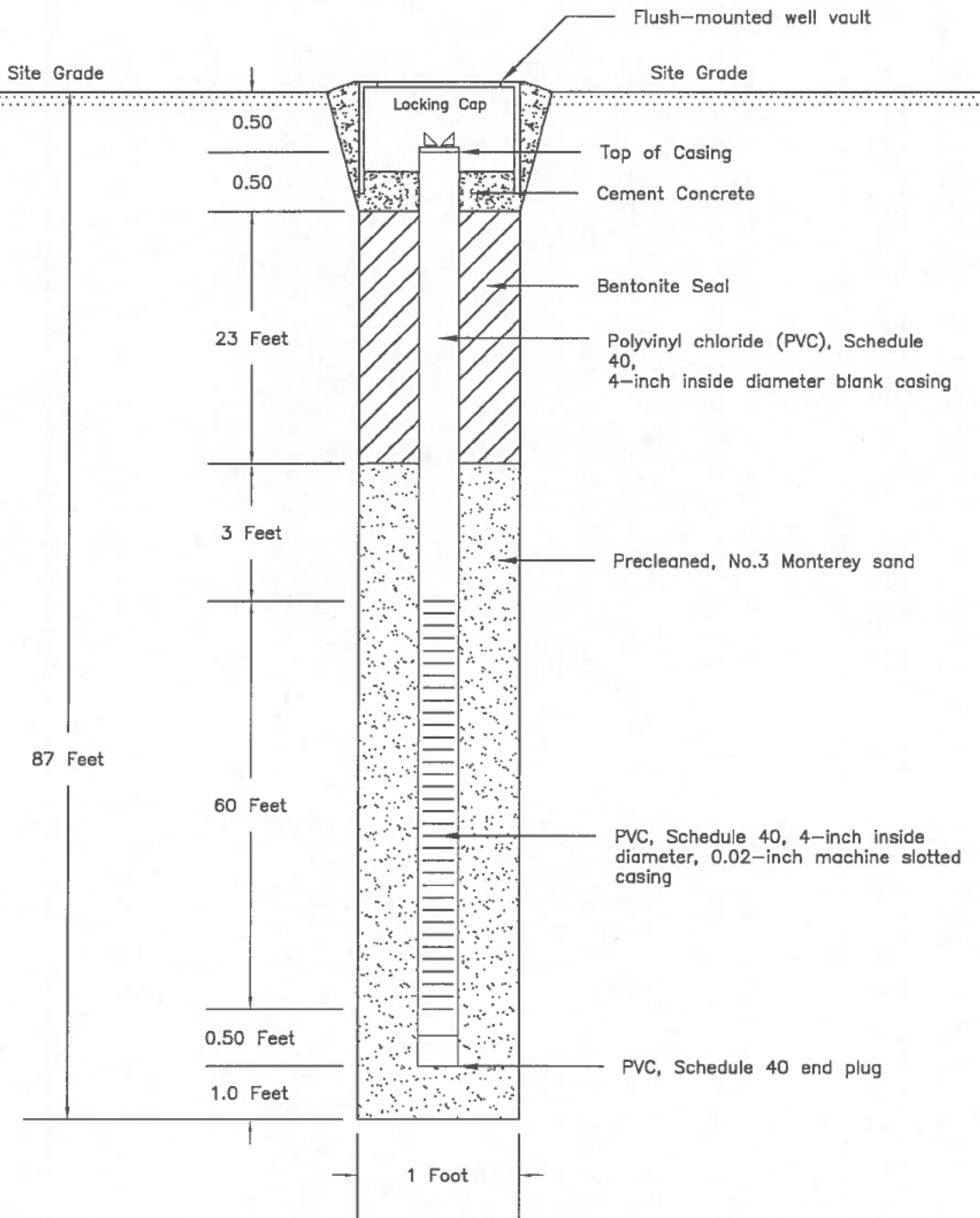


Figure 4
Groundwater Monitoring Well MW-2



GEO-CAL, INC.
Environmental & Geotechnical Engineering

4370 Hallmark Prkwy. Ste #101
San Bernardino CA 92407

Foothill Gas Mart
2660 Foothill Blvd
La Crescenta, CA

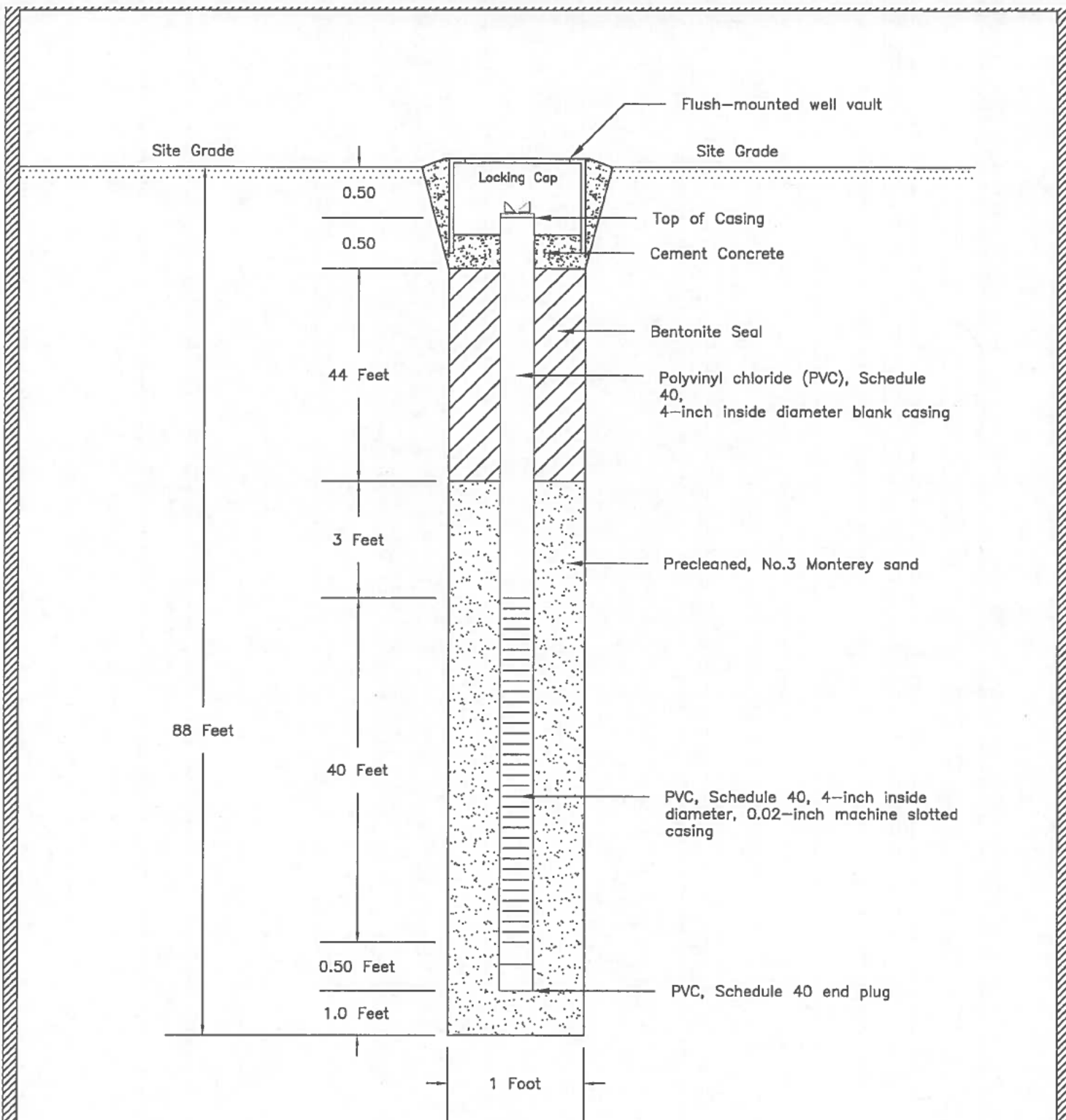


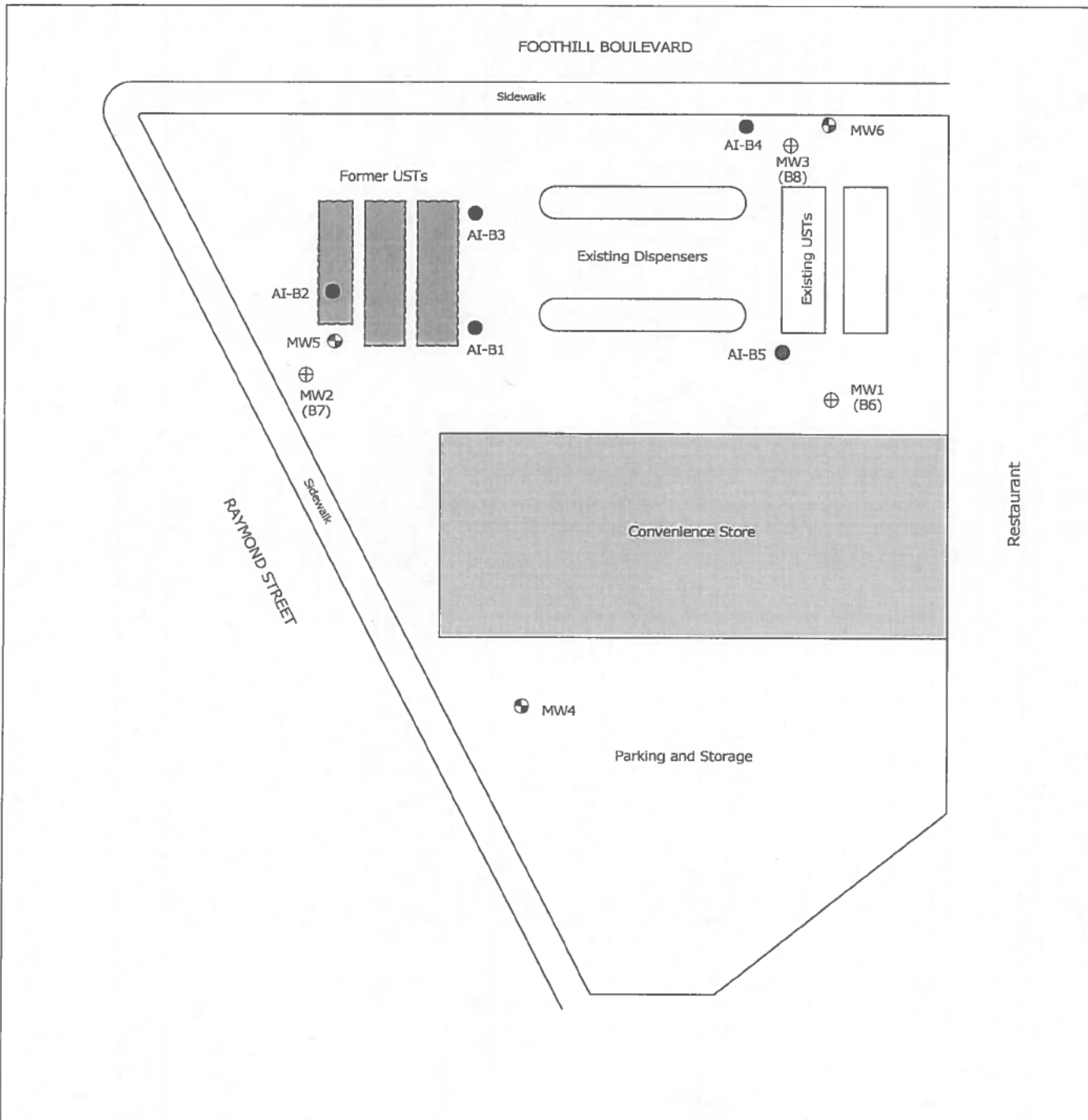
Figure 5
Groundwater Monitoring Well MW-3



GEO-CAL, INC.
Environmental & Geotechnical Engineering

4370 Hallmark Prkwy. Ste #101
San Bernardino CA 92407

Foothill Gas Mart
2660 Foothill Blvd
La Crescenta, CA



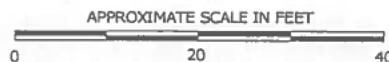
LEGEND

- ⊕ Groundwater Monitoring Wells
- ⊕ Groundwater Monitoring Wells (Dry)
- Soil Borings (Refusal at 21 ft)

FIGURE 1
 GENERAL SITE PLAN
 FOOTHILL GAS MART
 (VALERO SERVICE STATION)
 2660 West Foothill Boulevard
 La Crescenta, California



GSA
 ENGINEERING, INC.





ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
◆ Telephone: (626) 430-5420 ◆
http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Chevron Facility No. 9-6368 / 185850984		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://eqisgocx.isd.lacounty.gov/slv?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel.	5815-020-023	
WORK SITE ADDRESS:	ADDRESS 623 Foothill Boulevard	CITY La Canada Flintridge	ZIP CODE 91011
CROSS STREET(S):	Rinetti Lane		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		126.00
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): <u>30</u>			
Estimated groundwater depth: <u>40 feet</u>			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 126.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>Belinda</i>
DATE: <i>2/27/20</i>
SUPERVISOR'S INITIAL: <i>LM</i>
SITE / PERMIT NO.: SR <i>0215949</i>
INVOICE NO.: IN <i>0804774</i>



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
 ♦ Telephone: (626) 430-5420 ♦
http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS 623 Foothill Boulevard		CITY La Canada Flintridge	ZIP CODE 91011	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I ABC Liovin Drilling		C-57 LICENSE HOLDER NAME Vissili I Liovin	C-57 LICENSE NUMBER 422904	C-57 EXPIRATION DATE 6/30/2019
TELEPHONE NO. (909) 335-6116	MOBILE (714) 620-4883	E-MAIL ADDRESS ivan@abcdrilling.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO.	MOBILE	E-MAIL ADDRESS		
OWNER NAME Dominic Caresio		TELEPHONE / MOBILE (805) 667-8801	E-MAIL mlgoldenson@charter.net	
CONSULTANT Stantec Consulting Services Inc		OFFICE NUMBER (909) 335-6116		
PROJECT CONTACT Jaret Fischer	TELEPHONE NO. (909) 335-6116 Ext. 8209	MOBILE [REDACTED]	E-MAIL ADDRESS jaret.fischer@stantec.com	
PROJECT MANAGER Same as above	TELEPHONE NO. (909) 335-6116 Ext. 8209	MOBILE [REDACTED]	E-MAIL ADDRESS jaret.fischer@stantec.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

To:	Environmental Health Drinking Water Program 5050 Commerce Drive Baldwin Park, CA 91706	From:	Jaret Fischer 735 E Carnegie Drive, Suite 280 San Bernardino, CA 92408
File:	185850984	Date:	February 26, 2020

Reference: Written Narrative Describing Work Plan Details – 623 Foothill Boulevard, La Canada Flintridge, CA

Stantec will provide for the services of a field geologist or engineer to supervise and direct all on-site activities. Stantec is proposing to advance one (1) hollow stem auger boring to a depth of 30 feet below the ground surface (bgs) for a geotechnical investigation. No groundwater samples will be collected. The boring will be backfilled with bentonite grout and completed with concrete to match existing grade within 24 hours of boring construction using the tremie method.

Stantec Consulting Services Inc.



Jaret Fischer PE
Principal Engineer

Phone: (909) 255-8209
Jaret.Fischer@stantec.com



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS Casitas Well- 2369 N. El Sol Ave.		CITY Altadena	ZIP CODE 91001	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I General Pump Company, Inc.		C-57 LICENSE HOLDER NAME General Pump Company, Inc.	C-57 LICENSE NUMBER 496765	C-57 EXPIRATION DATE 8/31/2020
TELEPHONE NO. (909) 599-9606	MOBILE (909) 599-9606	E-MAIL ADDRESS mbodart@genpump.com / Mhaas@genpump.com / aesparza@genpump.com		
CALIFORNIA STATE REGISTERED DRILLER II N/A		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO.	MOBILE	E-MAIL ADDRESS		
OWNER NAME Pasadena, City of		TELEPHONE / MOBILE (626) 744-4486	E-MAIL Roumiana Voutchkova - rvoutchkova@cityofpasadena.net	
CONSULTANT N/A		OFFICE NUMBER		
PROJECT CONTACT	TELEPHONE NO. Ext.	MOBILE	E-MAIL ADDRESS	
PROJECT MANAGER	TELEPHONE NO. Ext.	MOBILE	E-MAIL ADDRESS	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Well construction logs
<input checked="" type="checkbox"/> Type and amount of sealant
<input checked="" type="checkbox"/> Method of assessment
<input checked="" type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

WELL PERMIT APPLICATION - PRODUCTION WELLS

DRINKING WATER PROGRAM - ENVIRONMENTAL HEALTH DIV.
5050 COMMERCE DRIVE, BALDWIN PARK, CA 91706 TELE (626) 430-5420 FAX (626) 813-3016

DATE 3/31/2020

NEW WELL CONSTRUCTION RECONSTRUCTION OR RENOVATION DECOMMISSIONING OTHER: _____
 PRIVATE DOMESTIC PRIVATE IRRIGATION OTHER: _____

WELL LOCATION

Site Address: **Casitas Well - 2369 N. El Sol Ave.** City: **Altadena, CA** Zip Code: **91001**
Township: _____ Range: _____ Section: _____ Map Book Page/Grid: _____
GPS location: (To be completed after the final seal)

WELL STRUCTURE

Type and Size of Production Casing: **18" 20' Ply 3, 10 Guage Steel** Sanitary / Annular Sealing Material: **Concrete**
Depth of Sanitary / Annular Seal: **N/A** Conductor Casing Seal: **N/A**

OWNER INFORMATION

Owner's Name: **Pasadena, City of** Telephone Number: **909-599-9606**
Address: **150 S. Los Robles Ave. Suite 200** City: **Pasadena, CA** Zip Code: **91101**

DRILLER INFORMATION

Driller's Name: **General Pump Company, Inc.** Telephone Number: **909-599-9606** C-57 License Number: **496765**
Address: **159 N. Acacia St.** City: **San Dimas, CA** Zip Code: **91773**

WELL DECOMMISSIONING INFORMATION

Well Depth: **533'** Method of Well Assessment: **Video log** Depth and Number of Perforations: **160'-220', 356'-376', 440'-446', and 450'-527'**
 log/records Type of Perforator: **Mills Knife** Size of Perforations: **N/A** Method of Upper Seal Pressure Application: **N/A**
Type and Amount of Scalant: **11 Sack sand 24 yds**

CONSULTANT INFORMATION

Company: **N/A**
Address: _____ City: _____ State: _____ Zip Code: _____
Project Manager: _____ Telephone Number: _____

ATTENTION: WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THIS DEPARTMENT.

I hereby agree to comply in every respect with all the regulations of the County Environmental Health Division and with all ordinances and laws of the County of Los Angeles and the State of California pertaining to well construction, reconstruction, and decommissioning. Upon completion of the well and within thirty days thereafter, I will furnish the Environmental Health office with a completion log of the well, giving date drilled, depth of the well, perforations in the casing, and any other data deemed necessary by the County Environmental Health Division.

Signature of C-57 Licensee:  Printed Name: **General Pump Company, Inc. Michael Bodart - President / Director of Engineering**

THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED OFF BY THE DEPUTY HEALTH OFFICER. WELL CONSTRUCTION OR DECOMMISSIONING CANNOT BE INITIATED WITHOUT A WORK PLAN APPROVAL FROM THIS DEPARTMENT.

***** (DEPARTMENT USE ONLY) *****

WORK PLAN APPROVAL This Approval is Valid for 180 Days	FINAL INSPECTION The placement of the annular seal must be witnessed by a Deputy Health Officer for the permit to be valid. Contact this Department to arrange for an appointment
REHS _____ DATE _____	REHS _____ DATE _____
Conditions:	WATER QUALITY The completed water well must be properly disinfected and meet required bacteriological and inorganic chemical standards prior to approval
	REHS _____ DATE _____
	PERMIT ISSUED Well completion log must be received by this Department prior to issuance of final approval
	REHS _____ DATE _____



159 N. ACACIA STREET * SAN DIMAS, CA 91773
PHONE: (909) 599-9606 * FAX: (909) 599-6238

CAMARILLO, CA 93010 * PHONE: (805) 482-1215
www.genpump.com

WELL & PUMP SERVICE SINCE 1952
Serving Southern California and Central Coast

Lic. #496765

April 2, 2020

LA County Environmental Health
5050 Commerce Dr.
Baldwin Park, CA 91706

Subject: Casitas Well Destruction permit

General Pump Company is pleased to submit the enclosed Application for well permit along with well decommission diagram, well information, video photos, site images, and a check payable to LA County Environmental Health for the above referenced project.

Please review the permit and let us know if you have any questions or additional information as we would like to decommission this well as soon as possible.

Thank you!

Sincerely,

GENERAL PUMP COMPANY, INC.



Alexa Esparza

Contracts Administrator

Well Location (Include distances from road and major cross streets)

Casitas Well -2369 N. El Sol Ave. Altadena, CA 91001

Projected Start Date

Projected End Date

WELL LOCATION DIAGRAM	WELL DECOMMISSIONING DIAGRAM
<p>At site inspection, the well location must be staked and clearly marked with the owner's name</p> <div style="text-align: center;"> <p>NORTH </p> <p>Figueroa Dr.</p> <p>Stonehurst Dr.</p> <p>WELL LOCATION</p> <p>El Sol Ave.</p> <p>N. Windsor Ave.</p> <p>Alberta St.</p> </div> <p>Provide a scaled drawing (1 inch = 50 feet) with labels and dimensions, indicating property lines, private sewage disposal systems and other possible sources of contamination within 200 feet of the well site. Attach all supporting documents.</p>	<p>*See attached Image</p> <div style="border: 1px solid black; height: 150px; width: 100%;"></div> <p>*See attached Image</p>

WORK PLAN DETAILS

(Construction or Decommissioning)

Install tremie pipe to pump the 18" casing from 151' to bottom with a 11-sack sand slurry.

The upper vault of shaft is dry and would be filled with a pea gravel to within 5' of the ground surface.

The upper 5' of the vault of shaft walls would be broken and then upper 5' would be filled with native soil and wheel packed.

****See attached letter and drawing**

NOTES/COMMENTS (Department Use Only)

BREAK OFF 5' bgs
FILL AND COMPACT
NATIVE SOIL

GROUND
SURFACE

85'

160'

5' X 9' HAND DUG
SHAFT

18"

130' bgs

151' bgs

FILL WITH
PEA GRAVEL

18"

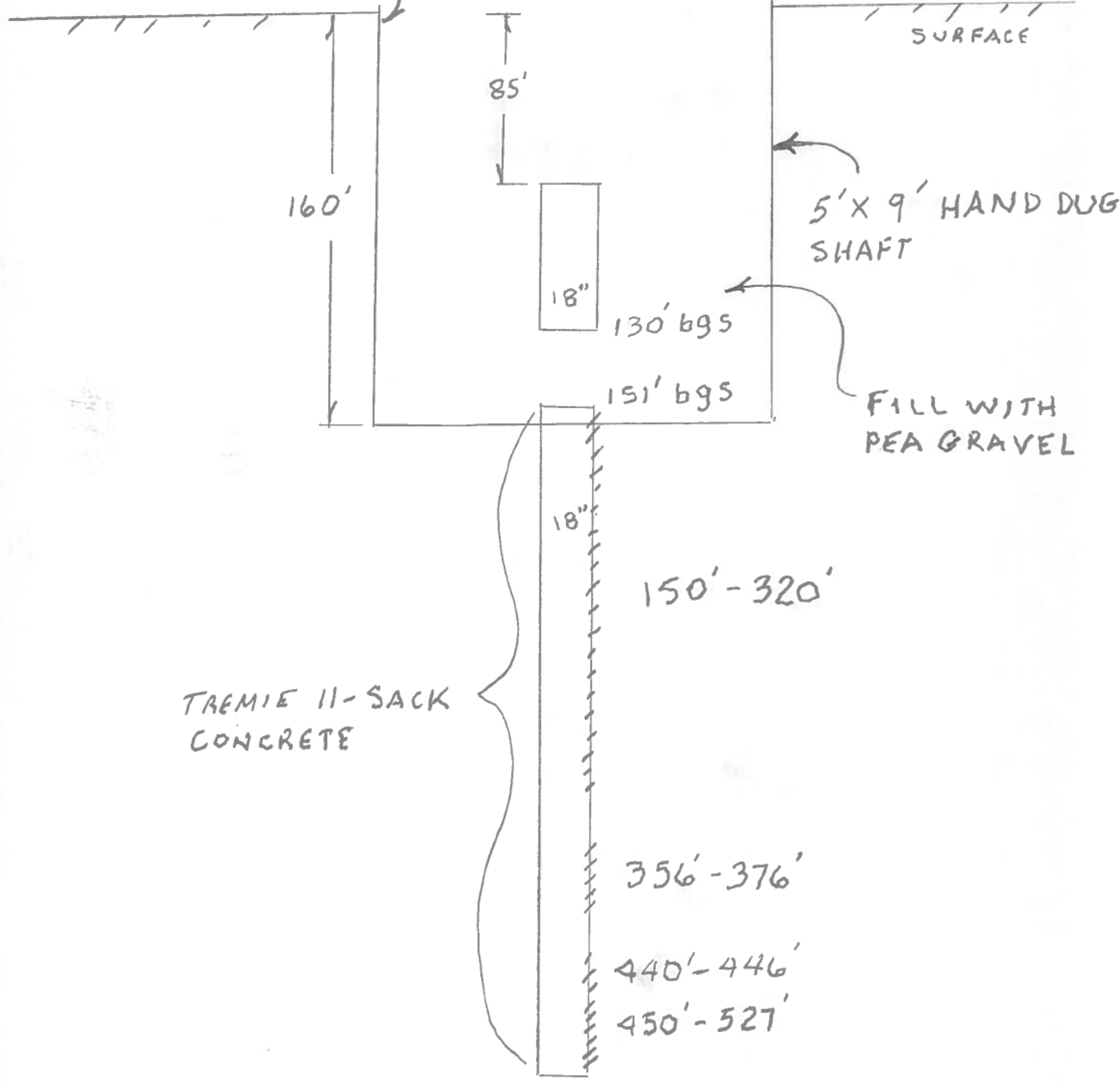
150' - 320'

TREMIE 11-SACK
CONCRETE

356' - 376'

440' - 446'

450' - 527'





159 N. ACACIA STREET * SAN DIMAS, CA 91773
PHONE: (909) 599-9606 * FAX: (909) 599-6238

CAMARILLO, CA 93010 * PHONE: (805) 482-1215
www.genpump.com

WELL & PUMP SERVICE SINCE 1952

Lic. #496765

Serving Southern California and Central Coast

February 14, 2020

Via Email

City of Pasadena
150 S Los Robles, Suite 200
Pasadena, California 91105
Attn: Roumiana Voutchkova

Subject: Casitas Well

This well was hand dug in 1900. The original walls were made of wood and in 1914 and 1915 a concrete lining surface was installed to 160'. The shaft of the upper 160' was recorded as being 5'x 9'. The 18" riveted casing was seen at 85'. Our camera went into the 18" casing at 85' and came out the bottom of the 18" at 130'. At this point we could see the ladder and the walls of the 5'x 9' shaft. An egg shape smaller diameter pipe was seen at 134' and appeared to be full of concrete. This pipe was laid to one side of the shaft. At a depth of 151' we found the broken off 18" casing which was perforated. Records show the 18" to be perforated from 150'-320', 356'-376', 440'-446', and 450'-527'. No water was found during this video survey.

A plan was developed 21 years ago to decommission this well. The plan was to use a tremie pipe to pump the 18" casing from 151' to bottom with a 11-sack sand slurry. The upper vault of shaft is dry and would be filled with a pea gravel to within 5' of the ground surface. The upper 5' of the vault of shaft walls would be broken and then upper 5' would be filled with native soil and wheel packed. Based on the construction of this well we would agree with this plan to decommission this well.

Should you have any questions or need additional information regarding the above new well pump equipment summary and associated cost, please do not hesitate to contact us.



Roumiana Voutchkova
City of Pasadena
February 14, 2020
Page -2-

Thank you.

Sincerely,

GENERAL PUMP COMPANY, INC.

Michael Bodart

Michael Bodart
President / Director of Engineering

-0135.1F

itas well 14718

-0130.0F

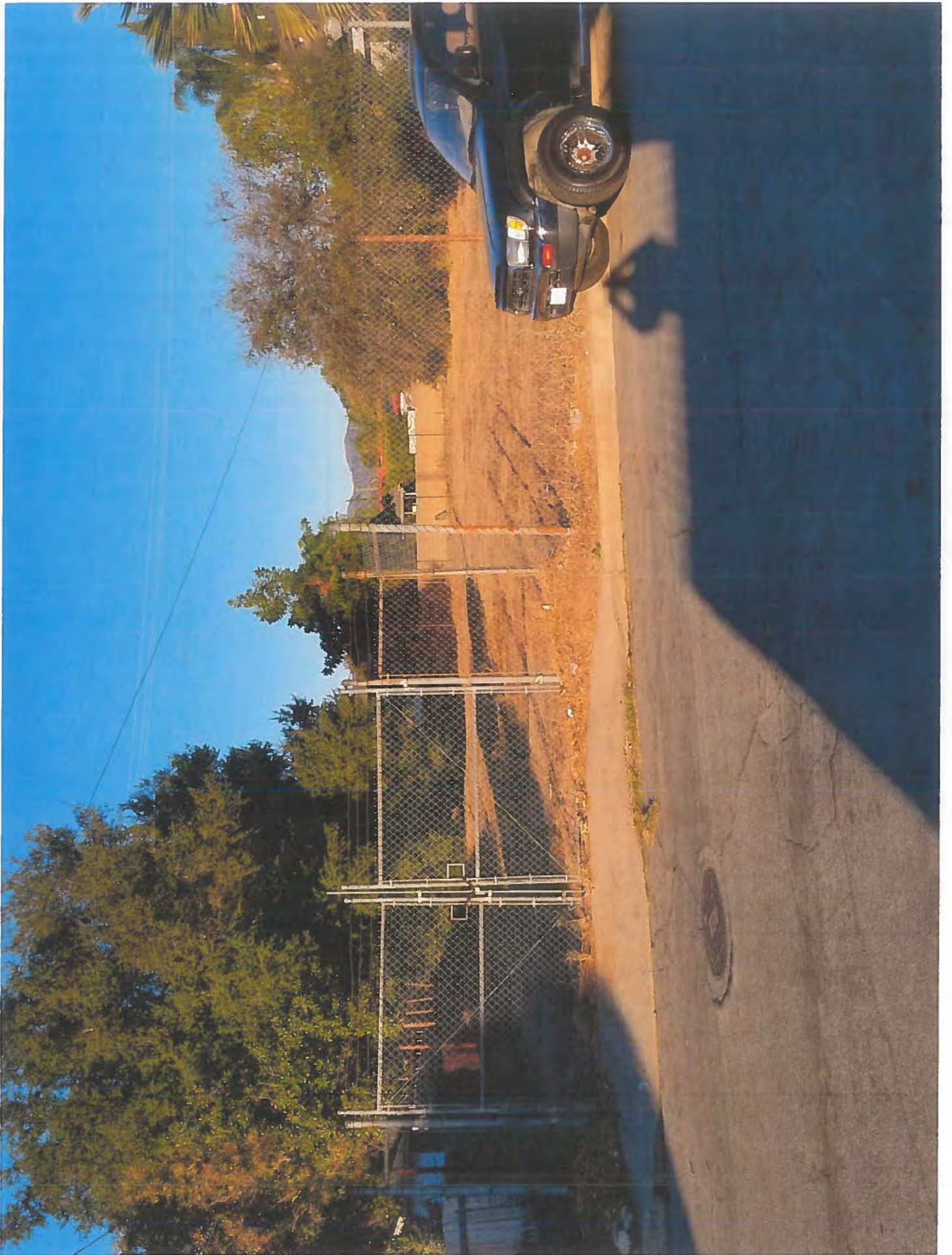
itas well 14718

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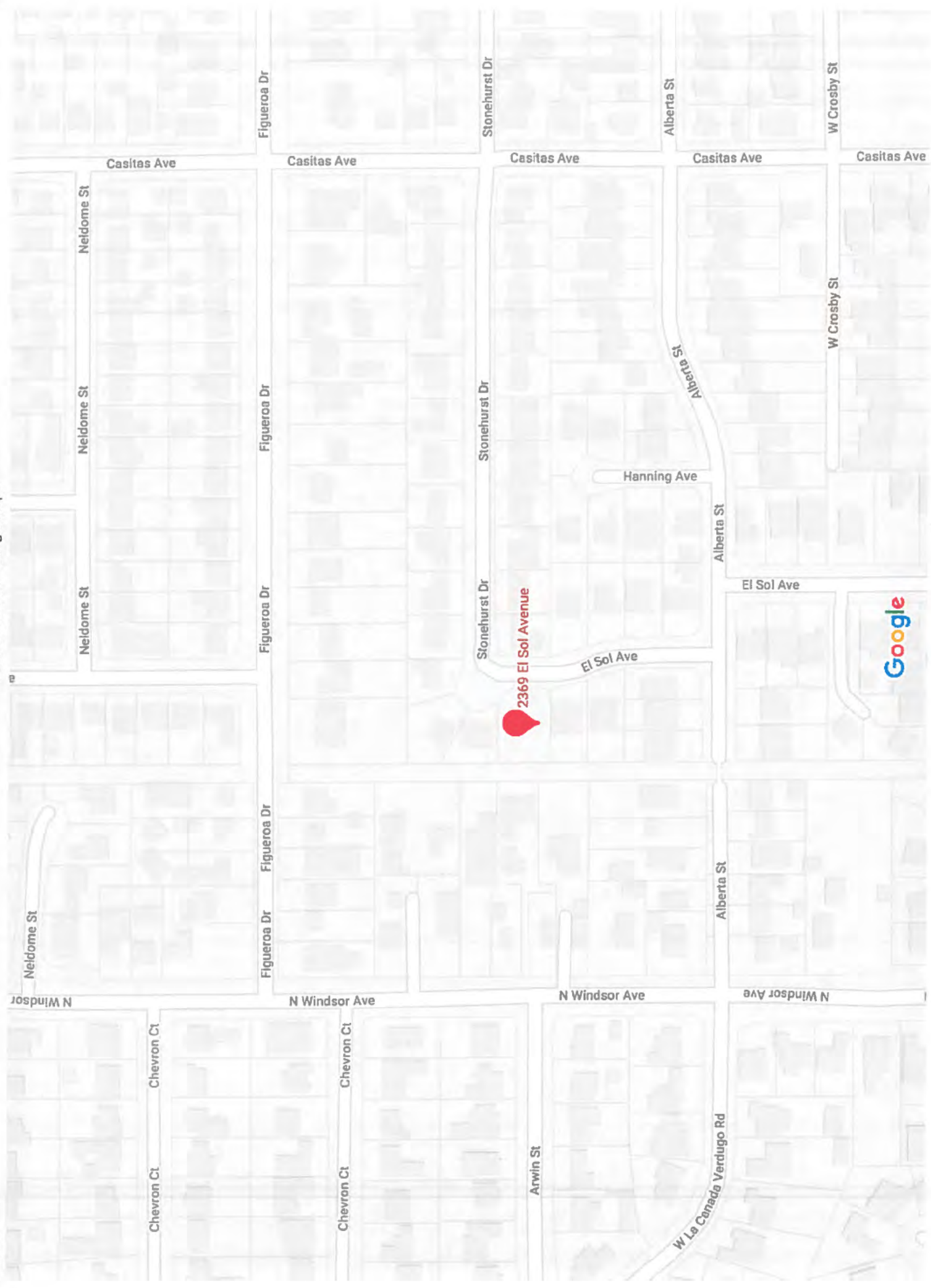
s well 14718

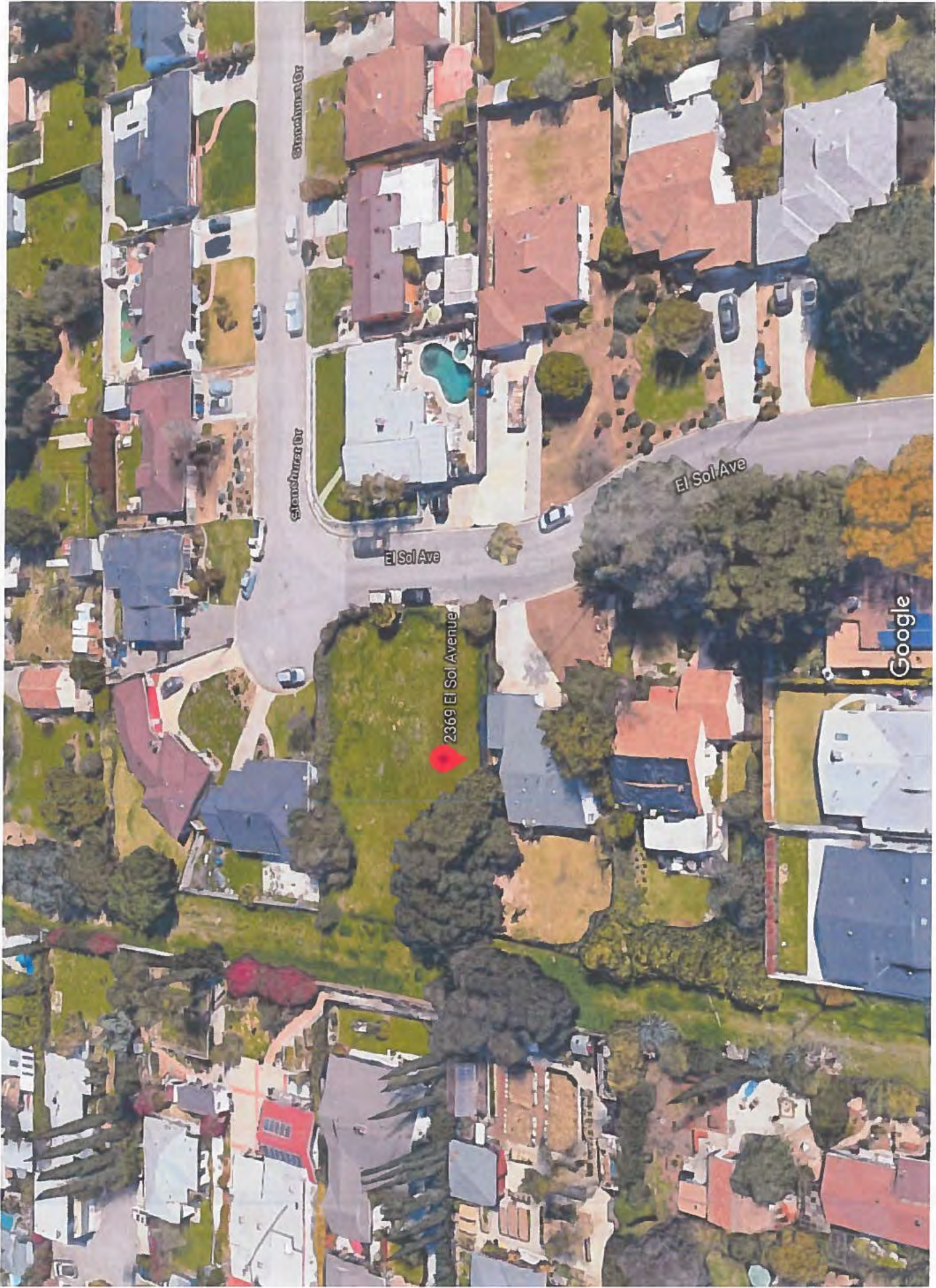
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as well 14718











ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Casitas Well - 2369 N. El Sol Ave. Altadena, CA 91001		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://egisgck.isd.lacounty.gov/slv/?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel. 5827-006-270		
WORK SITE ADDRESS:	ADDRESS Casitas Well- 2369 N. El Sol Ave.	CITY Altadena	ZIP CODE 91001
CROSS STREET(S):	Stonehurst Dr.		
E-MAIL PERMIT TO:	<input checked="" type="checkbox"/> Driller <input type="checkbox"/> Owner <input type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input checked="" type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 970.00	x	= \$
	\$ 1,268.00	x 1	= \$ 1,268.00
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole <input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange <input type="checkbox"/> Construction <input type="checkbox"/> Decommission <input type="checkbox"/> 1-10 Wells \$ 735.00 <input type="checkbox"/> 11-24 Wells \$ 825.00 <input type="checkbox"/> 25+ Wells \$ 1,666.00			
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): _____			
Estimated groundwater depth: _____			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 1,268.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR:
DATE:
SUPERVISOR'S INITIAL:
SITE / PERMIT NO.: SR 0219274
INVOICE NO.: IN 0806509



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS Casitas Well- 2369 N. El Sol Ave.		CITY Altadena	ZIP CODE 91001	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I General Pump Company, Inc.		C-57 LICENSE HOLDER NAME General Pump Company, Inc.	C-57 LICENSE NUMBER 496765	C-57 EXPIRATION DATE 8/31/2020
TELEPHONE NO (909) 599-9606	MOBILE (909) 599-9606	E-MAIL ADDRESS mbodart@genpump.com / Mhaas@genpump.com / aesparza@genpump.com		
CALIFORNIA STATE REGISTERED DRILLER II N/A		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO	MOBILE	E-MAIL ADDRESS		
OWNER NAME Pasadena, City of		TELEPHONE / MOBILE (626) 744-4486	E-MAIL Roumiana Voutchkova - rvoutchkova@cityofpasadena.net	
CONSULTANT N/A		OFFICE NUMBER		
PROJECT CONTACT	TELEPHONE NO. Ext.	MOBILE	E-MAIL ADDRESS	
PROJECT MANAGER	TELEPHONE NO. Ext.	MOBILE	E-MAIL ADDRESS	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Well construction logs
<input checked="" type="checkbox"/> Type and amount of sealant
<input checked="" type="checkbox"/> Method of assessment
<input checked="" type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

WELL PERMIT APPLICATION - PRODUCTION WELLS

DRINKING WATER PROGRAM - ENVIRONMENTAL HEALTH DIV.
5050 COMMERCE DRIVE, BALDWIN PARK, CA 91706 TELE (626) 430-5420 FAX (626) 813-3016

DATE 3/31/2020

NEW WELL CONSTRUCTION RECONSTRUCTION OR RENOVATION DECOMMISSIONING OTHER: _____
 PRIVATE DOMESTIC PRIVATE IRRIGATION OTHER: _____

WELL LOCATION

Site Address: **Casitas Well - 2369 N. El Sol Ave.** City: **Altadena, CA** Zip Code: **91001**
Town ship: _____ Range: _____ Section: _____ Map Book Page/Grid: _____
GPS location: (To be completed after the final seal)

WELL STRUCTURE

Type and Size of Production Casing: **18" 20' Ply 3, 10 Gauge Steel** Sanitary / Annular Sealing Material: **Concrete**
Depth of Sanitary / Annular Seal: **N/A** Conductor Casing Seal: **N/A**

OWNER INFORMATION

Owner's Name: **Pasadena, City of** Telephone Number: **909-599-9606**
Address: **150 S. Los Robles Ave. Suite 200** City: **Pasadena, CA** Zip Code: **91101**

DRILLER INFORMATION

Driller's Name: **General Pump Company, Inc.** Telephone Number: **909-599-9606** C-57 License Number: **496765**
Address: **159 N. Acacia St.** City: **San Dimas, CA** Zip Code: **91773**

WELL DECOMMISSIONING INFORMATION

Well Depth: **533'** Method of Well Assessment: **Video log** Depth and Number of Perforations: **160'-220', 356'-376', 440'-446', and 450'-527'**
 log/records Type of Perforator: **Mills Knife** Size of Perforations: **N/A** Method of Upper Seal Pressure Application: **N/A**
Type and Amount of Sealant: **11 Sack sand 24 yds**

CONSULTANT INFORMATION

Company: **N/A**
Address: _____ City: _____ State: _____ Zip Code: _____
Project Manager: _____ Telephone Number: _____

ATTENTION: WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THIS DEPARTMENT

I hereby agree to comply in every respect with all the regulations of the County Environmental Health Division and with all ordinances and laws of the County of Los Angeles and the State of California pertaining to well construction, reconstruction, and decommissioning. Upon completion of the well and within thirty days thereafter, I will furnish the Environmental Health office with a completion log of the well, giving date drilled, depth of the well, perforations in the casing, and any other data deemed necessary by the County Environmental Health Division.

Signature of C-57 Licensee:  Printed Name: **General Pump Company, Inc. Michael Bodart - President / Director of Engineering**

THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED OFF BY THE DEPUTY HEALTH OFFICER. WELL CONSTRUCTION OR DECOMMISSIONING CANNOT BE INITIATED WITHOUT A WORK PLAN APPROVAL FROM THIS DEPARTMENT.

***** (DEPARTMENT USE ONLY) *****

WORK PLAN APPROVAL This Approval is Valid for 180 Days	FINAL INSPECTION The placement of the annular seal must be witnessed by a Deputy Health Officer for the permit to be valid. Contact this Department to arrange for an appointment
REHS _____ DATE _____	REHS _____ DATE _____
Conditions:	WATER QUALITY The completed water well must be properly disinfected and meet required bacteriological and inorganic chemical standards prior to approval
	REHS _____ DATE _____
	PERMIT ISSUED Well completion log must be received by this Department prior to issuance of final approval
	REHS _____ DATE _____



159 N. ACACIA STREET * SAN DIMAS, CA 91773
PHONE: (909) 599-9606 * FAX: (909) 599-6238

CAMARILLO, CA 93010 * PHONE: (805) 482-1215
www.genpump.com

WELL & PUMP SERVICE SINCE 1952
Serving Southern California and Central Coast

Lic. #496765

April 2, 2020

LA County Environmental Health
5050 Commerce Dr.
Baldwin Park, CA 91706

Subject: Casitas Well Destruction permit


General Pump Company is pleased to submit the enclosed Application for well permit along with well decommission diagram, well information, video photos, site images, and a check payable to LA County Environmental Health for the above referenced project.

Please review the permit and let us know if you have any questions or additional information as we would like to decommission this well as soon as possible.

Thank you!

Sincerely,

GENERAL PUMP COMPANY, INC.



Alexa Esparza
Contracts Administrator

Well Location (Include distances from road and major cross streets)

Casitas Well -2369 N. El Sol Ave. Altadena, CA 91001

Projected Start Date

Projected End Date

WELL LOCATION DIAGRAM

At site inspection, the well location must be staked and clearly marked with the owner's name



Provide a scaled drawing (1 inch = 50 feet) with labels and dimensions, indicating property lines, private sewage disposal systems and other possible sources of contamination within 200 feet of the well site. Attach all supporting documents.

WELL DECOMMISSIONING DIAGRAM

***See attached Image**

***See attached Image**

WORK PLAN DETAILS

(Construction or Decommissioning)

Install tremie pipe to pump the 18" casing from 151' to bottom with a 11-sack sand slurry.

The upper vault of shaft is dry and would be filled with a pea gravel to within 5' of the ground surface.

The upper 5' of the vault of shaft walls would be broken and then upper 5' would be filled with native soil and wheel packed.

****See attached letter and drawing**

NOTES/COMMENTS (Department Use Only)

BREAK OFF 5' bgs
FILL AND COMPACT
NATIVE SOIL

GROUND
SURFACE

85'

160'

5' X 9' HAND DUG
SHAFT

18"

130' bgs

151' bgs

FILL WITH
PEA GRAVEL

18"

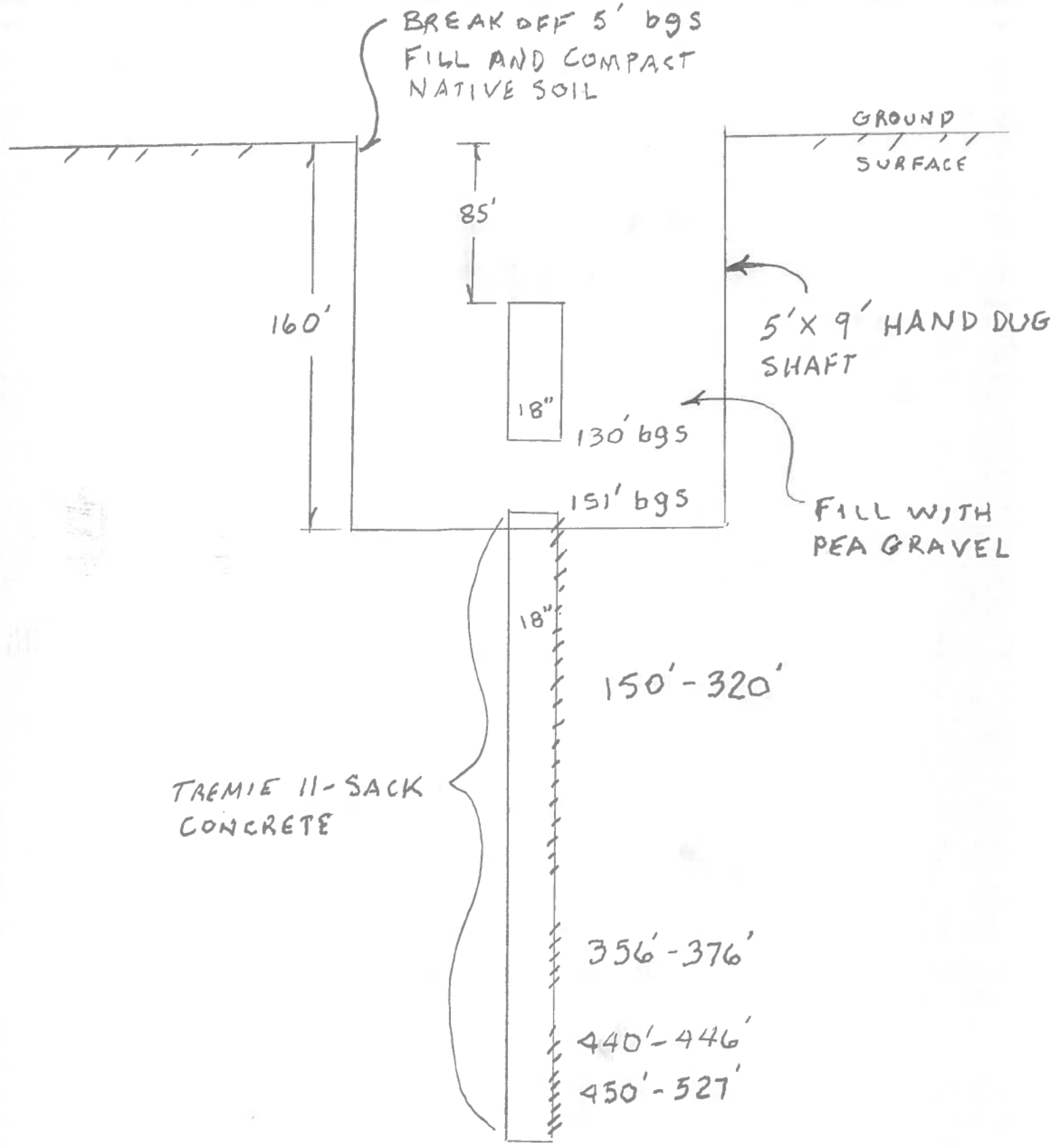
150' - 320'

TREMIE 11-SACK
CONCRETE

356' - 376'

440' - 446'

450' - 527'





159 N. ACACIA STREET * SAN DIMAS, CA 91773
PHONE: (909) 599-9606 * FAX: (909) 599-6238

CAMARILLO, CA 93010 * PHONE: (805) 482-1215
www.genpump.com

WELL & PUMP SERVICE SINCE 1952

Lic. #496765

Serving Southern California and Central Coast

February 14, 2020

Via Email

City of Pasadena
150 S Los Robles, Suite 200
Pasadena, California 91105
Attn: Roumiana Voutchkova

Subject: Casitas Well

This well was hand dug in 1900. The original walls were made of wood and in 1914 and 1915 a concrete lining surface was installed to 160'. The shaft of the upper 160' was recorded as being 5'x 9'. The 18" riveted casing was seen at 85'. Our camera went into the 18" casing at 85' and came out the bottom of the 18" at 130'. At this point we could see the ladder and the walls of the 5'x 9' shaft. An egg shape smaller diameter pipe was seen at 134' and appeared to be full of concrete. This pipe was laid to one side of the shaft. At a depth of 151' we found the broken off 18" casing which was perforated. Records show the 18" to be perforated from 150'-320', 356'-376', 440'-446', and 450'-527'. No water was found during this video survey.

A plan was developed 21 years ago to decommission this well. The plan was to use a tremie pipe to pump the 18" casing from 151' to bottom with a 11-sack sand slurry. The upper vault of shaft is dry and would be filled with a pea gravel to within 5' of the ground surface. The upper 5' of the vault of shaft walls would be broken and then upper 5' would be filled with native soil and wheel packed. Based on the construction of this well we would agree with this plan to decommission this well.

Should you have any questions or need additional information regarding the above new well pump equipment summary and associated cost, please do not hesitate to contact us.



Roumiana Voutchkova
City of Pasadena
February 14, 2020
Page -2-

Thank you.

Sincerely,

GENERAL PUMP COMPANY, INC.

Michael Bodart

Michael Bodart
President / Director of Engineering

-0135.1F

itas well 14718

-0130.0F

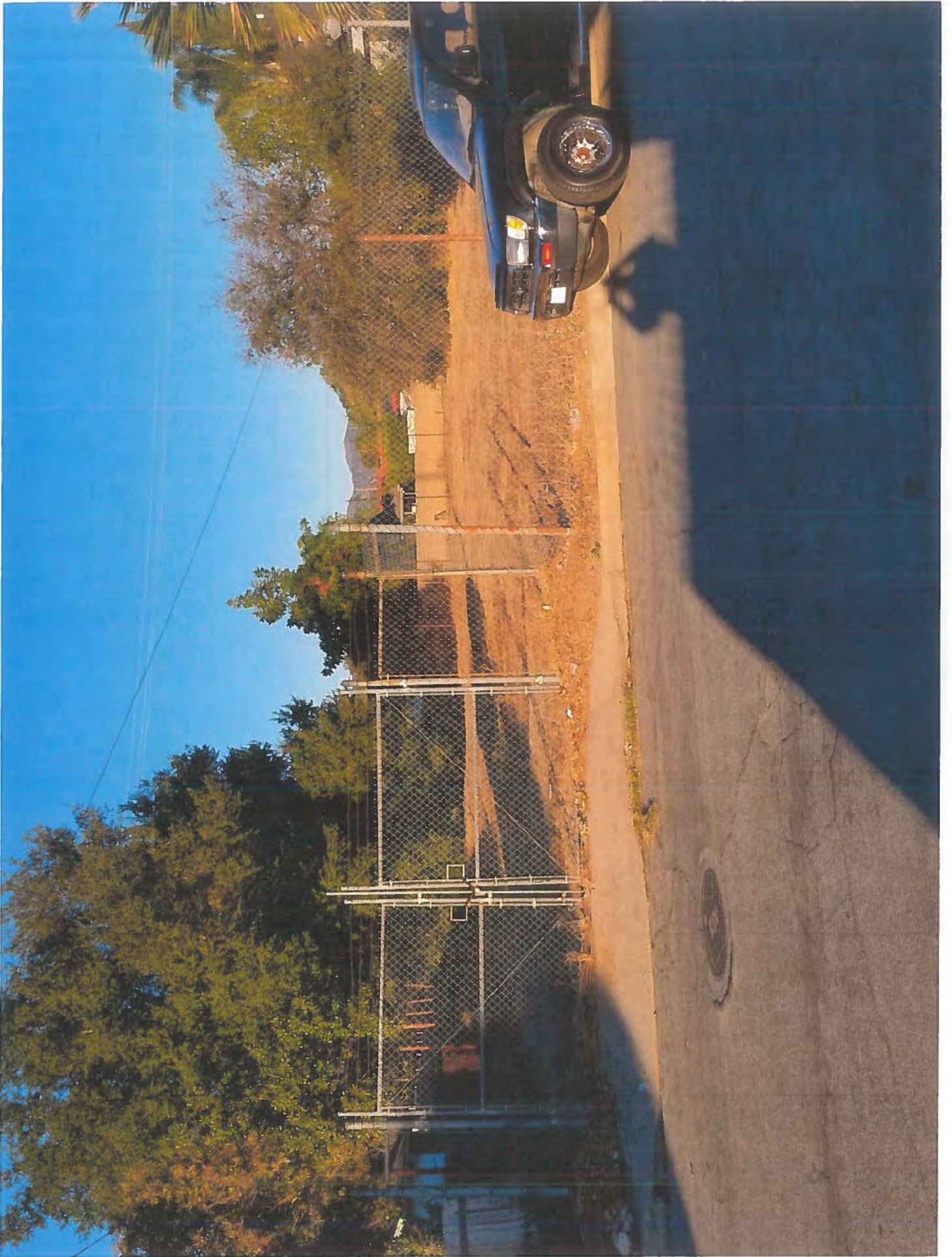
itas well 14718

-0149.4F

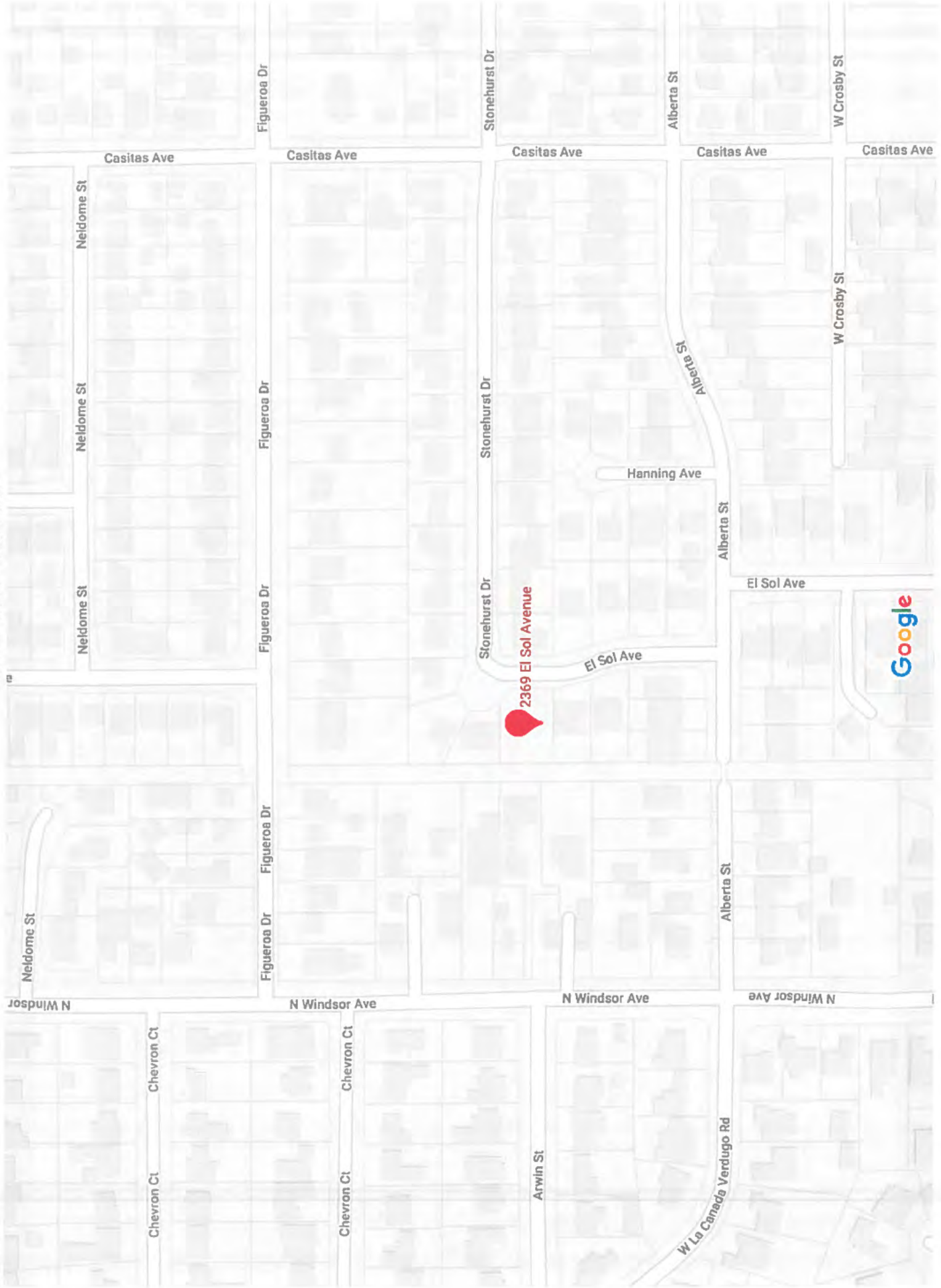
s well 14718

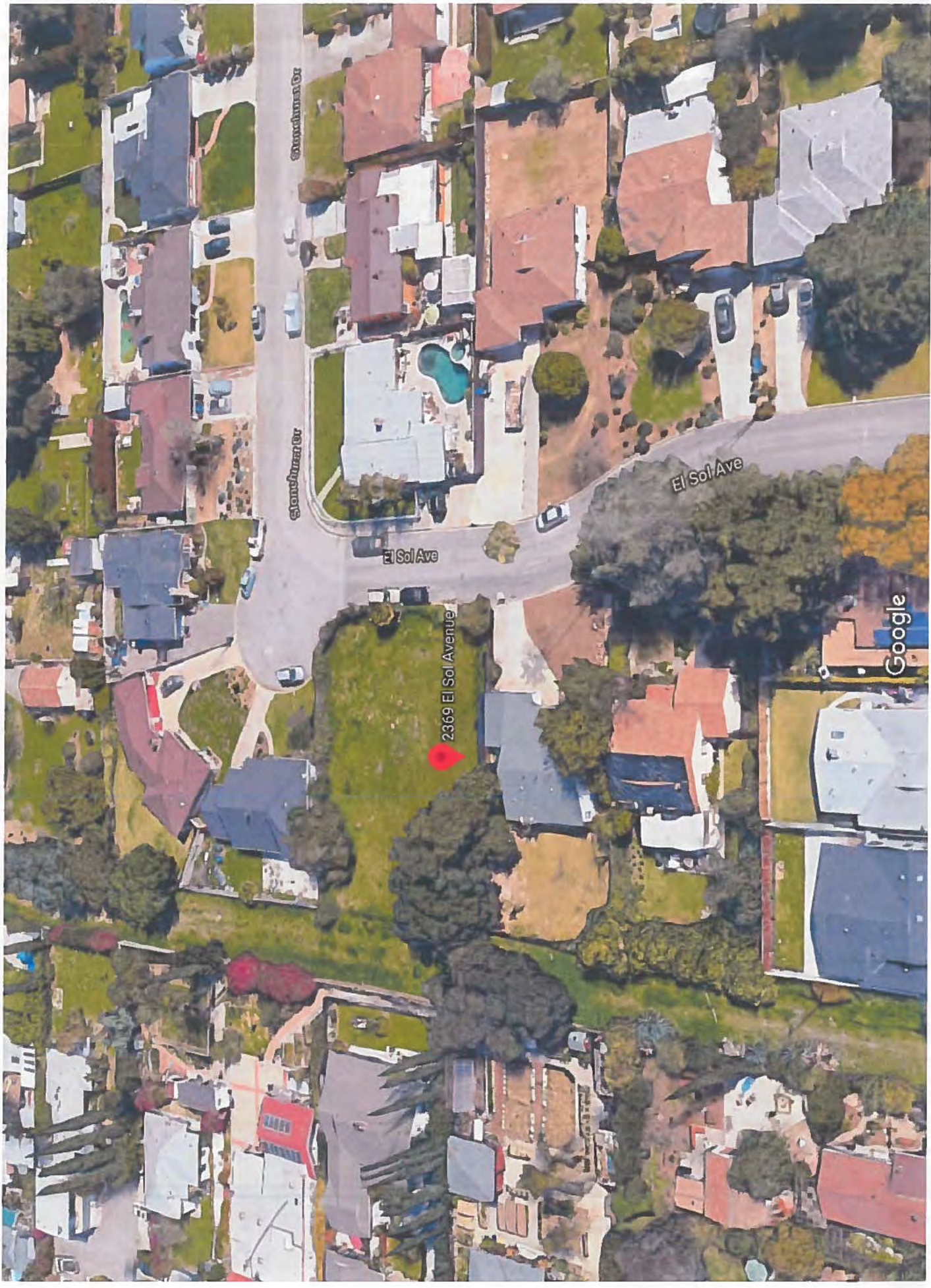
-0150.1F

as well 14718











ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



COUNTY OF LOS ANGELES
Public Health

APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	La Canada Flintridge - Flint Canyon Wash Trail		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://eplscpx.isd.lacounty.gov/slv?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel. 5821-020-901		
WORK SITE ADDRESS:	ADDRESS South side of 210 Freeway	CITY La Canada Flintridge	ZIP CODE 91011
CROSS STREET(S):	Between 210 Fwy Overpass and Berkshire Place		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater)			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input checked="" type="checkbox"/> 5+ Borings	\$ 406.00		406.00
Depth of boring (Min. to Max.): <u>30</u>			
Estimated groundwater depth: <u>30</u>			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 406.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>Belinda</i>
DATE: <i>5/27/20</i>
SUPERVISOR'S INITIAL: <i>HC</i>
SITE / PERMIT NO.: SR 0223450
INVOICE NO.: <i>IN 0808098</i>



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

♦ Telephone: (626) 430-5420 ♦

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS South side of 210 Freeway		CITY La Canada Flintridge	ZIP CODE 91011	QUANTITY (QTY) 6
CALIFORNIA STATE REGISTERED DRILLER I Pacific Drilling Co		C-57 LICENSE HOLDER NAME Tod Clark	C-57 LICENSE NUMBER 681380	C-57 EXPIRATION DATE 12/31/2021
TELEPHONE NO (208) 720-7972	MOBILE	E-MAIL ADDRESS tod@pacdrill.com		
CALIFORNIA STATE REGISTERED DRILLER II N/A		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO	MOBILE	E-MAIL ADDRESS		
OWNER NAME La Canada Flintridge		TELEPHONE / MOBILE (818) 790-8882	E-MAIL ptaber@lcf.ca.gov	
CONSULTANT Twining, Inc.		OFFICE NUMBER (562) 426-3355		
PROJECT CONTACT Doug Crayton	TELEPHONE NO (208) 720-7972 Ext	MOBILE	E-MAIL ADDRESS dcrayton@twininginc.com	
PROJECT MANAGER Doug Crayton	TELEPHONE NO (208) 720-7972 Ext	MOBILE	E-MAIL ADDRESS dcrayton@twininginc.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site



2883 East Spring Street, Suite 300
Long Beach CA 90806

Tel 562.426.3355
Fax 562.426.6424

May 12, 2020
Project No. 200376.1

**Subject: Work Plan
Flint Canyon Wash Trail
La Canada Flintridge, California**

To whom it may concern:

Twining, Inc. (Twining) is pleased to submit this work plan to perform a geotechnical investigation at the above-referenced site.

Before starting our exploration program, we will conduct a field reconnaissance and mark the locations of our planned subsurface explorations. As required by law, we will notify Underground Service Alert (USA) of the proposed subsurface exploration locations at least 72 hours prior to drilling.

We plan to explore the site by advancing six soil borings in order to log the subsurface conditions and collect geotechnical samples. The borings will be advanced to approximately 30 feet below the existing ground surface or refusal, whichever comes first. A six-inch-diameter solid-stem auger, limited-access drill rig will be used.

The soil boring operations will be observed by a Twining Staff Engineer who will log the subsurface conditions, as encountered. Driven and bulk samples from the soil borings will be collected for laboratory observation and testing. It is assumed that no higher than Level D for personal protection equipment will be required (i.e., hard hat, steel-toe boots, eye and hearing protection).

Drive samples will be collected at approximately 5-foot intervals within the soil borings using either a Standard Penetration Test (SPT) sampler or California Modified sampler.

We will conduct the drilling and sampling in general accordance with applicable American Society of Testing and Materials (ASTM) standards.

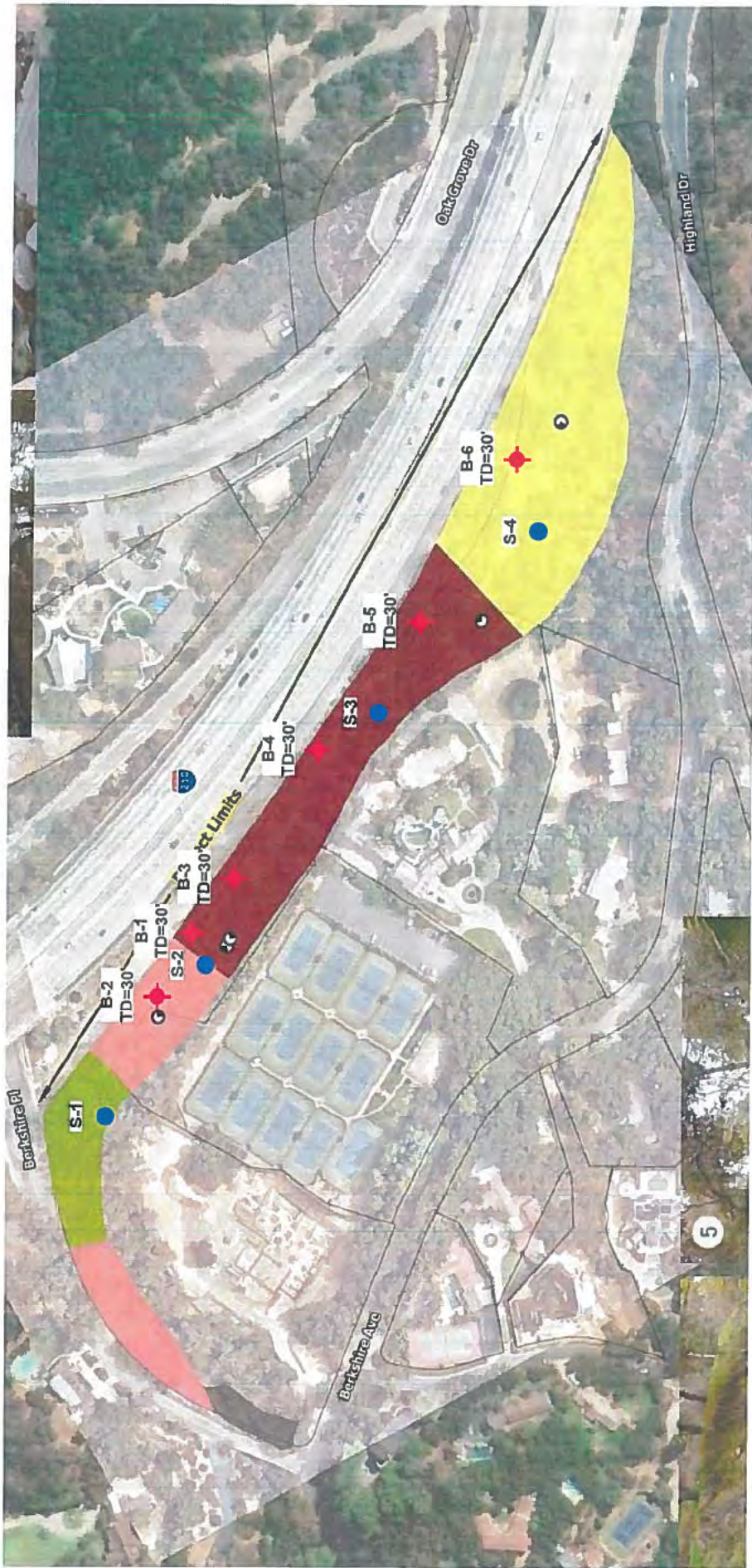
At the completion of the drilling, the borings will be backfilled with slurry and the surface restored to its pre-existing condition. The cuttings will be disposed of on-site in existing dirt covered areas. The samples will be transported to our laboratory for geotechnical testing.

Respectfully submitted,
TWINING, INC.



Doug Crayton
Staff Engineer

Attachments: Proposed Boring Locations



LEGEND

- B-1 PROPOSED BORING LOCATION AND DEPTH
- TD=30'
- S-1 PROPOSED SEDIMENT SAMPLING LOCATION



SITE PLAN AND PROPOSED BORING LOCATION MAP	
FLINT CANYON LA CANADA FLINTRIDGE, CALIFORNIA	
PROJECT NO. 200376.1	DATE May 2020
FIGURE 1	



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
 ♦ Telephone: (626) 430-5420 ♦
http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Chevron Facility No. 9-2980		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://eglisgpx.lsd.lacounty.gov/slv/?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel. 5815-020-023		
WORK SITE ADDRESS:	ADDRESS 11426 Telegraph Road	CITY Santa Fe Springs	ZIP CODE 90670
CROSS STREET(S):	Bartley Avenue		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		126.00
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): <u>50</u>			
Estimated groundwater depth: <u>35-40 feet</u>			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 126.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>B. Lark</i>
DATE: <i>5/29/20</i>
SUPERVISOR'S INITIAL: <i>BL</i>
SITE / PERMIT NO.: SR 0224006
INVOICE NO.: IN 0808228



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
 ♦ Telephone: (626) 430-5420 ♦
http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS 11426 Telegraph Road		CITY Santa Fe Springs	ZIP CODE 90670	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I ABC Liovin Drilling		C-57 LICENSE HOLDER NAME Vissili I Liovin	C-57 LICENSE NUMBER 422904	C-57 EXPIRATION DATE 6/30/2019
TELEPHONE NO. (909) 335-6116	MOBILE (714) 620-4883	E-MAIL ADDRESS ivan@abcdrilling.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO.	MOBILE	E-MAIL ADDRESS		
OWNER NAME REXFORD TITLE, INC		TELEPHONE / MOBILE (310) 396-4514	E-MAIL CONZING_K@YAHOO.COM	
CONSULTANT Stantec Consulting Services Inc		OFFICE NUMBER (909) 335-6116		
PROJECT CONTACT Jaret Fischer	TELEPHONE NO. (909) 335-6116 Ext 8209	MOBILE [REDACTED]	E-MAIL ADDRESS jaret.fischer@stantec.com	
PROJECT MANAGER Same as above	TELEPHONE NO. (909) 335-6116 Ext 8209	MOBILE [REDACTED]	E-MAIL ADDRESS jaret.fischer@stantec.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
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<input type="checkbox"/> Type and amount of sealant
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Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

To:	Environmental Health Drinking Water Program 5050 Commerce Drive Baldwin Park, CA 91706	From:	Jaret Fischer 735 E Carnegie Drive, Suite 280 San Bernardino, CA 92408
File:	185850090	Date:	May 26, 2020

Reference: Written Narrative Describing Work Plan Details – 11426 Telegraph Road, Santa Fe Springs, CA

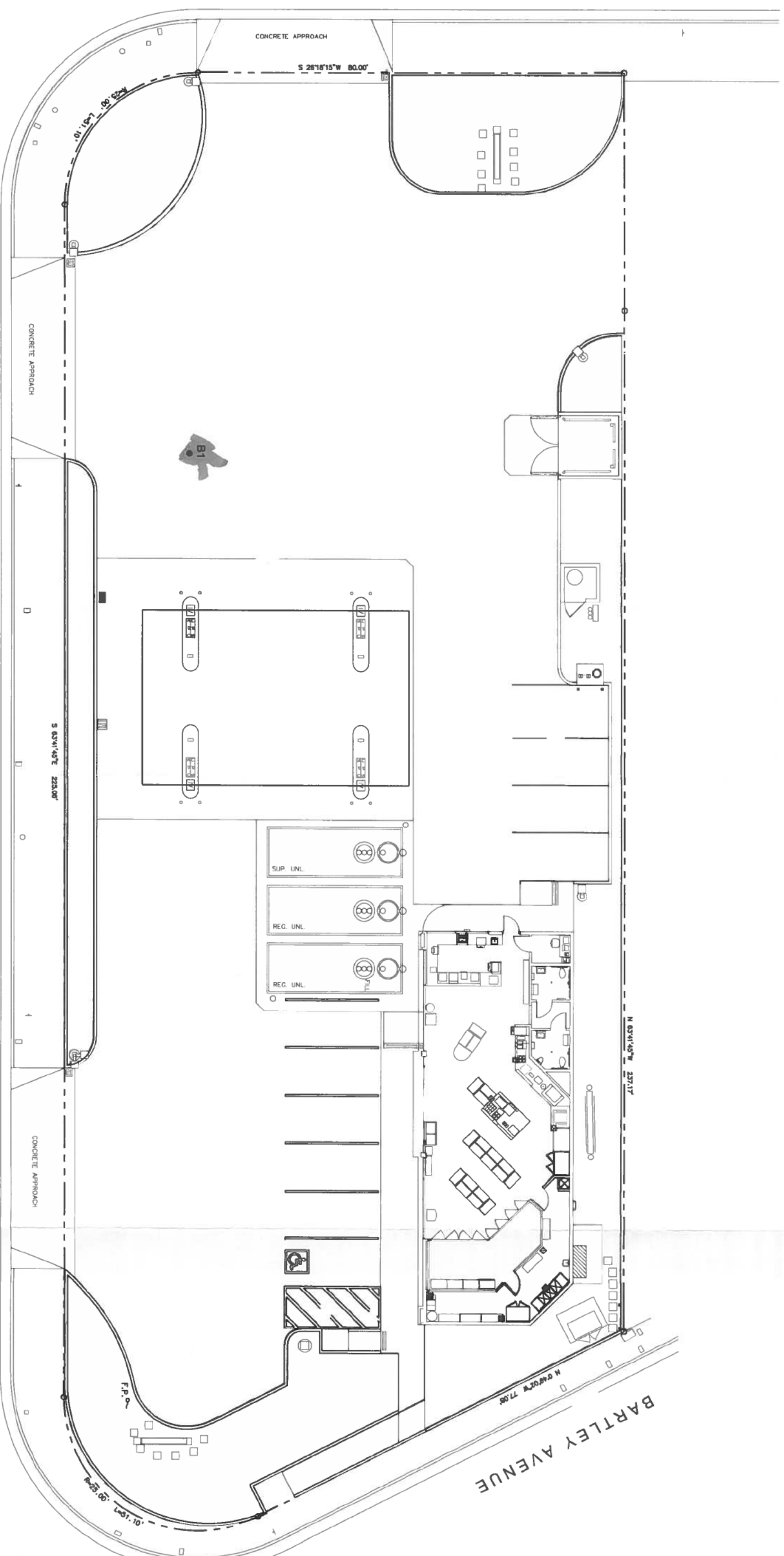
Stantec will provide for the services of a field geologist or engineer to supervise and direct all on-site activities. Stantec is proposing to advance one (1) hollow stem auger boring to a depth of 50 feet below the ground surface (bgs) for a geotechnical investigation. No groundwater samples will be collected. The boring will be backfilled with bentonite grout and completed with concrete to match existing grade within 24 hours of boring construction using the tremie method.

Stantec Consulting Services Inc.

Jaret Fischer PE
Principal Engineer

Phone: (909) 255-8209
Jaret.Fischer@stantec.com

ORR and DAY ROAD

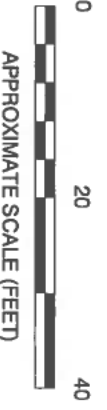



TELEGRAPH ROAD

BARTLEY AVENUE

EXPLANATION

- B2 ● APPROXIMATE GEOTECHNICAL SOIL BORING LOCATIONS
- APPROXIMATE PROPERTY BOUNDARY
- EXISTING SITE IMPROVEMENTS



 Stantec 25864-F BUSINESS CENTER DRIVE REDLANDS, CA 92374 PHONE: (909) 335-6116 FAX: (909) 335-6120	FOR:	CHEVRON FACILITY NO. 9-2980 11426 TELEGRAPH ROAD SANTA FE SPRINGS, CALIFORNIA 90670			FIGURE:	2
	JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	5/4/13
	185850090	JEF	JEF	JEF		



ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS LACDPW Hay Canyon Channel SW Capture 600 ft Foothill Blvd & Cornishon Ave / APN 5813-018-900	CITY La Canada Flintridge	ZIP 91011	EMAIL ADDRESS Raj.Pirathiviraj@terracon.com
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NOTICE:

- **WORK PLAN APPROVALS ARE VALID FOR 180 DAYS.** 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 1 soil borings up to ~50 feet bgs.	PERMIT NUMBER: SR0250134	DATE: April 13, 2021
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ADDITIONAL APPROVAL CONDITIONS:

- 1) Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- 2) Soil borings shall be sealed to terminal depth pursuant to Section 9 and Appendix B of *California Well Standards - Bulletins 74-90 & Bulletins 74-81* respectively upon completion.
 - o For Portland cement, it shall be mixed at a ratio of one 94-pound sack of Portland cement 5 to 6 gallons of 'clean' water.
 - o **Up to 6%** of bentonite may be added to the cement mixture at a ratio of two (2) pounds of bentonite one (1) gallon of 'clean' water, or in accordance with the manufacturer's specification.
 - o The use of hydrated bentonite is **not** permitted.
- 3) Sealing materials shall be applied under pressure - **from terminal depth, advancing upward in one continuous operation, via a tremie pipe or equivalent** - to prevent freefall, jamming or "bridging", voids, dilution of sealing materials, and/or prevent separation of aggregate from sealants.
- 4) Drill cuttings and wastewater shall be disposed of in accordance with all applicable federal, State, and local requirements.
- 5) Sealing materials shall meet *National Sanitation Foundation (NSF 61)* standard.
- 6) Provide temporary cover to the borehole opening whenever work is interrupted.
- 7) Soil boring or exploration holes must comply with all applicable requirements published in the *California Well Standards (Bulletins 74-81 and 74-90 combined)* and the *Los Angeles County Code, Title 11*.



Quang Ly, REHS



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	LACDPW Hay Canyon Channel SW Capture		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://eg.sgcc.ca.gov/slv/?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel. 5813-018-900		
WORK SITE ADDRESS:	ADDRESS Approximately 600 feet S/O Foothill Blvd and Cornishon Ave	CITY La Canada Flintridge	ZIP CODE 91011
CROSS STREET(S):	Foothill Blvd and Cornishon Ave		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		126.00
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): <u>0 to 50 ft</u>			
Estimated groundwater depth: <u>80 ft</u>			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 126.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>Quang</i>
DATE: <i>4/7/21</i>
SUPERVISOR'S INITIAL: <i>LM</i>
SITE / PERMIT NO.: SR 0250134
INVOICE NO.: IN 0921404



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS Approximately 600 feet S/O Foothill Blvd and Cornishon Ave		CITY La Canada Flintridge	ZIP CODE 91011	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I 2R Drilling		C-57 LICENSE HOLDER NAME 2R Drilling, Inc.	C-57 LICENSE NUMBER 709029	C-57 EXPIRATION DATE 6/30/202
TELEPHONE NO. (949) 383-1990	MOBILE	E-MAIL ADDRESS info@2rdrilling.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO.	MOBILE	E-MAIL ADDRESS		
OWNER NAME		TELEPHONE / MOBILE	E-MAIL	
CONSULTANT Terracon Consultants		OFFICE NUMBER (949) 383-1990		
PROJECT CONTACT Raj Pirathiviraj	TELEPHONE NO. (949) 383-1990 Ext.	MOBILE	E-MAIL ADDRESS raj.pirathiviraj@terracon.com	
PROJECT MANAGER Raj Pirathiviraj	TELEPHONE NO. (949) 383-1990 Ext.	MOBILE	E-MAIL ADDRESS raj.pirathiviraj@terracon.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction	Well Decommission	Borings
<input type="checkbox"/> Written narrative describing work plan details	<input type="checkbox"/> Written narrative describing work plan details	<input checked="" type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features 	<input type="checkbox"/> Well construction logs	<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site	<input type="checkbox"/> Type and amount of sealant	
	<input type="checkbox"/> Method of assessment	
	<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)	
	<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site	

March 30, 2021

County of Los Angeles Public Health
Drinking Water Program
5050 Commerce Drive
Baldwin Park, CA 91706



**Re: Application for Well Permit
LACDPW Hay Canyon Channel SW Capture
Approximately 600 feet S/O Foothill Blvd and Cornishon Ave Intersection
La Canada Flintridge, California 91011**

Terracon Consultants, Inc. (Terracon) is submitting this application for the well permit.

A. PROJECT INFORMATION

The project site is located approximately 600 feet S/O the intersection of Foothill Blvd and Cornishon Ave in La Canada Flintridge, California. The project site is an existing residential street with associated hardscaping and landscaping. Current ground cover is made up of asphalt and concrete pavements. One (1) location is located within the existing are at the site.

B. SCOPE OF WORK

Based on the proposed structures, we propose to perform a total of one (1) boring to an approximate depth of 50 feet below ground surface (bgs).

We will advance soil borings with a truck-mounted drill rig using continuous flight hollow stem augers. Four samples are obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. Test samples will be collected during drilling in general accordance with the appropriate ASTM methods using Standard Penetration Testing (SPT) and sampling using either standard split-spoon or Modified California samplers. A sampling spoon is driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value, also referred to as N-values. The N-values are indicated on the boring logs at the test depths. The samples are placed in appropriate containers, taken to our soil laboratory for testing, and classified by a geotechnical engineer.

Borings will be backfilled with cement grout which is a mixture of 5 to 6 gallons of water per one 94-lbs bag of cement. The surface will be capped with matching surface materials.

Proposed Exploration Plan

Hay Canyon Channel Stormwater Capture

Legend

- Boring Location
- Paths of Travel
- Work Areas





ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Descanso Gardens SCWP Feasibility Study - CWR0668		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://egisqcx.isd.lacounty.gov/slv/?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel. 5813-008-910 & 5813-008-902		
WORK SITE ADDRESS:	ADDRESS 1418 Descanso Dr	CITY La Cañada Flintridge	ZIP CODE 91011
CROSS STREET(S):	Fairlawn Dr & Descanso Dr		
E-MAIL PERMIT TO:	<input checked="" type="checkbox"/> Driller <input type="checkbox"/> Owner <input type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation <input type="checkbox"/> Construction <input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$	970.00	x = \$
	\$	1,268.00	x = \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole <input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Construction <input type="checkbox"/> Decommission <input type="checkbox"/> 1-10 Wells <input type="checkbox"/> 11-24 Wells <input type="checkbox"/> 25+ Wells	\$	735.00	
	\$	825.00	
	\$	1,666.00	
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input type="checkbox"/> Up to four (4) borings <input checked="" type="checkbox"/> 5+ Borings	\$	126.00	
	\$	406.00	406.00
Depth of boring (Min. to Max.): <u>50 to 60 feet</u>			
Estimated groundwater depth: _____			
CATHODIC WELLS			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission	\$	970.00	x = \$
	\$	1,268.00	x = \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial <input type="checkbox"/> Water Supply Yield Test - Residential	\$	1,038.00	x = \$
	\$	971.00	x = \$
WELL SITE PLAN REVIEW (for Small Water Systems)			
	\$	584.00	x = \$
WATER TREATMENT SYSTEM EVALUATION			
	\$	519.00	x = \$
WATER SAMPLING (Commercial food service facility for USDA certification)			
	\$	821.00	x = \$
TOTAL COST			\$ 406.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>Belinda</i>
DATE: <i>4/13/21</i>
SUPERVISOR'S INITIAL: <i>LM</i>
SITE / PERMIT NO.: SR 0250909
INVOICE NO.: IN 0922015



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

◆ Telephone: (626) 430-5420 ◆

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS 1418 Descanso Dr		CITY La Cañada Flintridge	ZIP CODE 91011	QUANTITY (QTY) 6
CALIFORNIA STATE REGISTERED DRILLER I Gregg Drilling LLC		C-57 LICENSE HOLDER NAME John Greg	C-57 LICENSE NUMBER 1044456	C-57 EXPIRATION DATE 9/30/2022
TELEPHONE NO (562) 427-6899	MOBILE (562) 449-7543	E-MAIL ADDRESS jmckeehan@greggdrilling.com		
CALIFORNIA STATE REGISTERED DRILLER II Martini Drilling LLC		C-57 LICENSE HOLDER NAME Darin Martini	C-57 LICENSE NUMBER 831982	C-57 EXPIRATION DATE 2/28/22
TELEPHONE NO (714) 715-2715	MOBILE	E-MAIL ADDRESS martinidrilling@yahoo.com		
OWNER NAME Descanso Gardens - Juliann Rooke		TELEPHONE / MOBILE (818) 952-4348	E-MAIL jrooke@descansogardens.org	
CONSULTANT GeoSyntec Consultants		OFFICE NUMBER (714) 969-0800		
PROJECT CONTACT Karthik Viswanathan	TELEPHONE NO (714) 969-0800 Ext. 1250	MOBILE [REDACTED]	E-MAIL ADDRESS kviswanathan@geosyntec.com	
PROJECT MANAGER Brian Rowley	TELEPHONE NO (510) 258-2658 Ext.	MOBILE [REDACTED]	E-MAIL ADDRESS browley@geosyntec.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Descanso Gardens Feasibility Study – Workplan
Location: Descanso Gardens, 1418 Descanso Dr, La Cañada Flintridge, CA 91011

Scope of work:

- 3 Cone Penetration Tests (CPTs) to a depth of 50-60 feet or refusal
- 3 Hollow Stem Auger (HSA) borings drilled to a depth of 50 feet or refusal
 - HSA borings temporarily converted to infiltration test wells

Tentative work schedule:

Between April 22, 2021 and May 15, 2021 – subject to driller availability. LA County Environmental Health Inspector will be notified as soon as exact date is confirmed, but no later than 3 business days prior to start of work.

- Day 1 – Advance 3 CPTs
- Days 2 and 3 – Drilling 3 HSA borings and setting up infiltration test wells
- Days 2, 3 and 4 – Infiltration testing
- Day 5 – Abandonment of infiltration test wells

Work area:

- Located within the Descanso Gardens property, south of intersection of Fairlawn Dr and Descanso Dr in La Cañada Flintridge, CA
- See attached plans showing locations. For convenience preliminary coordinates for explorations obtained from Google Earth are provided below.
- These locations may be slightly adjusted in the field subject to utility clearance
- The work area consists of paved areas and is relatively flat with the exception of localized undulations.

Location	Latitude	Longitude
CPT-1	34.202540	-118.211282
CPT-2	34.201783	-118.210156
CPT-3	34.200350	-118.209394
HSA-1	34.202425	-118.211284
HSA-2	34.201650	-118.210147
HSA-3	34.200263	-118.209315

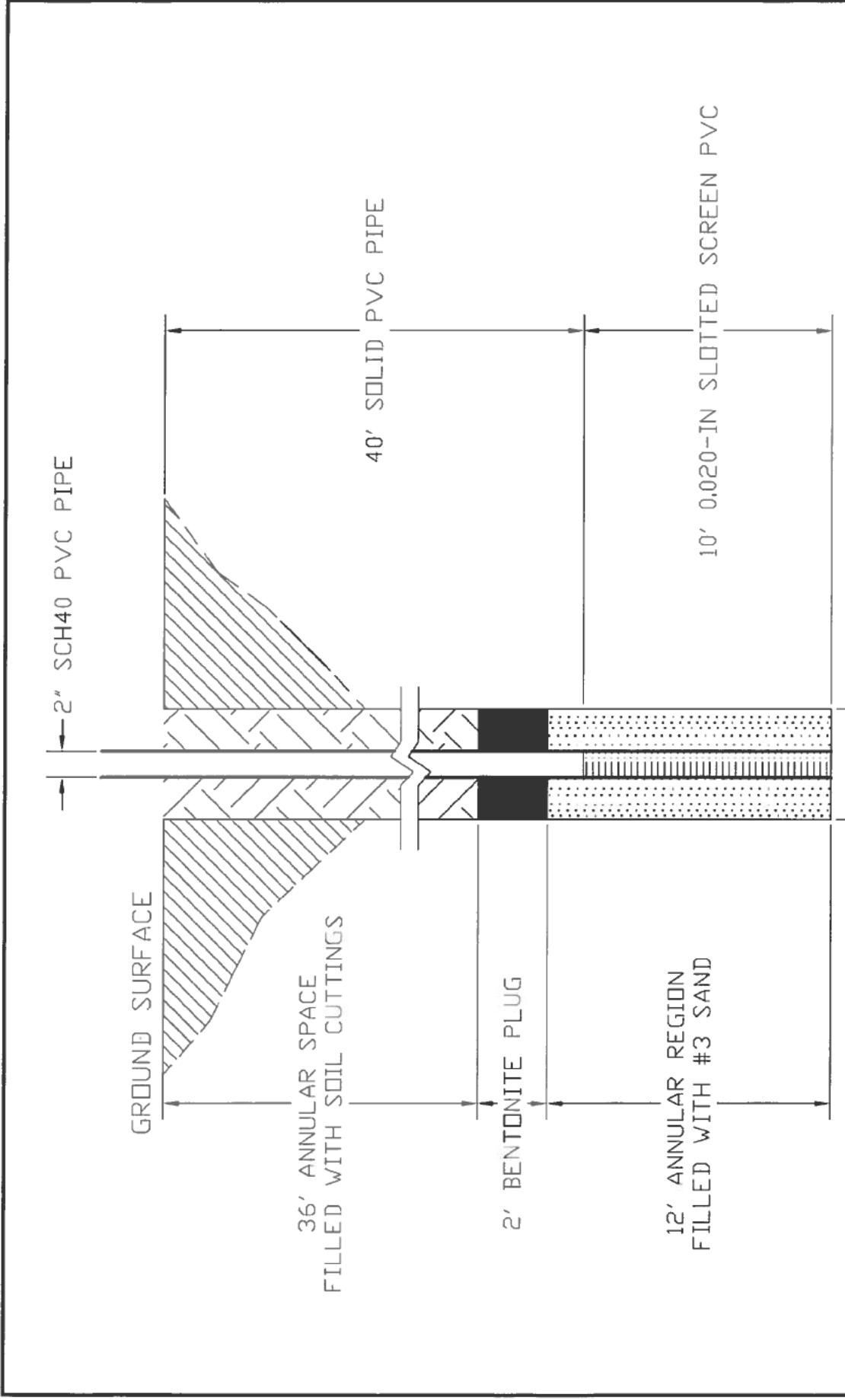
Work Steps:

CPT

- Utility clearance by Underground Service Alert
- Hand-auger top 5 feet to check for possible utility conflict
- Position truck mounted CPT rig at the hole location and advance CPT to target depth
- Perform dissipation test in effort to assess groundwater level
- Remove the CPT rods following reaching target depth or encountering refusal
- Backfill boring with cement grout

HSA Borings and Infiltration Test Wells

- Utility clearance by Underground Service Alert
- Hand-auger top 5 feet to check for possible utility conflict
- Position truck mounted drill rig at the hole location and advance boring to target depth
- Sample soils at 5-foot interval
- Observe groundwater level in the borings, if encountered:
 - Drilling will be paused for approximately 30-minutes to allow groundwater level to settle (to measure static elevation).
- After reaching the target elevation at each borehole, a **temporary infiltration test well** will be constructed using the following procedure:
 - from 40 ft to 50 ft bgs a 2-inch slotted PVC well screen will be placed in the boring
 - 2" diameter PVC Schedule 40 (Outside Diameter = 2.375 inches)
 - in the upper portions of the boreholes solid PVC with no perforations will be installed
 - along the depth with slotted screen, pea gravel/#3 wash sand will be placed
 - a 2 ft bentonite plug will be placed above the slotted screen with soil cuttings placed above along the portion with solid PVC
 - the infiltration wells will be pre-soaked after installation
- On the following day, infiltration tests will be performed in general accordance with the U.S. Bureau of Reclamation Well Permeameter Method (USBR-7300) which is an approved method per the Los Angeles County Department of Public Works guidance document
- Following completion of the infiltration testing, the drilling subcontractor will arrive back on site to abandon the wells in-situ and backfill boreholes with cement-bentonite grout placed using a tremie pipe (bottom-up grouting):
 - Portland cement (approximately two 50lbs bags per 6 gallons of water) and maximum 5% bentonite.
- Restore pavement with concrete/asphalt patch
- Drilling cuttings to be stored in DOT drums, samples will be taken for disposal profiling.



SCHEMATIC OF INFILTRATION TEST WELL
Descanso Gardens Feasibility Study
LA CANADA FLINTRIDGE, CALIFORNIA

Geosyntec
consultants

Project No: CWR0668 APRIL 2021

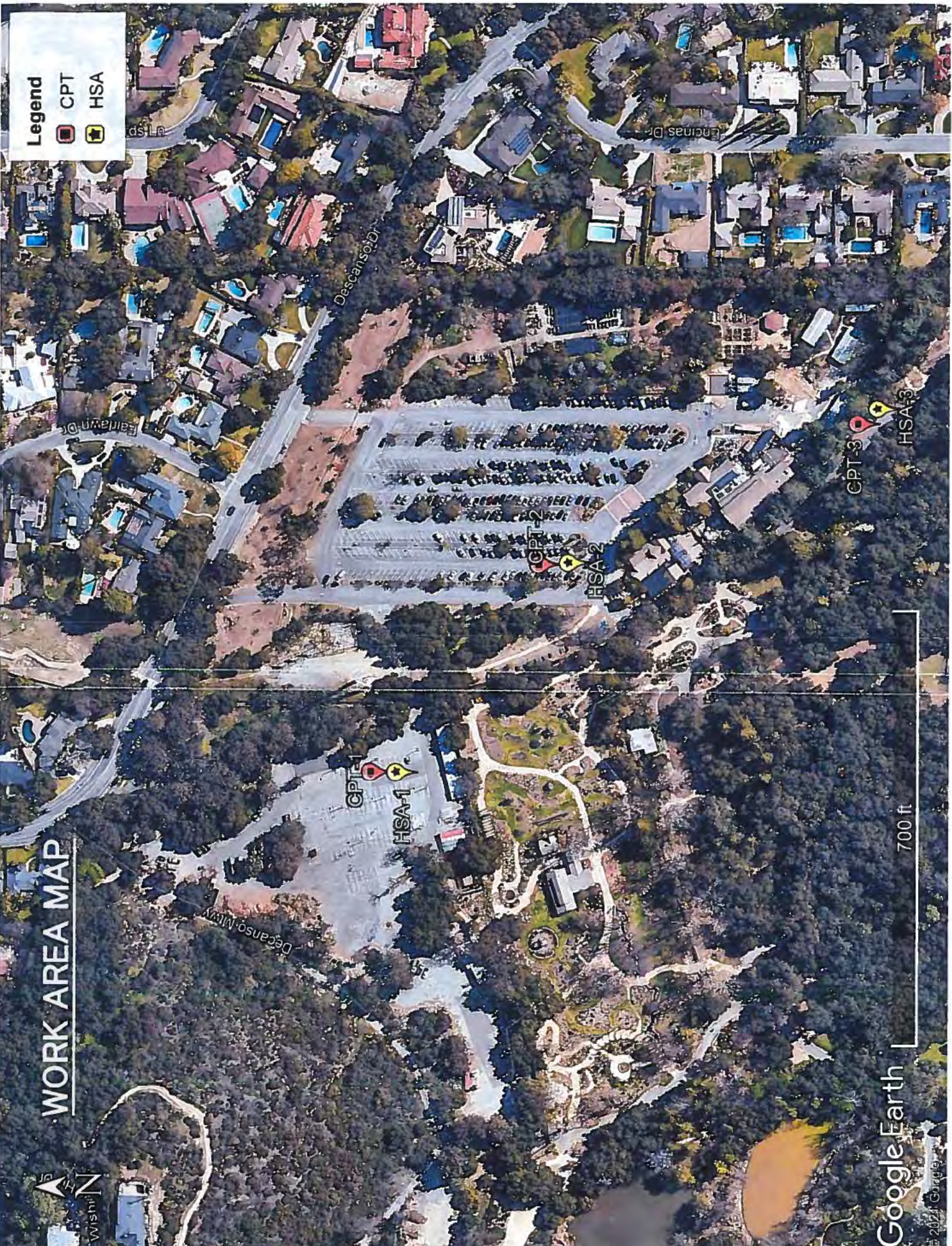
Figure



WORK AREA MAP

Legend

-  CPT
-  HSA



700 ft

Google Earth

© 2021 Google



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
♦ Telephone: (626) 430-5420 ♦

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Pasadena USD (Jackson) SCWP Feasibility Study - CWR0657		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://egsdcx.isd.lacounty.gov/siv?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel 5827-007-901		
WORK SITE ADDRESS:	ADDRESS 593 W Woodbury Rd	CITY Altadena	ZIP CODE 91001
CROSS STREET(S):	W Crosby St and Casitas Ave		
E-MAIL PERMIT TO:	<input checked="" type="checkbox"/> Driller <input type="checkbox"/> Owner <input type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		126.00
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): <u>50 to 60 feet</u>			
Estimated groundwater depth: _____			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 126.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: Belinda
DATE: 5/26/21
SUPERVISOR'S INITIAL: LM
SITE / PERMIT NO.: SR 0256619
INVOICE NO.: IN 0925360



ENVIRONMENTAL HEALTH Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

♦ Telephone: (626) 430-5420 ♦

http://publichealth.lacounty.gov/eh/docs/ep_dw_well_app.pdf



**COUNTY OF LOS ANGELES
Public Health**

APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

WORK SITE ADDRESS 593 W Woodbury Rd		CITY Altadena	ZIP CODE 91001	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I Martini Drilling LLC		C-57 LICENSE HOLDER NAME Darin Martini	C-57 LICENSE NUMBER 831982	C-57 EXPIRATION DATE 2/28/2022
TELEPHONE NO (714) 715-2715	MOBILE	E-MAIL ADDRESS martinidrilling@yahoo.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO	MOBILE	E-MAIL ADDRESS		
OWNER NAME Pasadena USD - Leonard Hernandez Jr		TELEPHONE / MOBILE (626) 396-5850	E-MAIL hernandez.leonard@pusd.us	
CONSULTANT Geosyntec Consultants, Inc.		OFFICE NUMBER (714) 969-0800		
PROJECT CONTACT Karthik Viswanathan	TELEPHONE NO (714) 465-1250 ^{Ext}	MOBILE [REDACTED]	E-MAIL ADDRESS kviswanathan@geosyntec.com	
PROJECT MANAGER Brian Rowley	TELEPHONE NO (510) 285-2658 ^{Ext}	MOBILE [REDACTED]	E-MAIL ADDRESS browley@geosyntec.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Pasadena USD SCWP Feasibility Study – Workplan
Location: Jackson Elementary School, 593 W Woodbury Rd, Altadena, CA 91001

Scope of work:

- 1 Hollow Stem Auger (HSA) borings drilled to a depth of 50 feet or refusal
 - HSA boring temporarily converted to infiltration test wells

Tentative work schedule:

Between June 7, 2021 and June 11, 2021 – subject to driller availability. LA County Environmental Health Inspector will be notified as soon as exact date is confirmed, but no later than 3 business days prior to start of work.

- Day 1 – Drilling 1 HSA boring and setting up infiltration test well
- Day 2 – Infiltration testing
- Day 3 – Abandonment of infiltration test well

Work area:

- Located within the Jackson Elementary School property, east of Casitas Ave in Altadena, CA
- See attached plans showing locations. For convenience preliminary coordinates for exploration obtained from Google Earth are provided below.
- This location may be slightly adjusted in the field subject to utility clearance
- The work area consists of paved area and is relatively flat with the exception of localized undulations.

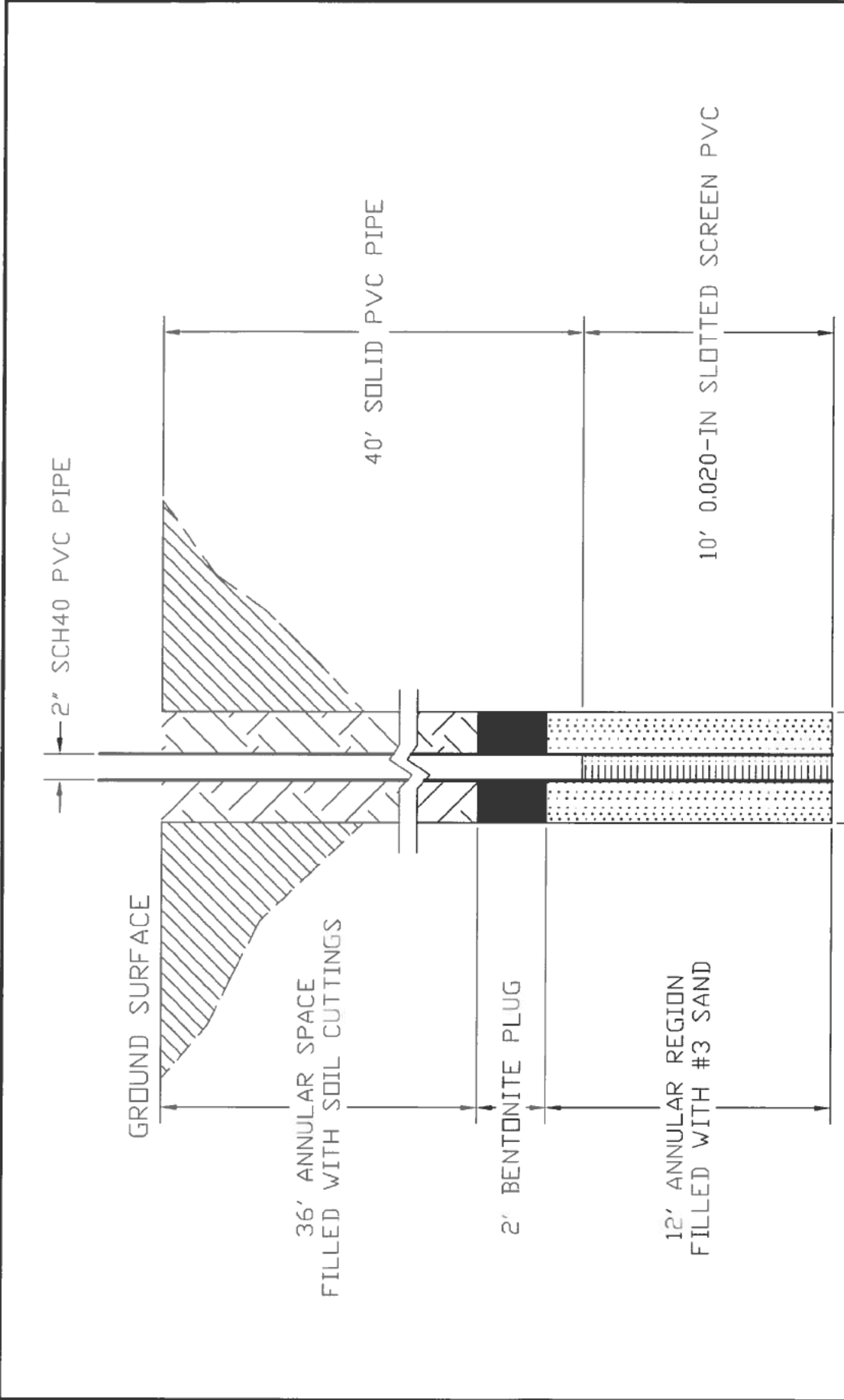
Location	Latitude	Longitude
HSA-I	34.184195	-118.163846

Work Steps:

HSA Borings and Infiltration Test Wells

- Utility clearance by Underground Service Alert
- Hand-auger top 5 feet to check for possible utility conflict
- Position truck mounted drill rig at the hole location and advance boring to target depth
- Sample soils at 5-foot interval
- Observe groundwater level in the borings, if encountered:
 - Drilling will be paused for approximately 30-minutes to allow groundwater level to settle (to measure static elevation).
- After reaching the target elevation at each borehole, a **temporary infiltration test well** will be constructed using the following procedure:
 - from 40 ft to 50 ft bgs a 2-inch slotted PVC well screen will be placed in the boring
 - 2" diameter PVC Schedule 40 (Outside Diameter = 2.375 inches)
 - in the upper portions of the boreholes solid PVC with no perforations will be installed
 - along the depth with slotted screen, pea gravel/#3 wash sand will be placed
 - a 2 ft bentonite plug will be placed above the slotted screen with soil cuttings placed above along the portion with solid PVC
 - the infiltration wells will be pre-soaked after installation

- On the following day, infiltration tests will be performed in general accordance with the U.S. Bureau of Reclamation Well Permeameter Method (USBR-7300) which is an approved method per the Los Angeles County Department of Public Works guidance document
- Following completion of the infiltration testing, the drilling subcontractor will arrive back on site to abandon the wells in-situ and backfill boreholes with cement-bentonite grout placed using a tremie pipe (bottom-up grouting):
 - Portland cement (approximately two 50lbs bags per 6 gallons of water) and maximum 5% bentonite.
- Restore pavement with concrete/asphalt patch
- Drilling cuttings to be stored in DOT drums, samples will be taken for disposal profiling.



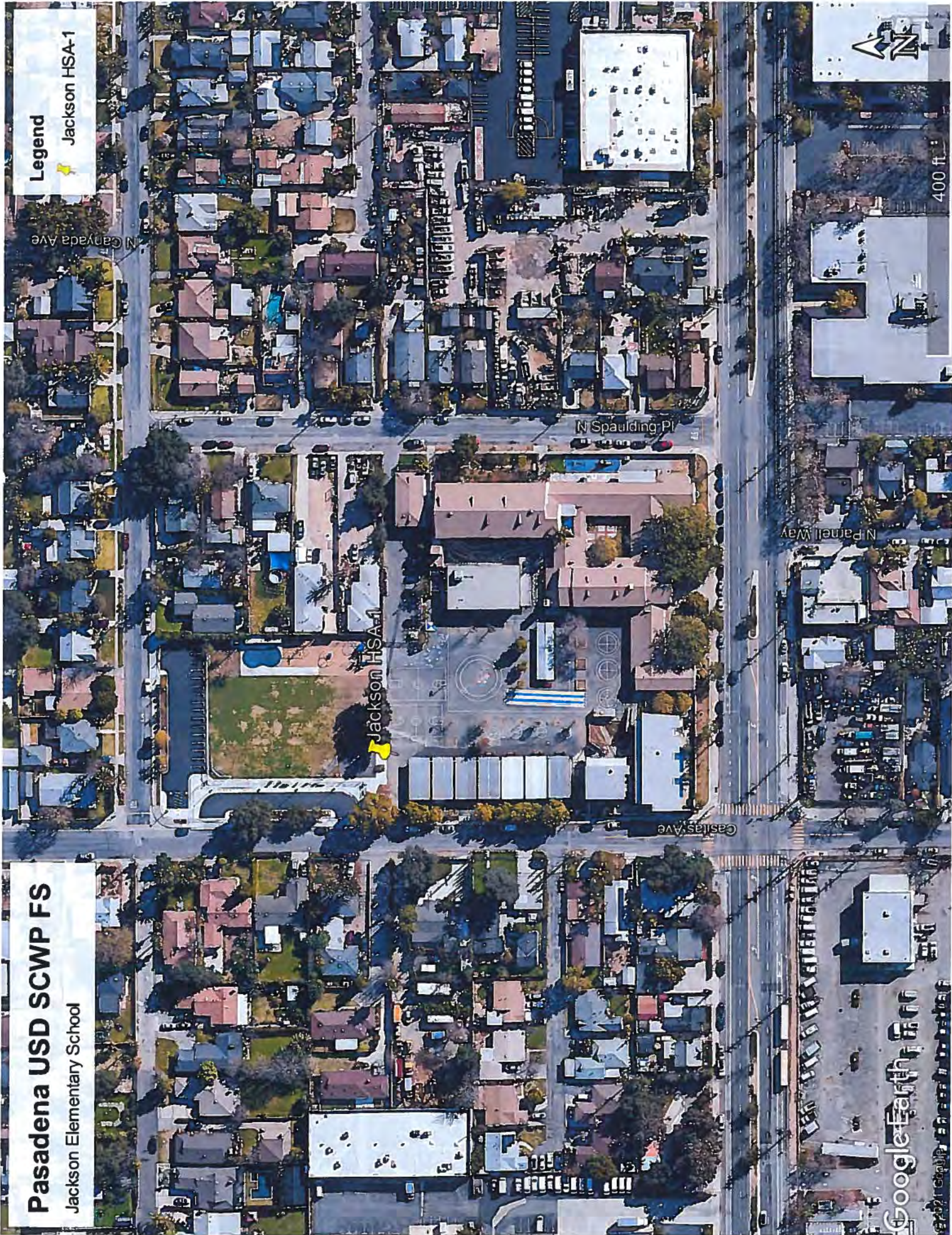
SCHEMATIC OF INFILTRATION TEST WELL Pasadena USD SCWP FS JACKSON ELEMENTARY SCHOOL ALTADENA, CALIFORNIA	
Geosyntec consultants	Figure
Project No: CWR0657	MAY 2021

Pasadena USD SCWP FS

Jackson Elementary School

Legend

Jackson HSA-1





APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

Environmental Health Division
 Drinking Water Program
 5050 Commerce Drive, Baldwin Park, CA 91706
www.publichealth.lacounty.gov/eh
 (888) 700-9995



PROJECT INFORMATION			
PROJECT NAME / NUMBER:	CWE: Site 4 Altadena		
ASSESSOR'S PARCEL NUMBER (APN):	MONITORING WELLS - Submit separate application(s) for each parcel. 5828-021-901 http://ealsacs.lad.lacounty.gov/slv/?Viewer=GISViewer/		
WORK SITE ADDRESS:	ADDRESS 291 Figueroa Dr	CITY Altadena	ZIP CODE 91001
CROSS STREET(S):	N Grandeur Ave		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole <input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange <input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input checked="" type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.):	25 feet to 45 feet		
Estimated groundwater depth:	165 feet		
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 406.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

For properties in Unincorporated communities, this Section must be completed by L.A. County Regional Planning

This water well is associated with (type of project) _____

Regional Planning has: APPROVED the project and it is OK to proceed with this water well application

Regional Planning Plan number (RPPL) _____ Date of approval: _____

Planner signature/date: _____

This approval is only a Regional Planning referral, and does not constitute a well/exploration hole permit. Please return this application to Environmental Health to obtain your well/exploration hole permit

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: B. Larsen
DATE: 12/19/21
SUPERVISOR'S INITIAL: B for LM
SITE / PERMIT NO.: SR 0281328
INVOICE NO.: IN 1069128



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

Environmental Health Division

Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

www.publichealth.lacounty.gov/eh

(888) 700-9995



Continuation of Application

WORK SITE ADDRESS 291 Figueroa Dr	CITY Altadena	ZIP CODE 91001	QUANTITY (QTY) 5
---	-------------------------	--------------------------	----------------------------

CALIFORNIA STATE REGISTERED DRILLER I 2R DRilling	C-57 LICENSE HOLDER NAME 2R Drilling Inc.	C-57 LICENSE NUMBER 709029	C-57 EXPIRATION DATE 6/30/2022
TELEPHONE NO. (909) 490-0530	MOBILE	E-MAIL ADDRESS info@2rdrilling.com	

CALIFORNIA STATE REGISTERED DRILLER II	C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO.	MOBILE	E-MAIL ADDRESS	

OWNER NAME	TELEPHONE / MOBILE	E-MAIL
------------	--------------------	--------

CONSULTANT Terracon Inc.	OFFICE NUMBER (949) 261-0051		
PROJECT CONTACT Raj Pirathiviraj	TELEPHONE NO. Ext. (949) 383-1990	MOBILE [REDACTED]	E-MAIL ADDRESS raj.pirathiviraj@terracon.com
PROJECT MANAGER Raj Pirathiviraj	TELEPHONE NO. Ext. (949) 383-1990	MOBILE [REDACTED]	E-MAIL ADDRESS raj.pirathiviraj@terracon.com

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

December 7, 2021



County of Los Angeles Public Health
Drinking Water Program
5050 Commerce Drive
Baldwin Park, CA 91706

**Re: Application for Well Permit
CWE: Site 4 Altadena
291 Figueroa Dr.
Altadena, California 91001**

Terracon Consultants, Inc. (Terracon) is submitting this application for the well permit.

A. PROJECT INFORMATION

The project site is located at 291 Figueroa Dr. in Altadena, California. The project site is developed with multiple one-story buildings utilized as a working facility for the city. Current ground cover is made up of asphalt and concrete pavements.

B. SCOPE OF WORK

Based on the proposed improvements, we propose to perform a total of five (5) borings to approximate depths of 25 and 45 feet below ground surface (bgs) within the area of improvement. Two (2) borings will be drilled to an approximate depth of 25 feet bgs, one (1) boring to an approximate depth of 30 feet bgs, one (1) boring to an approximate depth of 40 feet bgs, and one (1) boring to an approximate depth of 45 feet bgs.

Five (5) supplemental borings, drilled to 25, 30, 40 and 45 feet bgs, will be used for percolation testing. A 2-inch thick layer of gravel will be placed in the bottom of each boring after the borings are drilled to investigate the soil profile. A 3-inch diameter perforated pipe will be installed on top of the gravel layer in each boring. Gravel will be used to backfill between the perforated pipes and the boring sidewall. The borings then will be filled with water for a pre-soak period. At the beginning of each test, the pipes will be refilled with water and readings will be taken at a standardized time intervals.

Test samples will be collected during drilling in general accordance with the appropriate ASTM methods. Standard Penetration Testing (SPT) and sampling using either standard split-spoon or Modified California samplers will be performed starting at 50 feet bgs sampled at 5-foot intervals to the maximum depths drilled.

Borings will be backfilled with cement grout which is a mixture of 5 to 6 gallons of water per one 94-lbs bag of cement. The surface will be capped with matching surface materials.

CWE: Site 4 Altadena

291 Figueroa Dr.
Altadena, CA 91001

Legend

- Percolation Tests

PA-1 (40-45)

PA-2 (20-25)

PA-3 (35-40)

PA-4 (25-30) PA-5 (20-25)

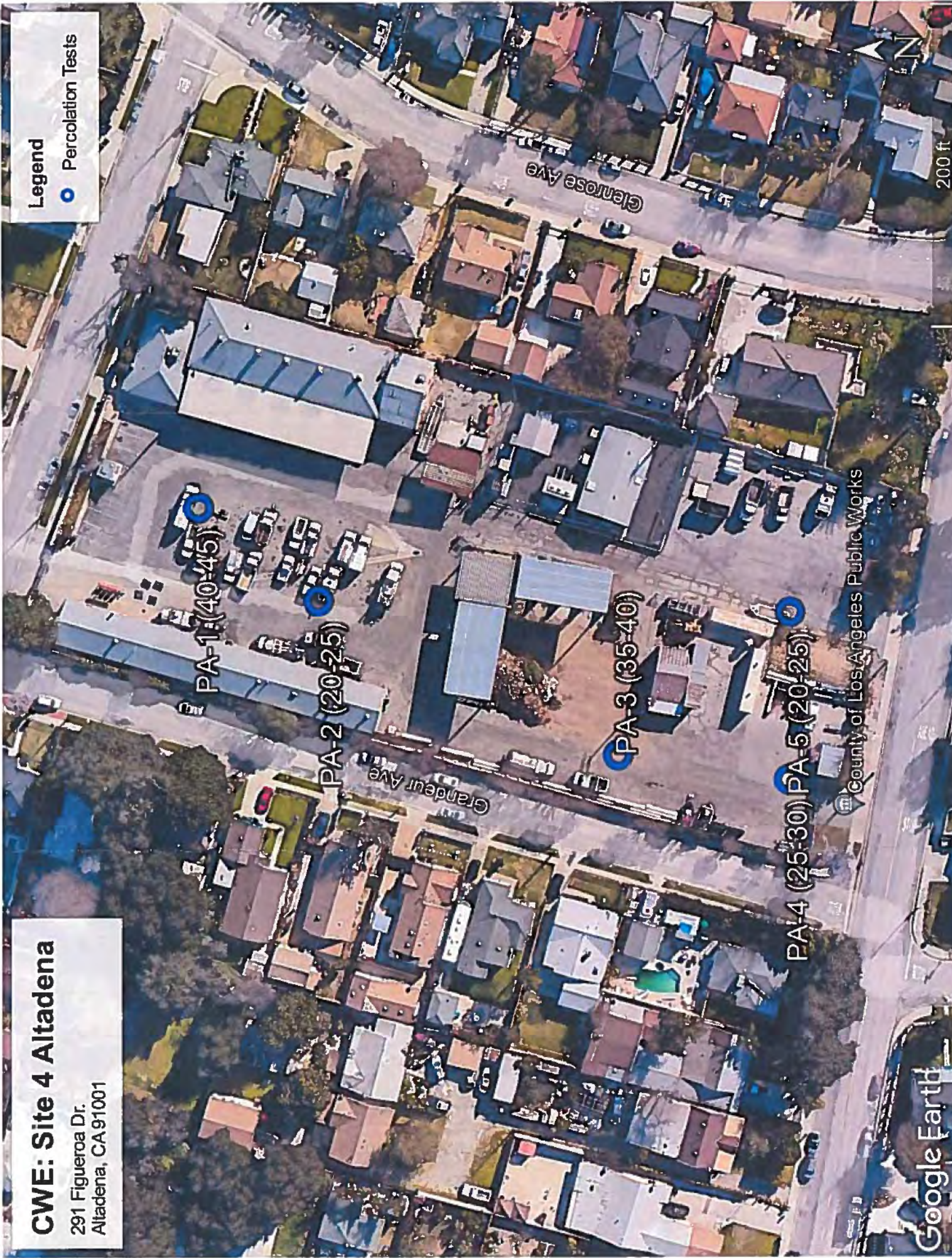
Glennrose Ave

Grandeur Ave

Google Earth

County of Los Angeles Public Works

200 ft





APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

Environmental Health Division
Drinking Water Program
5050 Commerce Drive, Baldwin Park, CA 91706
www.publichealth.lacounty.gov/eh
(888) 700-9995



PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Chevron Site 96368 - Well Decommission		
ASSESSOR'S PARCEL NUMBER (APN):	MONITORING WELLS - Submit separate application(s) for each parcel 5815-020-023 <small>http://egisgscx.isd.lacounty.gov/slv/?viewer=GISViewer#</small>		
WORK SITE ADDRESS:	ADDRESS 623 Foothill Blvd	CITY La Cañada Flintridge	ZIP CODE 91011
CROSS STREET(S):	Foothill Blvd and Rinetti Ln		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole <input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Decommission			
<input checked="" type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): _____			
Estimated groundwater depth: _____			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 735

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

For properties in Unincorporated communities, this Section must be completed by L.A. County Regional Planning:

This water well is associated with (type of project) _____

Regional Planning has: APPROVED the project and it is OK to proceed with this water well application

Regional Planning Plan number (RPPL): _____ Date of approval: _____

Planner signature/date: _____

This approval is only a Regional Planning referral, and does not constitute a well/exploration hole permit. Please return this application to Environmental Health to obtain your well/exploration hole permit.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>Teri Hachey</i>
DATE: <i>11/1/22</i>
SUPERVISOR'S INITIAL: <i>AH</i>
SITE / PERMIT NO.: SR <i>0315538</i>
INVOICE NO.: IN <i>1165485</i>



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

Environmental Health Division
Drinking Water Program
5050 Commerce Drive, Baldwin Park, CA 91706
www.publichealth.lacounty.gov/eh
(888) 700-9995



Continuation of Application

WORK SITE ADDRESS 623 Foothill Blvd		CITY La Cañada Flintridge	ZIP CODE 91011	QUANTITY (QTY) 3
CALIFORNIA STATE REGISTERED DRILLER I Wayne Perry Inc.		C-57 LICENSE HOLDER NAME Brandon Smith	C-57 LICENSE NUMBER 300345	C-57 EXPIRATION DATE 9/30/2024
TELEPHONE NO 714-826-0352	MOBILE 714-471-0623 Rodrigo Quinteros or 714-325-5739	E-MAIL ADDRESS VQuinteros@wpinc.com or CMcDonald@wpinc.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO	MOBILE	E-MAIL ADDRESS		
OWNER NAME Chevron Environmental Management Company		TELEPHONE / MOBILE (805) 546-6918 / (832) 986-4645	E-MAIL mmailoux@chevron.com	
CONSULTANT Arcadis U.S., Inc.		OFFICE NUMBER 714-730-9052		
PROJECT CONTACT Shinta Aizawa	TELEPHONE NO. Ext. 714-730-9052	MOBILE [REDACTED]	E-MAIL ADDRESS shinta.aizawa@arcadis.com	
PROJECT MANAGER Shinta Aizawa	TELEPHONE NO. Ext. 714-730-9052	MOBILE [REDACTED]	E-MAIL ADDRESS shinta.aizawa@arcadis.com	

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Well construction logs
<input checked="" type="checkbox"/> Type and amount of sealant
<input checked="" type="checkbox"/> Method of assessment
<input checked="" type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Los Angeles County Department of Public Health
5050 Commerce Drive
Baldwin Park, CA 91706
Attention: Drinking Water Program

Date: October 17, 2022
Subject: Well Destruction Work Plan
Chevron Service Station 96368
623 Foothill Boulevard, La Canada, California

Arcadis U.S., Inc.
2300 Clayton Road
Suite 400
Concord
California 94520
Phone: 925 274 1100
Fax: 925 726 0121
www.arcadis.com

1 Introduction

On behalf of Chevron Environmental Management Company (Chevron), Arcadis U.S., Inc. (Arcadis) has prepared this Well Destruction Work Plan for Chevron Service Station 96368 located at 623 Foothill Boulevard, La Canada Flintridge, California (site). The objective of this Work Plan is to detail the field activities needed to destroy an existing groundwater monitoring wells (MW-2, MW-3, and MW-5) for the site.

2 Pre-Field Activities

This section discusses pre-field activities associated with the proposed well destruction activities.

2.1 Access and Permitting

Property owners and relevant stakeholders will be notified of proposed field activities prior to conducting field work. Before the well destruction activities are implemented, well destruction permit will be obtained through Los Angeles County Department of Public Health (LACDPH).

2.2 Health and Safety Plan

As required by the Occupational Safety and Health Administration 29 Code of Federal Regulations 1910.120 (Hazardous Waste Operations and Emergency Responses), Chevron and/or onsite contractor will prepare a Health and Safety Plan (HASP) that addresses the hazards associated with fieldwork at the site. The HASP is intended to identify and prevent potential safety hazards. Field staff and contractors will be required to review the HASP before beginning field operations at the site.

2.3 Utility Locate

A DigAlert ticket will be created with the Underground Service Alert of Southern California at least 72 hours prior to the commencement of field activities to identify public utilities within the work area. In addition, Chevron will retain a private utility locating company to further identify and mark underground utilities or obstructions to be avoided during subsurface activities.

3 Field Activities

Chevron and a designated contractor will coordinate field activities associated with the destruction of the monitoring wells.

3.1 Well Destruction

Chevron proposes to destroy groundwater monitoring wells MW-2, MW-3, and MW-5 in accordance with LACDPH guidelines and California Well Standards. Monitoring wells are as shown on Figure 2 and well construction logs for the monitoring wells are included as Attachment A.

The well will be gauged, and total depth will be confirmed per the corresponding boring log prior to commencing well destruction activities. Chevron will retain a drilling contractor with a C-57 license to destroy the well. The well box ring, lid, top 5 feet of well casing, and the surrounding well pad will be removed. The well will be pressure-grouted using a grout containing Portland cement (95%)/bentonite (5%). The grout will be delivered from the bottom of the well to the top using a tremie pipe. The grout will be pressurized to a minimum of 25 pounds per square inch for approximately 15 minutes using either a grout pump or compressed air system. Additional grout will be added (and pressure applied) until the well no longer accepts the material. The wells will be pressure grouted from the bottom to 1.5 feet below ground surface. Concrete will be applied from 1.5 feet bgs to the ground surface, dyed to match existing ground conditions.

Based on the well construction log, an anticipated grout volume is calculated to be 26 gallons for each well (Attachment B). The actual grout volume will be recorded.

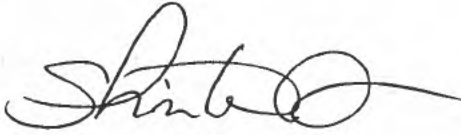
3.2 Waste

Anticipated wastes generated during well decommissioning activities include the well lids, PVC casing, and concrete collars. These wastes are anticipated to be disposed as commercial waste.

4 Schedule and Reporting

Upon Work Plan approval, Chevron estimates completing the work proposed within 90 days of obtaining applicable permits. Upon completion of this field activities proposed in this Work Plan, a driller will prepare a completion report detailing well destruction activities.

Sincerely,
Arcadis U.S., Inc.

A handwritten signature in black ink, appearing to read 'Shinta', with a large, stylized flourish extending to the right.

Shinta Aizawa
Project Manager

Email: Shinta.Aizawa@arcadis.com
Telephone: 310-753-5539

Enclosures:

- Figure 1. Site Plan with Proposed Well Decommissioning
- Attachment A. Boring-Well Construction Log
- Attachment B. Well Abandonment Pressure Grouting Calculations

Attachment A

Boring-Well Construction Log



1220 Avenida Acaso
 Camarillo, CA 93012
 (805) 388-3775
 www.aecom.com

Client: CEMC
 Project Number: 60331382
 Site Description/Location: 623 Foothill Blvd, La Canada, California
 Coordinates: See Survey Elevation: Datum:
 Drilling Equipment/Method: HSA/ CME85 Weather: partly cloudy cool
 Sample Type(s): split spoon Boring Diameter: 8 IN.

Boring No. MW-2
 Ambient PID Reading: 0.0
 Sheet: 1 of 2
 Monitoring Well Installed: Yes
 Screened Interval: 40-60 ft.

Approved By: S. Piper Logged By: S. Piper Date/Time Started: 12-10-14 / 12:11 Depth of Boring: 60 FT BGS
 Drilling Contractor: ABC Liovin Drilling Backfill: Date/Time Finished: 12-11-14 / 10:44 Water Level: ~50 FT BGS

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.	Well Diagram
5	MW-2-S-N-5-20141210			1.5	0.0	SP		8 INCH CONCRETE, Air Knife to 8 feet, Hand Auger at 5 feet SAND, brown (10YR 4/3), 85% fine-grained, poorly graded sand, 10% fine-grained gravel (max size 2"), 5% non-plastic silt, subangular, loose, moist, No odor or staining	<p>Locking Slip Cap</p> <p>95% Cement/ 5% Bentonite Grout</p>
10	MW-2-S-N-10-20141211		9 11 14	1.5	0.0	ML		SILT, dark yellowish brown (10YR 4/4), 90% low-plastic silt, 10% fine-grained gravel (max size 0.25"), stiff, moist, No odor or staining	
15	MW-2-S-N-15-20141211		7 12 16	1.5	0.1	SM		SANDY SILT, very dark grayish brown (10YR 3/2), 65% low-plastic silt, 30% fine-to medium-grained, poorly graded sand, 5% fine-grained gravel (max size 0.25"), medium dense, moist, No odor or staining	
20	MW-2-S-N-20-20141211		8 11 15	1.5	1.1	SP		SAND, dark grey (10YR 4/1), 95% medium- to coarse-grained, poorly graded sand, 5% fine-grained gravel (max size 0.25"), subangular, loose, moist, No odor or staining	
25	MW-2-S-N-25-20141211		9 12 17	1.5	0.3	SP		SAND, dark grey (10YR 4/1), 95% medium- to coarse-grained, poorly graded sand, 5% fine-grained gravel (max size 0.25"), subangular, loose, moist, No odor or staining	
30									

Notes:



1220 Avenida Acaso
Camarillo, CA 93012
(805) 388-3775
www.aecom.com

Client: CEMC
Project Number: 60331382
Site Description/Location: 623 Foothill Blvd, La Canada, California
Coordinates: See Survey Elevation: Datum:
Drilling Equipment/Method: HSA/ CME85 Weather: partly cloudy cool
Sample Type(s): split spoon Boring Diameter: 8 IN.

Boring No. MW-2
Ambient PID Reading: 0.0
Sheet: 2 of 2
Monitoring Well Installed: Yes
Screened Interval: 40-60 ft.

Approved By: S. Piper Logged By: S. Piper Date/Time Started: 12-10-14 / 12:11 Depth of Boring: 60 FT BGS
Drilling Contractor: ABC Livioin Drilling Backfill: Date/Time Finished: 12-11-14 / 10:44 Water Level: ~50 FT BGS

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.	Well Diagram
	MW-2-S-N-30-20141211	8 10 16		1.5	0.0	SP		SAND, brown (10YR 4/3), 90% fine-to medium-grained, poorly graded sand, 10% fine-grained gravel (max size 0.33"), subangular, moist, No odor or staining	<p>Hydrated Bentonite Seal</p> <p>#3 Monterey Sand Filter Pack</p>
35	MW-2-S-N-35-20141211	7 9 13		1.5	0.0				
40	MW-2-S-N-40-20141211	8 8 11		1.5	0.0			dark grayish brown (10YR 4/1), 85% fine-to medium-grained, poorly graded sand, loose, 15% fine-grained gravel (max size 0.25")	
45	MW-2-S-N-45-20141211	9 11 13		1.5	0.0				
50	MW-2-S-N-50-20141211	8 9 13		1.5	0.0	ML		SILT, brown (10YR 4/3), 90% low-plastic silt, 10% poorly sorted sand, medium dense, wet, No odor or staining, 85% non-plastic silt, 15% clay	
55	MW-2-S-N-55-20141211	50 for 6		0.5	0.0				
60	MW-2-S-N-60-20141211	10 12 18		1.5	0.0				0.02 inch Slotted Screen Bottom Cap

Notes:



1220 Avenida Acaso
 Camarillo, CA 93012
 (805) 388-3775
 www.aecom.com

Client: CEMC
 Project Number: 60331382
 Site Description/Location: 623 Foothill Blvd, La Canada, California
 Coordinates: See Survey Elevation: Datum:
 Drilling Equipment/Method: HSA/ CME85 Weather:
 Sample Type(s): split spoon Boring Diameter: 8 IN.

Boring No. MW-3
 Ambient PID Reading: 0.0
 Sheet: 1 of 2
 Monitoring Well Installed: Yes
 Screened Interval: 40-60 ft.

Approved By: S. Piper Logged By: S. Piper Date/Time Started: 12-10-14 / 14:05 Depth of Boring: 60 FT BGS
 Drilling Contractor: ABC Liovin Drilling Backfill: Date/Time Finished: 12-11-14 / 13:48 Water Level: ~ 45 FT BGS

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6" RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.	Well Diagram
						SP	<p>8 INCH CONCRETE, Air Knife to 8 feet, Hand Auger at 5 feet</p> <p>GRAVELLY SAND, brown (10YR 4/3), 60% medium-to coarse -grained, poorly graded sand, 40% fine-to coarse - grained gravel (greater than 6" granitic boulders), subangular, loose, moist, No odor or staining</p> <p>SAND, brown (10YR 4/3), 100% medium-to coarse-grained, poorly graded sand, loose, medium dense, moist, No odor or staining</p> <p>dark grey (10YR 4/1), 85% medium-to coarse-grained, poorly graded sand, 10% non-plastic silt, 5% fine-grained gravel (max size 0.33"), medium dense</p> <p>SILTY SAND, brown (10YR 4/3), 75% fine-grained, poorly graded sand, 25% low-plastic silt, subangular, loose, moist, No odor or staining</p>	<p>Locking Slip Cap</p> <p>95% Cement/ 5% Bentonite Grout</p>	
5	MW-3-S-N-5-20141210			1.5	0.0				
10	MW-3-S-N-10-20141211		5 8 10	1.5	0.0				
15	MW-3-S-N-15-20141211		7 8 11	1.5	0.0				
20	MW-3-S-N-20-20141211		8 11 14	1.5	0.0				
25	MW-3-S-N-25-20141211		9 11 13	1.5	0.0	SM			
30									

Notes: Dup: MW-3-S-Y-60-20141211



1220 Avenida Acaso
Camarillo, CA 93012
(805) 388-3775
www.aecom.com

Client: CEMC
Project Number: 60331382
Site Description/Location: 623 Foothill Blvd, La Canada, California
Coordinates: See Survey Elevation: Datum:
Drilling Equipment/Method: HSA/ CME85 Weather:
Sample Type(s): split spoon Boring Diameter: 8 IN.

Boring No. MW-3
Ambient PID Reading: 0.0
Sheet: 2 of 2
Monitoring Well Installed: Yes
Screened Interval: 40-60 ft.

Approved By: S. Piper Logged By: S. Piper Date/Time Started: 12-10-14 / 14:05 Depth of Boring: 60 FT BGS
Drilling Contractor: ABC Livoin Drilling Backfill: Date/Time Finished: 12-11-14 / 13:48 Water Level: ~ 45 FT BGS

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.	Well Diagram
	MW-3-S-N-30-20141211	6 11 17		1.5	0.0	SP		SAND, dark yellowish brown (10YR 4/4), 90% fine-to medium-grained, poorly graded sand, 10% fine-grained gravel, subangular, loose, moist, No odor or staining	
35	MW-3-S-N-35-20141211	10 15 19		1.5	0.0	SM		SILTY SAND, dark gray brown (10YR 3/2), 80% poorly graded sand, 20% non-plastic silt, medium dense, moist, No odor or staining	
40	MW-3-S-N-40-20141211	10 10 15		1.5	0.0			, 80% fine-grained, poorly graded sand, 15% non-plastic silt, 5% fine-grained gravel (max size 0.25"), subangular, wet	
45	MW-3-S-N-45-20141211	11 15 26		1	0.0				
50	MW-3-S-N-50-20141211	50 for 6	0.33	0.0	0.0	ML		SILT, dark yellowish brown (10YR 4/4), 85% low-plastic silt, 10% poorly graded sand, 5% fine-grained gravel, medium dense, moist, No odor or staining	
55	MW-3-S-N-55-20141211	10 10 21		1.5	0.0			, 85% low-plastic silt, 10% medium-plastic clay, 5% fine-grained gravel, dense, moist	
60	MW-3-S-N-60-20141211	7 10 13		1.5	0.0				

Notes:



1220 Avenida Acaso
Camarillo, CA 93012
(805) 388-3775
www.aecom.com

Client: Chevron Environmental Management Company
Project Number: 60551575
Site Description/Location: Chevron 96368 - 623 Foothill Blvd., La Canada, California
Coordinates: See Survey Elevation: Datum:
Drilling Equipment/Method: HSA Weather:
Sample Type(s): Split Spoon Boring Diameter: 8 IN.

Boring No. MW-5
Ambient PID Reading: 0.0 ppm
Sheet: 1 of 1
Monitoring Well Installed: Yes
Screened Interval: 40-60 feet bgs

Approved By: T. Watson Logged By: D. Files Date/Time Started: 09-15-17 Depth of Boring: 60 feet bgs
Drilling Contractor: ABC Livoin Backfill: see well diagram Date/Time Finished: 09-15-17 Water Level: ~48 feet bgs

DEPTH (ft)	Sample ID	Sample Depth (ft)	Blows per 6"/RQD	Recovery (ft)	PID Reading (ppm)	USCS	Graphic Log	MATERIAL IDENTIFICATION, color, description of fine grained material (silt and clay), description of coarse grained material (sand and gravel), structural or mineralogical features, density or stiffness, moisture content, odors or staining.	Well Diagram
								6-inch thick concrete	
5	MW-5-2			0.5	0.0	SP		SAND, light brown, 5% non-plastic silt, 95% poorly graded medium to coarse grained sand, subrounded, dense, dry, no odors or staining observed	
	MW-5-5			0.5	0.0				
10	MW-5-10		11 13 14	1.5	0.0				
15	MW-5-15		9 10 13	1.5	0.0				
20	MW-5-20		7 9 11	1.5	0.0				
25	MW-5-25		8 8 12	1.5	0.0				
30	MW-5-30		13 15 17	1.5	0.0	SM		SILTY SAND, light brown, 70% poorly graded fine to medium grained sand, 30% non-plastic silt, subrounded, dense, moist, no odors or staining observed	
35	MW-5-35		9 14 16	1	0.0	SP		SAND, light brown, 5% non-plastic silt, 95% poorly graded medium to coarse grained sand, subrounded, dense, dry, no odors or staining observed	
40	MW-5-40		9 11 13	1	0.0	SM		SILTY SAND, light brown, 70% poorly graded fine to medium grained sand, 30% non-plastic silt, subrounded, dense, moist, no odors or staining observed	
45	MW-5-45		10 12 13	1.5	0.0				
50	MW-5-50		13 15 17	1	0.0			wet	
55	MW-5-55		14 14 15	1.5	0.0	ML		SILT, light brown, 90% non-plastic silt, 10% low plasticity clay, dense/hard, wet, no odors or staining observed	
60	MW-5-60		14 16 17	1.5	0.0				

Notes:

Attachment B

Well Abandonment Pressure Grouting Calculations

Spreadsheet for Well Abandonment Pressure Grouting Calculations

CEMC

96368 La Canada

623 Foothill Boulevard, La Canada, California

	Diameter (inches)	Radius (inches)	Pi Value	Radius (feet)	r ²	Height h	Volume (cu ft) (cu ft)	Cu Ft to gal.	Volume (gals)	Total Filter pack Volume (gals)	Filter pack porosity (value)	Effective Filter pack Volume (gals)	Total Volume (gals)
Casing Blank	2	1	3.14	0.0833	0.0069	40	0.872	7.48	6.52				6.52
Casing Screen	2	1	3.14	0.0833	0.0069	20	0.436	7.48	3.26				3.26
Borehole Filter pack	8	4	3.14	0.3333	0.1111	22	7.676	7.48	57.41	54.15	0.3	16.25	16.25
Borehole Mushroom cap	8	4	3.14	0.3333	0.1111	0	0.000	7.48	0.00				0.00
													<u>26.03</u>

Casing Blank = Length of Blank Casing Adjacent to seal/grout backfill

Casing Screen = Length of Casing adjacent to Filter pack

Borehole Filter pack = Length of borehole annulus filled with Filter pack

Borehole Mushroom cap = length of borehole above casing cut off filled with grout

Radius in inches = radius of casing or borehole

Pi = 3.1415

Radius in feet = Radius in inches/12

r² = Radius Squared

h = height of borehole or casing

Volume = pi*r²*h in ft³ = cubic feet

Conversion factor cu ft to gals= cu ft * 7.48

Total Filter pack volume = Borehole Filter pack volume - casing screen

Filter pack porosity = Assumed porosity of 30%

Effective Filter pack Volume = Total Filter pack volume * Filter pack porosity

Total Volume = Blank Casing + Screen Casing + Effective Filter pack Volume + Mushroom cap

User Defined Value



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT
Environmental Health Division
Drinking Water Program
 5050 Commerce Drive, Baldwin Park, CA 91706
www.publhealth.lacounty.gov/eh
 (888) 700-9995



PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Lincoln Affirmed Housing Proposed Senior Apartments/3020082		
ASSESSOR'S PARCEL NUMBER (APN): http://epicisocx.lacounty.gov/srv/?Viewer=GISViewer#	MONITORING WELLS - Submit separate application(s) for each parcel. 5828-027-022		
WORK SITE ADDRESS:	ADDRESS 2439-2445 Lincoln Avenue	CITY Altadena	ZIP CODE 91001
CROSS STREET(S):	Lincoln Avenue and Figueroa Drive		
E-MAIL PERMIT TO:	<input checked="" type="checkbox"/> Driller	<input checked="" type="checkbox"/> Owner	<input checked="" type="checkbox"/> Consultant

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input checked="" type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.):	10 FT TO 50 FT		
Estimated groundwater depth:	225 FT		
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 126.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

For properties in Unincorporated communities, this Section must be completed by L.A. County Regional Planning:

This water well is associated with (type of project) _____

Regional Planning has: **APPROVED** the project and it is OK to proceed with this water well application

Regional Planning Plan number (RPPL): _____ Date of approval: _____

Planner signature/date: _____

This approval is only a Regional Planning referral, and does not constitute a well/exploration hole permit. Please return this application to Environmental Health to obtain your well/exploration hole permit.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>Maple Kuo</i>
DATE: <i>1/13/2023</i>
SUPERVISOR'S INITIAL: <i>AT</i>
SITE / PERMIT NO.: SR 0324088
INVOICE NO.: IN 1193204



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT
Environmental Health Division
Drinking Water Program
 5050 Commerce Drive, Baldwin Park, CA 91706
www.publhealth.lacounty.gov/eh
 (888) 700-9995



Continuation of Application

WORK SITE ADDRESS 2439-2445 Lincoln Avenue		CITY Altadena	ZIP CODE 91001	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I ABC LIOVIN		C-57 LICENSE HOLDER NAME Ivan Liovin	C-57 LICENSE NUMBER 422904	C-57 EXPIRATION DATE 9/30/2024
TELEPHONE NO. 562-981-8575	MOBILE 714-620-4883	E-MAIL ADDRESS ivan@abcdrilling.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO.	MOBILE	E-MAIL ADDRESS		
OWNER NAME Affirmed Housing		TELEPHONE / MOBILE 909-771-4462	E-MAIL shonda@affirmedhousing.com	
CONSULTANT NOVA Services, Inc.		OFFICE NUMBER 858-292-7575		
PROJECT CONTACT Melissa Stayner	TELEPHONE NO. 858-292-7575	Ext. 413	MOBILE [REDACTED]	E-MAIL ADDRESS mstayner@usa-nova.com
PROJECT MANAGER Melissa Stayner	TELEPHONE NO. 858-292-7575	Ext. 413	MOBILE [REDACTED]	E-MAIL ADDRESS mstayner@usa-nova.com

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site



GEOTECHNICAL

MATERIALS

SPECIAL INSPECTION

DVBE • SBE • SDVOSB • SLBE

GEOTECHNICAL DRYWELL TESTING WORK PLAN

Project Name: Lincoln Affirmed Housing
2439-2455 Lincoln Avenue, Altadena, CA 91001

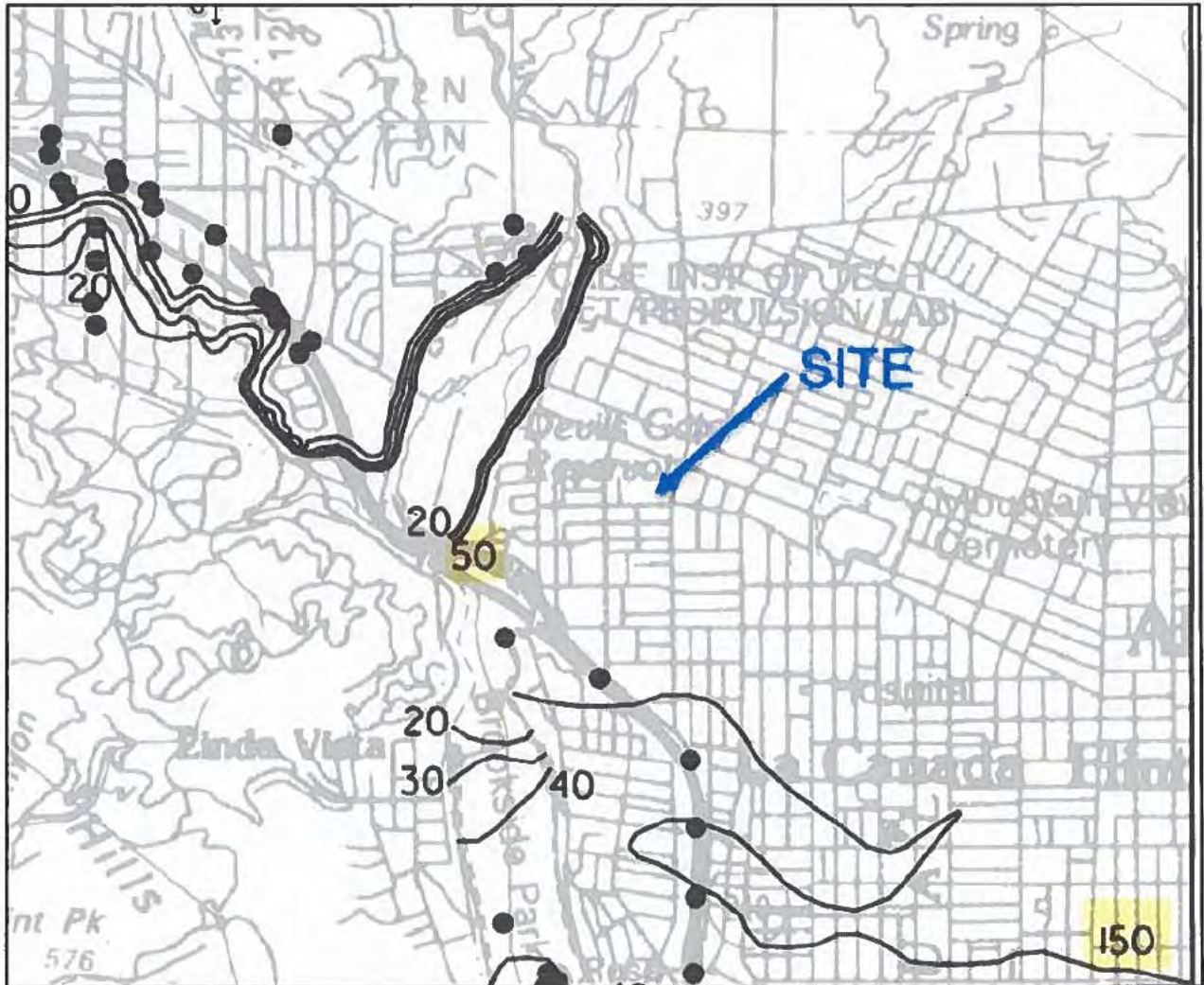
Scope of Work:

- Drill one boring to 50 feet utilizing an air percussion drill rig to perform infiltration testing for proposed drywell. Water trucks, water meter access, and miscellaneous equipment will be provided on-site as necessary. The soils will be logged in accordance with USCS. Samples of soils will be collected and delivered to NOVA for laboratory analysis.
- From 50 feet to 40 feet below ground surface (bgs) the boring will be backfilled with bentonite chips.
- The dry well testing procedure will consist of a constant head test method, using a 3-inch diameter slotted schedule 40 PVC pipe placed inside the 9.5-inch diameter boring to a depth of 40 feet. The annular space between the pipe and the drilled boring walls will be backfilled with ¾-inch gravel from 40 feet to the ground surface. The infiltration well will be pre-soaked prior to field testing in accordance with the Guidelines for Geotechnical Investigation and Reporting Low Impact Development Stormwater Infiltration.
- The following day, constant head testing will involve maintaining a nearly constant water level within the boring at a depth of approximately 15 feet below existing grade. During the test period, the flow rate required to maintain a constant head will be measured and recorded at approximately 15-minute intervals until an hour after the flow rate has stabilized per the County Guidelines.
- Upon completion of the drywell testing (within 24 hours of completion) the test boring will be decommissioned per the Department of Water Resources, Bulletin 74-81, Water Well Statards: State of California, December 1981. The boring will be cased to 40 feet, and the pipe pulled out. The boring will be drilled and the casing driven to 50 feet, removing all gravel and bentonite chips. An approved cement slurry mix will be placed by tremie method in lifts while extracting the temporary drive casing until the borehole is grouted to the ground surface.

Groundwater

A monitoring well installed approximately 850 feet north of the site measured groundwater between approximately 225 to 250 feet below ground surface between October 2017 and February 2020 (CDWR 2020). This finding is consistent with NOVA's experience in the near site vicinity. NOVA does not anticipate groundwater being a constraint for infiltration feasibility. Historic high groundwater level

in the area is reported within the Seismic Harard Zon Report for the Pasadena 7.5- Minute Quadrangle, to be between 50 feet and 150 feet below ground surface (see figure below).





Attachments: Location of Proposed Drywell Test Boring
 Drywell Test Boring Diagram

Lincoln Affirmed Housing Dry Well Test Boring

2439-2455 Lincoln Avenue, Altadena, CA 91001



Legend

-  2445 Lincoln Ave
-  P-1 Location of Dry Well Test Boring

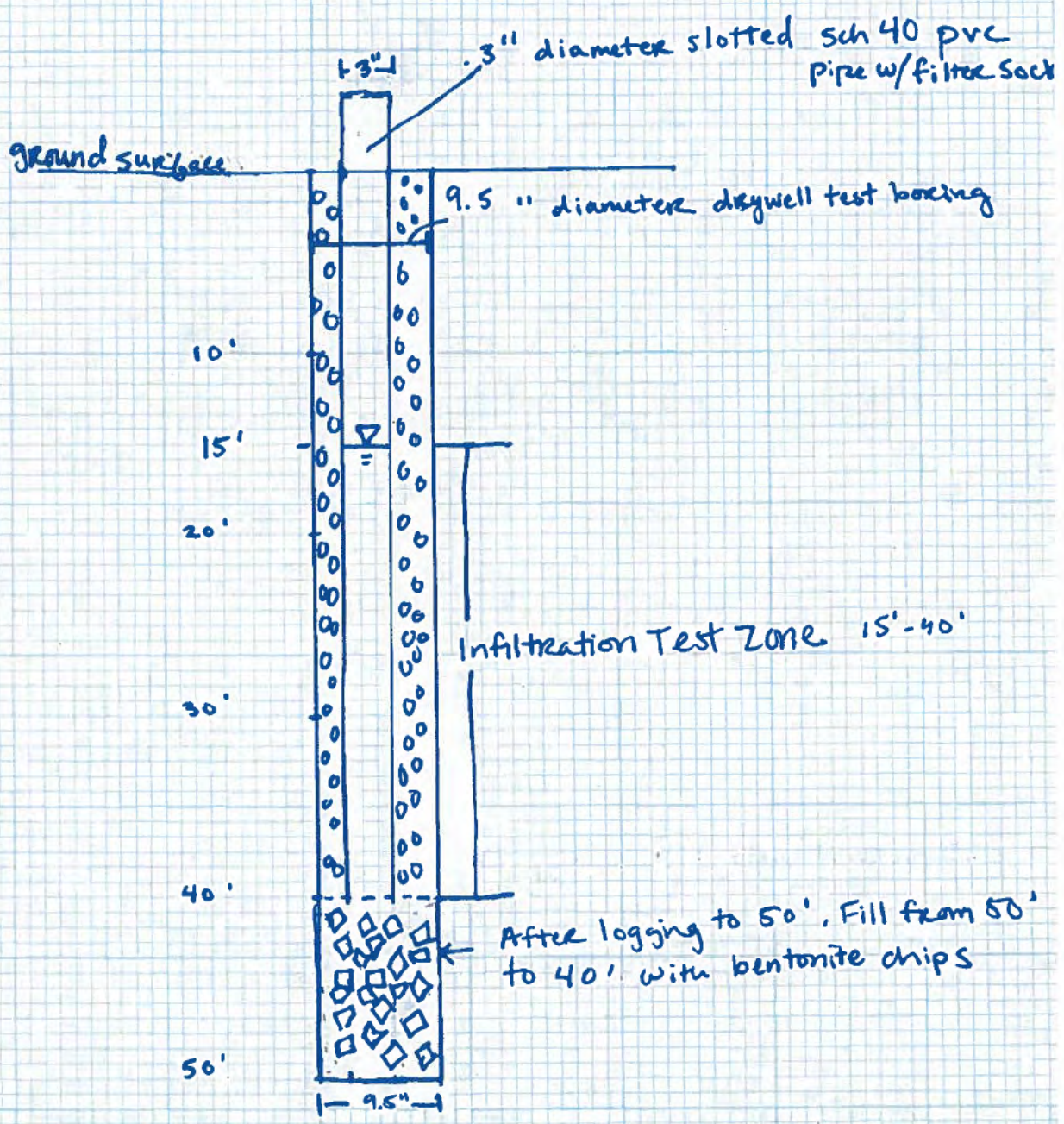
Google Earth

100 ft



Jan 12, 2023
Lincoln Affing Housing
Altadena
PRJ. 302082

Drywell Test Boring Diagram





APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

Environmental Health Division

Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

<http://www.publichealth.lacounty.gov/eh>

(626) 430-5420



PROJECT INFORMATION

PROJECT NAME / NUMBER:	MonteCedro II - Geotech Investigation		
ASSESSOR'S PARCEL NUMBER (APN):	MONITORING WELLS - Submit separate application(s) for each parcel. 5845-022-019 http://eqisocx.lfd.lacounty.gov/sv/?Viewer=GISViewer#		
WORK SITE ADDRESS:	ADDRESS 2212 El Molino Avenue	CITY Altadena	ZIP CODE 91001
CROSS STREET(S):	Alameda and North Crawford		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater)			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): 50 feet			
Estimated groundwater depth: 100 feet			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

For properties in Unincorporated communities, this Section must be completed by L.A. County Regional Planning:

This water well is associated with (type of project) _____

Regional Planning has: APPROVED the project and it is OK to proceed with this water well application

Regional Planning Plan number (RPPL): _____ Date of approval: _____

Planner signature/date: _____

This approval is only a Regional Planning referral, and does not constitute a well/exploration hole permit. Please return this application to Environmental Health to obtain your well/exploration hole permit.

FOR OFFICE USE ONLY

ASSIGNED INSPECTOR:

J. Hachey
DATE: 6/26/23

SUPERVISOR'S INITIAL:

CH

SITE / PERMIT NO.:

SR 0344193

INVOICE NO.:

IN 1272582



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

Environmental Health Division

Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

<http://www.publichealth.lacounty.gov/sh>

(626) 430-5420



Continuation of Application

WORK SITE ADDRESS 2212 El Molino Avenue	CITY Altadena	ZIP CODE 91001	QUANTITY OF WELLS 0
--	------------------	-------------------	------------------------

CALIFORNIA STATE REGISTERED DRILLER I Martini Drilling Corp		C-57 LICENSE HOLDER NAME DARIN EDWARD MARTINI	C-57 LICENSE NUMBER 831982	C-57 EXPIRATION DATE 02/29/2024
TELEPHONE NO. 714-715-2715	MOBILE 714.715.2715	E-MAIL ADDRESS martinidrilling@yahoo.com		

CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO.	MOBILE	E-MAIL ADDRESS		

OWNER NAME	TELEPHONE / MOBILE	E-MAIL
------------	--------------------	--------

CONSULTANT Carl Kim Geotechnical, Inc.		OFFICE NUMBER 949-441-8143	
PROJECT CONTACT Andrew R. Hillstrand	TELEPHONE NO. 805-573-0315	Ext. 	MOBILE [REDACTED]
			E-MAIL ADDRESS geoandy@gmail.com
PROJECT MANAGER Carl Kim	TELEPHONE NO. 949-441-8143	Ext. 	MOBILE [REDACTED]
			E-MAIL ADDRESS carlkingeo@gmail.com

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

June 23, 2023

Project No. PWAS_20220414b

Environmental Health Headquarters
5050 Commerce Drive
Baldwin Park, CA 91706
Attention: Drinking Water Program

Subject: Proposed Geotechnical Exploration, MonteCedro II Senior Villa Project, 2212 El Molino Avenue, Altadena, California (APN 5845-022-019)

Dear Sir or Madam,

Carl Kim Geotechnical, Inc. (Carl Kim Geo) is planning to perform the following scope of work at the subject property:

- Advance two (2) hollow stem auger borings to approximately 50 feet below ground surface. Geotechnical sampling and short duration in-situ percolation testing will be performed in accordance with County of Los Angeles Public Works Geotechnical and Materials Engineering Division, "Guidelines for Geotechnical Investigation and Reporting, Low Impact Development Stormwater Infiltration" (dated 6/30/21, also known as GS200.1)

The drilling subcontractor is scheduled perform the work on approximately July 24, 2023. Carl Kim Geo's staff and subcontractors will use industry standard techniques to seal boreholes to surface. We will adhere to the requirements of the LA County Well/Boring Permit and California Well Standards. As such, borings will be abandoned/backfilled with neat cement using positive displacement methods (tremie pipe) after in-situ testing is performed.

Solid and liquid investigation derived waste are not expected to be impacted and will be stockpiled or spread onsite.

For convenience, a map excerpt from <https://apps.gis.lacounty.gov/m/?viewer=GISViewer/> is included below showing the approximate locations of proposed explorations.



If you have any questions, please do not hesitate to contact me at 805-573-0315 or geoandy@gmail.com.

Respectfully submitted,
Carl Kim Geotechnical, Inc.

Andrew R. Hillstrand PG 7720, CEG 2366
Senior Consulting Geologist

arh
Enclosure



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT
Environmental Health Division
Drinking Water Program
 5050 Commerce Drive, Baldwin Park, CA 91706
<http://www.publichealth.lacounty.gov/eh>
 (626) 430-5420



PROJECT INFORMATION			
PROJECT NAME / NUMBER:	MonteCedro II - Geotech Investigation		
ASSESSOR'S PARCEL NUMBER (APN):	MONITORING WELLS - Submit separate application(s) for each parcel. 5845-022-019		
WORK SITE ADDRESS:	ADDRESS 2212 El Molino Avenue	CITY Altadena	ZIP CODE 91001
CROSS STREET(S):	Alameda and North Crawford		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole <input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange <input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input checked="" type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): 50 feet			
Estimated groundwater depth: 100 feet			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 126⁰⁰

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

For properties in Unincorporated communities, this Section must be completed by L.A. County Regional Planning:

This water well is associated with (type of project) _____

Regional Planning has APPROVED the project and it is OK to proceed with this water well application

Regional Planning Plan number (RPPL): _____ Date of approval: _____

Planner signature/date: _____

This approval is only a Regional Planning referral, and does not constitute a well/exploration hole permit. Please return this application to Environmental Health to obtain your well/exploration hole permit.

FOR OFFICE USE ONLY
ASSIGNED INSPECTOR: <i>T. Hachey</i>
DATE: 6/28/23
SUPERVISOR'S INITIAL: <i>BP</i>
SITE / PERMIT NO.: SR 0344790
INVOICE NO.: IN 1273042



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT

Environmental Health Division

Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

<http://www.publichealth.lacounty.gov/eh>

(626) 430-5420



Continuation of Application

WORK SITE ADDRESS 2212 El Molino Avenue	CITY Altadena	ZIP CODE 91001	QUANTITY OF WELLS 0
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CALIFORNIA STATE REGISTERED DRILLER I Martini Drilling Corp		C-57 LICENSE HOLDER NAME DARIN EDWARD MARTINI	C-57 LICENSE NUMBER 831982	C-57 EXPIRATION DATE 02/29/2024
TELEPHONE NO 714-715-2715	MOBILE 714.715.2715	E-MAIL ADDRESS martinidrilling@yahoo.com		

CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO	MOBILE	E-MAIL ADDRESS		

OWNER NAME	TELEPHONE / MOBILE	E-MAIL
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CONSULTANT Carl Kim Geotechnical, Inc.		OFFICE NUMBER 949-441-8143	
PROJECT CONTACT Andrew R. Hillstrand	TELEPHONE NO 805-573-0315	Ext.	MOBILE [REDACTED]
			E-MAIL ADDRESS geoandy@gmail.com
PROJECT MANAGER Carl Kim	TELEPHONE NO 949-441-8143	Ext.	MOBILE [REDACTED]
			E-MAIL ADDRESS carlkingeo@gmail.com

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: <ol style="list-style-type: none"> (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input checked="" type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

June 23, 2023

Project No. PWAS_20220414b

Environmental Health Headquarters
5050 Commerce Drive
Baldwin Park, CA 91706
Attention: Drinking Water Program

Subject: Proposed Geotechnical Exploration, MonteCedro II Senior Villa Project, 2212 El Molino Avenue, Altadena, California (APN 5845-022-019)

Dear Sir or Madam,

Carl Kim Geotechnical, Inc. (Carl Kim Geo) is planning to perform the following scope of work at the subject property:

- Advance two (2) hollow stem auger borings to approximately 50 feet below ground surface. Geotechnical sampling and short duration in-situ percolation testing will be performed in accordance with County of Los Angeles Public Works Geotechnical and Materials Engineering Division, "Guidelines for Geotechnical Investigation and Reporting, Low Impact Development Stormwater Infiltration" (dated 6/30/21, also known as GS200.1)

The drilling subcontractor is scheduled perform the work on approximately July 24, 2023. Carl Kim Geo's staff and subcontractors will use industry standard techniques to seal boreholes to surface. We will adhere to the requirements of the LA County Well/Boring Permit and California Well Standards. As such, borings will be abandoned/backfilled with neat cement using positive displacement methods (tremie pipe) after in-situ testing is performed.

Solid and liquid investigation derived waste are not expected to be impacted and will be stockpiled or spread onsite.

For convenience, a map excerpt from <https://apps.gis.lacounty.gov/m/?viewer=GISViewer/> is included below showing the approximate locations of proposed explorations.



If you have any questions, please do not hesitate to contact me at 805-573-0315 or geoandy@gmail.com.

Respectfully submitted,
Carl Kim Geotechnical, Inc.

Andrew R. Hillstrand PG 7720, CEG 2366
Senior Consulting Geologist

arh
Enclosure



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT
Environmental Health Division
Drinking Water Program
 5050 Commerce Drive, Baldwin Park, CA 91706
www.publichealth.lacounty.gov/eh
 (888) 700-9995



PROJECT INFORMATION			
PROJECT NAME / NUMBER:	Descanso Gardens Stormwater Capture Reuse/CWR0861		
ASSESSOR'S PARCEL NUMBER (APN): <small>http://egisgdx.isd.lacounty.gov/slv/?Viewer=GISViewer#</small>	MONITORING WELLS - Submit separate application(s) for each parcel 5813-008-902		
WORK SITE ADDRESS:	ADDRESS 1418 Descanso Drive	CITY La Canada Flintridge	ZIP CODE 91011
CROSS STREET(S):	Fairlawn Drive		
E-MAIL PERMIT TO:	<input type="checkbox"/> Driller <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Consultant		

SERVICE	FEE	QTY	TOTAL
PRODUCTION WELLS			
<input type="checkbox"/> Residential <input type="checkbox"/> Public / Municipal <input type="checkbox"/> Irrigation			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission <input type="checkbox"/> Renovation	\$ 1,268.00	x	= \$
NON-PRODUCTION WELLS			
<input type="checkbox"/> Monitoring <input type="checkbox"/> Piezometer <input type="checkbox"/> Water Extraction <input type="checkbox"/> Injection <input type="checkbox"/> Air Sparge <input type="checkbox"/> Test Hole			
<input type="checkbox"/> Soil Vapor Extraction (into saturated zone / groundwater) <input type="checkbox"/> Geothermal Heat Exchange			
<input type="checkbox"/> Construction <input type="checkbox"/> Decommission			
<input type="checkbox"/> 1-10 Wells	\$ 735.00		
<input type="checkbox"/> 11-24 Wells	\$ 825.00		
<input type="checkbox"/> 25+ Wells	\$ 1,666.00		
EXPLORATION HOLES - CPT / HYDROPUNCH / SOIL BORING (Soil borings deeper than 10 feet or that extend into groundwater regardless of depth require a permit)			
<input type="checkbox"/> Up to four (4) borings	\$ 126.00		
<input checked="" type="checkbox"/> 5+ Borings	\$ 406.00		
Depth of boring (Min. to Max.): 10 to 60 feet			
Estimated groundwater depth: Not known			
CATHODIC WELLS			
<input type="checkbox"/> Construction	\$ 970.00	x	= \$
<input type="checkbox"/> Decommission	\$ 1,268.00	x	= \$
WATER SUPPLY YIELD			
<input type="checkbox"/> Water Supply Yield Test - Commercial	\$ 1,038.00	x	= \$
<input type="checkbox"/> Water Supply Yield Test - Residential	\$ 971.00	x	= \$
WELL SITE PLAN REVIEW (for Small Water Systems)	\$ 584.00	x	= \$
WATER TREATMENT SYSTEM EVALUATION	\$ 519.00	x	= \$
WATER SAMPLING (Commercial food service facility for USDA certification)	\$ 821.00	x	= \$
TOTAL COST			\$ 406.00

Applications are nontransferable. Please allow **ten (10) business days** for work plan review and response.

For properties in Unincorporated communities, this Section must be completed by L.A. County Regional Planning:

This water well is associated with (type of project) _____

Regional Planning has: APPROVED the project and it is OK to proceed with this water well application

Regional Planning Plan number (RPPL): _____ Date of approval: _____

Planner signature/date: _____

This approval is only a Regional Planning referral, and does not constitute a well/exploration hole permit. Please return this application to Environmental Health to obtain your well/exploration hole permit.

FOR OFFICE USE ONLY	
ASSIGNED INSPECTOR:	P. Habib
DATE:	10/5/23
SUPERVISOR'S INITIAL:	EP
SITE / PERMIT NO.:	SR 0355173
INVOICE NO.:	IN 1283826



APPLICATION FOR WELL/EXPLORATION HOLE PERMIT
Environmental Health Division
Drinking Water Program
 5050 Commerce Drive, Baldwin Park, CA 91706
www.publichealth.lacounty.gov/eh
 (888) 700-9995



Continuation of Application

WORK SITE ADDRESS 1418 Descanso Drive		CITY La Canada Flintridge	ZIP CODE 91011	QUANTITY (QTY) 1
CALIFORNIA STATE REGISTERED DRILLER I ABC Liovin Drilling Inc		C-57 LICENSE HOLDER NAME Bill Borgo	C-57 LICENSE NUMBER 422904	C-57 EXPIRATION DATE 9/30/2024
TELEPHONE NO. 562-981-8575	MOBILE 562-477-5169	E-MAIL ADDRESS bill@abcdrilling.com		
CALIFORNIA STATE REGISTERED DRILLER II		C-57 LICENSE HOLDER NAME	C-57 LICENSE NUMBER	C-57 EXPIRATION DATE
TELEPHONE NO.	MOBILE	E-MAIL ADDRESS		
OWNER NAME Descanso Gardens Foundation		TELEPHONE / MOBILE 818-949-4200	E-MAIL jrooke@descansogardens.org	
CONSULTANT Geosyntec Consultants, Inc		OFFICE NUMBER 714-465-1249		
PROJECT CONTACT Rehan Khan	TELEPHONE NO. (714) 465-1249	Ext.	MOBILE [REDACTED]	E-MAIL ADDRESS rkhan@geosyntec.com
PROJECT MANAGER Phil Reidy	TELEPHONE NO. 310-957-6140	Ext.	MOBILE [REDACTED]	E-MAIL ADDRESS preidy@geosyntec.com

REQUIRED SUPPORTING DOCUMENTS

Well Construction
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well diagram detailing depth, size, thickness, and materials of: (1) the casing (2) the annular (sanitary) seal (3) the screen / slotting (4) any pertinent geological features
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Well Decommission
<input type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Well construction logs
<input type="checkbox"/> Type and amount of sealant
<input type="checkbox"/> Method of assessment
<input type="checkbox"/> Method of upper seal pressure application (including PSI and time applied)
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Borings
<input checked="" type="checkbox"/> Written narrative describing work plan details
<input type="checkbox"/> Scaled drawing of roads, property lines, private sewage disposal systems, surface water features, blue line streams, and other possible sources of contamination within 200 feet of the well site

Location: Descanso Gardens located south of the intersection of Descanso Drive and Fairlawn Drive in La Canada Flintridge, CA.

PROPOSED WORK PLAN

Scope of Work

- Drill and collect soil samples at five (5) Hollow-Stem Auger (HSA) borings, numbered HSA-3 through HSA-7, to depths that range from 10 to 60 feet (target depth). The boring locations are shown in the attached figure.

Tentative Schedule

Contingent upon receiving the permit but expected to occur middle of October.

Work Area

The borings are located either on paved parking area or just adjacent to the pavement.

Work Steps

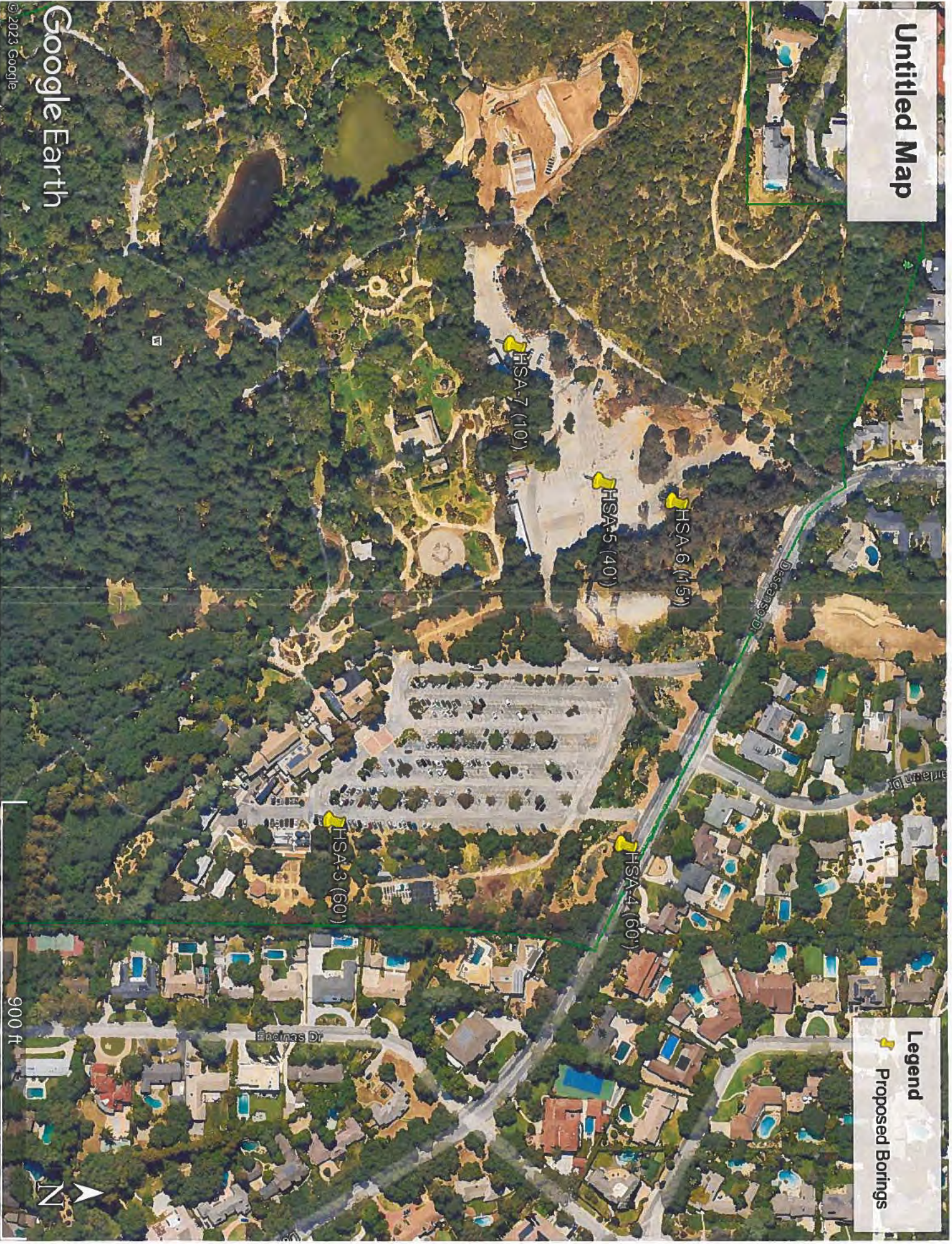
Prior to the day of exploration:

- At least 3 days prior to drilling, we will mark the proposed exploration locations for utility clearance by Underground Service Alert (USA).

On the day of exploration, we will:

- Perform geophysical survey to identify potential conflicts with underground utilities.
- Hand-auger top 5 feet at the boring locations to check for possible utility conflict.
- Advance borings (7 to 8 inches in diameter) to the target depth using the drilling equipment.
- Observe groundwater levels in boreholes, if encountered.
- Once drilling and sampling is complete, we will backfill the borings and patch the surface with concrete.
- The boring backfill will occur within 24 hours of completion of drilling with cement-bentonite grout placed using a tremie pipe (bottom-up grouting):
 - Portland cement (approximately two 50lbs bags per 6 gallons of water) and maximum 5% bentonite.
- Drilling cuttings to be stored in DOT drums, samples will be taken for disposal profiling.

Legend
Proposed Borings





ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
623 Foothill Blvd	La Canada Flintridge	91011	shintan.aizawa@arcadis.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- **ONCE APPROVED NOTIFY INSPECTOR TERI HACHEY PREFERABLY 3 BUSINESS DAYS TO SCHEDULE THE ANNULAR SEAL INSPECTION.**
THACHEY@PH.LACOUNTY.GOV

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN APPROVED

DATE: November 15, 2022

ADDITIONAL APPROVAL CONDITIONS: **Monitoring Well Destruction SR0315538**

Work plan approval issued for the destruction of 3 monitoring wells, (MW2, MW3 and MW5) located at 623 Foothill Blvd., La Canada Flintridge. MW2 and MW3 to be pressure grouted by approved methods and MW5 to be over drilled per approved methods. Follow revised work plan submitted on November 15, 2022. Follow the California Well Water Standards, 74-90 and the County of Los Angeles Health and Safety Code, Title 11.

The well destruction is to be witnessed by an inspector from the Drinking Water Program. Please schedule accordingly.

Please provide a copy of the well completion report within 60 days from the date of construction/destruction of well. Driller shall submit the well completion report to the Department of Water Resources at

<http://civicnet.resources.ca.gov/DWRWELLS>



TERI HACHEY R.E.H.S.
661-287-7017

Teri Hachey

ANNULAR SEAL FINAL INSPECTION REQUIRED

WELL COMPLETION LOG REQUIRED

DATE ACCEPTED: REHS signature

DATE ACCEPTED: REHS signature



ENVIRONMENTAL HEALTH



COUNTY OF LOS ANGELES
Public Health

Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
2212 El Molino Avenue	Altadena	91001	geoandy@gmail.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 2 Soil Boring/Exp. Hole	PERMIT NUMBER: SR0344193	DATE: July 3, 2023
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- As discussed, please ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole to surface.
- Ensure soil borings are sealed per California Well Standards 74-90
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips and/or soil cuttings.
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.

Please be advised this permit is for the installation of soil borings only and not for the percolation testing. Obtain all necessary permits from other agencies as required.

APPROVED BY:

Teri Hachey, REHS
26415 Carl Boyer Dr.
Santa Clarita, Ca 91350
(661) 287-7017



5770



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2439-2445 LINCOLN AVENUE	ALTADENA	91001	SHONDA@AFFIRMEDHOUSING.COM

NOTICE:

- WORK PLAN APPROVALS ONCE GRANTED, ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- POTENTIAL APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION OR WATERMASTER APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

<input checked="" type="checkbox"/>	WORK PLAN APPROVED FOR: 1 Soil Boring/Exp. Hole	PERMIT NUMBER: SR0324088	DATE: January 19, 2023
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ADDITIONAL APPROVAL CONDITIONS:

- Work plan approval is issued for scope of work submitted to the Drinking Water Program. Any modifications to the scope of work will require additional work plan review.
- Ensure the boring/exploration hole is backfilled within 24 hours of boring construction.
- Ensure to backfill using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole to surface.
- Ensure soil borings are sealed per California Well Standards (Bulletins 74-81 and 74-90)
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips and/or soil cuttings.
- Ensure the complete removal of bentonite chips from the boring prior to backfilling with neat cement.
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.

Maple Kuo, REHS
 Drinking Water Program
 Environmental Health Protection Division
 Los Angeles County Department of Public Health
 5050 Commerce Drive
 Baldwin Park, CA 91706
 (323) 482-7922
MaKuo@ph.lacounty.gov



RE-15 NO. 8846

Maple Kuo



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Approval

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
5869-020-005/BIG TUJUNGA CANYON RD.	SUNLAND	91040	VICSWELLDILLING@YAHOO.COM

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- **ONCE APPROVED NOTIFY INSPECTOR TERI HACHEY AT thachey@ph.lacounty.gov PREFERABLY 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:


WORK PLAN APPROVED DATE: May 23, 2018

ADDITIONAL APPROVAL CONDITIONS:

Work plan approval issued for private well construction located at 5869-020-005/Big Tujunga Canyon Rd., Sunland. Maintain all set back requirements as stated in the California Well Water Standards, 74-90 and the Los Angeles County Code, Title 11. The annular seal is to be witnessed by an inspector from the Drinking Water Program. Please schedule an appointment in advance for the seal inspection.

SR 0140847

A concrete slab or base is required around the casing and shall be a minimum of 3 feet horizontally in all directions from the casing and shall be 6 inches thick. The slab or concrete pad must slope slightly away from the casing so as to drain water away. Bacteriological and chemical water quality testing is required for this permit to be complete and a well yield test is required under a separate permit.



Teri Hachey

TERI HACHEY R.E.H.S
661-287-7017

<input checked="" type="checkbox"/> ANNULAR SEAL FINAL INSPECTION REQUIRED DATE ACCEPTED: _____ REHS signature _____	<input checked="" type="checkbox"/> WELL COMPLETION LOG REQUIRED DATE ACCEPTED: _____ REHS signature _____
<input checked="" type="checkbox"/> WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED DATE ACCEPTED: _____ REHS signature _____	<input checked="" type="checkbox"/> WATER QUALITY—CHEMICAL STANDARDS REQUIRED DATE ACCEPTED: _____ REHS signature _____
<input checked="" type="checkbox"/> WATER SUPPLY YIELD REQUIRED DATE ACCEPTED: _____ REHS signature _____	<input type="checkbox"/> OTHER REQUIREMENT DATE ACCEPTED: _____ REHS signature _____



ENVIRONMENTAL HEALTH



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Denial

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS
200 Foothill Blvd.	La Canada	91011	vnguyen@converseconsultants.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN DENIED FOR: 4 Soil Boring/Exp. Hole	PERMIT NUMBER: SR0192844	DATE: August 12, 2019
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WORK PLAN INCOMPLETE- SUBMIT THE FOLLOWING:

Provide revised work plan to include boring to be backfilled with approved sealing material. Soil Cutting and/or Bentonite chips are not approved sealing materials in LA County.

Provide revised work plan to include how approved sealing material will be placed in soil borings deeper than 10 feet. Required tremie or equivalent for placement of sealing material.

REVIEWED BY:

Teri Hachey, REHS
26415 Carl Boyer Dr.
Santa Clarita, Ca 91350
(661) 287-7017



5770



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Denial

TO BE COMPLETED BY APPLICANT:

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
623 Foothill Blvd	La Canada Flintridge	91011	shinta.aizawa@arcadis.com

NOTICE:

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- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- **ONCE APPROVED NOTIFY INSPECTOR TERI HACHEY AT thachey@ph.lacounty.gov PREFERABLY 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

WORK PLAN INCOMPLETE;

DATE: November 14, 2022

SUBMIT THE FOLLOWING: **Monitoring Well Destruction SR0315538**

- Provide clarification on the mushroom cap cut at 5-feet below ground surface.
- MW-5 is to be over-drilled per requirements of not having an approved annular sealing material.

Teri Hachey, REHS
 Environmental Health Specialist III
 Drinking Water Program
 Environmental Health Division
 Los Angeles County Department of Public Health
 26415 Carl Boyer Drive
 Santa Clarita, CA 91350
 Ph (661) 287-7017
thachey@ph.lacounty.gov



R.E.H.S. NO: 5770

Teri Hachey



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Denial

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
2439-2445 LINCOLN AVENUE	ALTADENA	91001	SHONDA@AFFIRMEDHOUSING.COM

NOTICE:

- WORK PLAN APPROVALS ONCE GRANTED, ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- POTENTIAL APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION OR WATERMASTER APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- **SEND THE REQUESTED ATTACHMENTS TO: MAKUO@PH.LACOUNTY.GOV**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X	WORK PLAN APPROVED FOR: 1 Soil Boring/Exp. Hole	PERMIT NUMBER: SR0324088	DATE: January 17, 2023
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WORK PLAN INCOMPLETE, SUBMIT THE FOLLOWING:

- Provide a narrative stating the borings/exploration holes will be backfilled within 24 hours of boring construction.
- Provide a narrative stating the backfilling procedure will be performed using a tremie pipe under pressure or equivalent equipment with approved cement grout, proceeding upward from the bottom of the boring/exploration hole to surface.
- Provide a narrative stating the soil borings will be sealed per California Well Standards (Bulletins 74-81 and 74-90) :
 - Cement grout mix ratio of 5-6 gallons of water per 94-pound bag of Portland cement.
 - Up to 6% of Bentonite may be added to the cement-based mix.
 - No hydrated Bentonite chips and/or soil cuttings.
- Borings/Exploration holes must comply with all applicable requirements published in the California Well Standards (Bulletins 74-81 and 74-90) and the Los Angeles County Code, Title 11.

Please note: We no longer allow soil vapor probes to be installed into ground water sample borings or borings that extend into ground water. Follow the Advisory Active Soil Gas Investigations July 2015: Cal EPA, DTSC, LA RWQCB and San Francisco RWQCB for vapor probe borings. We do not permit percolation test boings unless soil samples are initiated. Please contact the Land Use Program at (626) 430-5380 for further requirements regarding percolation testing procedures, only.

Maple Kuo, REHS
 Drinking Water Program
 Environmental Health Protection Division
 Los Angeles County Department of Public Health
 5050 Commerce Drive
 Baldwin Park, CA 91706
 (323) 482-7922
MaKuo@ph.lacounty.gov



RE-15 NO. 8846

Maple Kuo



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: waterquality@ph.lacounty.gov
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

Work Plan Denial

WORK SITE ADDRESS	CITY	ZIP	EMAIL ADDRESS FOR WELL PERMIT APPROVAL
5869-020-005/Big Tujunga Rd.	Sunland	91040	vicswelldrilling@yahoo.com

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
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- **ONCE APPROVED NOTIFY INSPECTOR TERI HACHEY AT thachey@ph.lacounty.gov PREFERABLY 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X WORK PLAN INCOMPLETE;
SUBMIT THE FOLLOWING:

DATE: May 2, 2018

- Provide a scaled, legible plot plan to include: property lines, private sewage disposal systems, surface water features, blue line streams and any other possible sources of contamination within 200 feet of well site.
- Provide a legible copy of the ULARA agreement to drill a well on said property.
- A well site inspection is required prior to approval.

SR0140847

Teri Hachey, REHS
 Environmental Health Specialist III
 Drinking Water Program
 Environmental Health Division
 Los Angeles County Department of Public Health
 26415 Carl Boyer Drive
 Santa Clarita, CA 91350
 Ph (661) 287-7017
 Fax (661) 286-2744



Attachment 2

Communication in Response to Formal Inquiry Letters and Records Requests