APPENDIX D

Phase I Environmental Site Assessment

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Phase I
Environmental Site Assessment
(ASTM E1527-13)

Silver Creek Mixed -Use Project
APN 481-19-003
1936 Alum Rock Avenue
San Jose, Santa Clara County, California 95116

Prepared For:
Pacific West Communities, Inc
430 East State Street, Suite 100
Eagle, ID 83616

December 9, 2019
RNC Project Number 1606K

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1. SUMMARY

RNC Environmental, LLC (RNC) has been retained by Pacific West Communities, Inc., to conduct a Phase I Environmental Site Assessment for the property located at 1936 Alum Rock Avenue in the City of San Jose, Santa Clara County, California. The primary investigator for the assessment was Neil O'Hara, Environmental Professional.

The standards and practices implemented in this assessment are intended to result in the identification of conditions indicative of releases and threatened releases of hazardous substances on, at, in, or to the subject property. The assessment seeks to identify current and past property uses of the property, uses of hazardous substances on the property, and activities that could have caused releases or threatened releases of hazardous substances. The assessment also seeks to identify and evaluate adjoining and nearby properties where environmental conditions may exist that could have resulted the migration of hazardous substances onto the subject property.

Sources of this information include interviews with present and (as necessary) past owners and operators of the property; a review of historical sources such as aerial photographs, maps, and building records; a search for environmental cleanup liens on the property; a review of government records of hazardous material storage facilities, known or threatened releases, waste generation, cleanup sites, etc., for the subject and surrounding properties; a visual inspection of the subject and adjacent properties, and a review of various information provided by the client.

This assessment has found that the subject property was developed in the 1940s. The original construction included a farm supply store and two single-family residences. Several sheds — some partial, some enclosed — were added in the following years. The farm supply store was operated continuously by the same owners until approximately 2005. From 2005 through 2016, the front portion of the building was occupied by a retail fish/bird pet store. The rear portion was used as office/storage space. Some of the sheds and yard space were used by a plastering contractor and by a salvage/recycling operator. The two residences were tenant-occupied, and have no history of any non-residential use. Use of the property prior to the

1940s is undetermined, but was likely agricultural. Alum Rock Avenue existed at least as far back as 1899.

A 500-gallon underground fuel storage tank (UST) was formerly located near the southeast (rear) corner of the store. The tank was removed in 1984; the removal was retroactively permitted in 1985, with no soil or groundwater testing conducted at the time. Testing conducted in 2007 determined that contaminated soil and groundwater were present as a result of a historic leak in the UST. Then owner, David Mijares, began assessment and remediation of the site in 2009, under the oversight of the Santa Clara County Department of Environmental Health. Between 2009 and 2016, semi-annual groundwater monitoring events were conducted, in order to assess the overall extent of soil and groundwater contamination. An area of contaminated soil and groundwater was identified at the location of the former UST, and extending underneath the southern portion of the store building. In January 2016, contaminated soil from the former tank location was excavated and disposed of offsite. Post-remediation monitoring indicated that additional soil and groundwater contamination remained on the site beneath the building, then inaccessible for excavation.

Pacific West Communities, as managing partner of 1936 Alum Rock Avenue LLC, acquired the property in April 2017, and accepted responsibility for implementing site remediation under the oversight of the Santa Clara County Department of Environmental Health (SCCDEH). Pacific West retained RNC Environmental and Ryan Geologic and Environmental Services to complete a site investigation and to implement remedial actions. In consultation with SCCDEH, in−situ chemical oxidation was selected as the best remedial option to address gasoline remaining in the subsurface of the site. Geologist Richard Ryan supervised the pressure injection of PersulfOx™, conducted in a series of five events from October 2018 through February 2019.

Post-remediation site investigation included a grab groundwater sample and soil vapor sampling. The July 2019 soil vapor and groundwater samples were collected approximately 150 days after the final ISCO injection event. The groundwater sample collected from the primary impact area found non-detectable levels of benzene in groundwater for the first time. A decreasing concentration trend for benzene in groundwater is now well established. The low dissolved benzene concentration in the source area and the decreasing concentration trend indicate that site conditions can be anticipated to improve in the future. Based on results, the site meets the criteria for case closure under the SWRCB low−threat policy. A passive soil vapor sample from above the primary impact area found non-detectable levels of benzene, 8.1 μg/m3 of ethylbenzene, and non−detectable levels of naphthalene. Those soil vapor concentrations meet low−threat criteria for a residential exposure scenario.

On November 27, 2019, SCCDEH issued a Proposed Case Closure public notice. Following a 60-day public comment period, the case will be closed, unless additional information is required to address substantive public comments.

All monitoring wells associated with the leaking underground fuel tank cleanup have be destroyed under the oversight of the Santa Clara County Water District.

The leaking underground fuel case, once closure is completed as anticipated, will represent a historical recognized environmental condition. As part of its approval of the site redevelopment, the City of San Jose may require re-evaluation of site conditions to confirm that they meet residential standards.

The southern portion of the site is covered by 2-3 feet of black soil, which appears to be the result of application of a dust suppressant. It contains low levels of petroleum hydrocarbons. It does not to represent a significant environmental concern at the site. Elevated concentrations of arsenic and lead were found in three soil borings in the west-central portion of the property. These borings are all located within 20 feet of each other, and the proximity of their location implies a spill of some sort affecting that area. The depth and full lateral extent of impact is currently unknown but an initial estimated volume of soil to be removed would be 900 cubic feet, assuming an area of 30 feet by 10 feet extending 3 feet deep. It is anticipated that site preparation for construction on the site will include excavation and removal of the upper three feet of soil. As a result, the shallow area of arsenic- and lead-contaminated soil will be removed, and no further remediation of this area will be required.

There are numerous leaking UST sites and several past and present hazardous materials cleanup sites within one-half mile of the property, mostly located along Alum Rock Avenue. There is no evidence of off-site impacts to the subject property from any of these sites.

2. INTRODUCTION

2.1. LOCATION AND LEGAL DESCRIPTION OF SUBJECT PROPERTY

The subject property consists of one parcel of 1.5± acres, on the south side of Alum Rock Avenue, between N. King Road and N. Jackson Avenue, in the City of San Jose, Santa Clara County, California. The property is currently vacant. The property previously included a commercial building addressed as 1936 Alum Rock Avenue, and two single-family residences at 1944 and 1946 Alum Rock Avenue.

According to the preliminary title report, the legal description of the property is:

> Lot Twelve (12) As Delineated And So Designated Upon Map Entitled, "Map Of The Alta Vista Tract, Being Jos. H. Rucker's & Co's Subdivision Of Parts Of 500 Acre Lots 48 And 49, San Jose City Lands," And Which Said Map As Filed On August 04, 1904 In The Office Of The County Recorder Of The County Of Santa Clara, State Of California In Vol. "F3" Of Maps, Page 89.
>
> APN: 481-19-003

Location maps and site maps of the subject property are attached to this report as Appendix A. Photographs of the subject property are attached to this report as Appendix B.

2.2. Purpose

This report is intended to constitute an "inquiry by an environmental professional" for All Appropriate Inquiry under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). As such, it presents the results of an effort to identify whether *recognized environmental conditions* may exist on the property.

The term *recognized environmental conditions* means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

This report was commissioned in association with the potential development of the property for use as affordable rental housing.

2.3. Scope of Work

RNC Environmental, LLC, has contractually agreed to conduct a Phase I Environmental Site Assessment, utilizing methods and procedures consistent with the nationally recognized standard, ASTM E1527-13, and with EPA All Appropriate Inquiry regulations.

The definition of *recognized environmental conditions* includes the encroachment of hazardous vapors onto the property. This assessment incorporates a Tier I vapor encroachment screening, as defined by ASTM E2600-10, within the findings, opinions, and conclusions presented in this report.

No special terms or conditions were specified by the user. Should there be a need to conduct an investigation into a specific question not addressed in this report, contact our office immediately regarding your concerns.

2.4. Limitations and Exceptions

This report was compiled as a Phase I Environmental Site Assessment for the subject project. This report contains information and data provided to RNC by several sources. RNC in no way warrants the accuracy or completeness of the information provided by those sources.

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. A Phase I Environmental Site Assessment is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost. All appropriate inquiries does not mean an exhaustive assessment of a property. This assessment represents a balance between the competing goals of limiting the costs and time demands and the reduction of uncertainty about unknown conditions resulting from additional information.

For this assessment, no additional project-specific limitations arose, and no exceptions were made to the assessment process as defined by ASTM E1527-13.

2.5. User Reliance

This report was prepared for the exclusive use of Pacific West Communities, Inc, and its successors and/or assigns. It also may be relied upon by lenders, investors, government agencies (including, but not limited to, the California Department of Housing and Community Development, the USDA Rural Development Program, and the California Tax Credit Allocation Committee) and/or nonprofit entities which may provide financial assistance for the proposed development of the subject property. No other person or entity is entitled to rely upon this report without the specific written authorization of RNC. Any such reliance is subject to the same limitations, terms, and conditions as the original contract with the client. RNC specifically disclaims any responsibility for any unauthorized use of this report.

All users of this report, whether identified in this section, provided authorization in a separate reliance letter, or for any reason using this report without specific authorization, should be aware that Landowner Liability Protection under CERCLA is also contingent upon the user's compliance with certain additional responsibilities, as specified in ASTM E1527-13, §6. This includes recording your own knowledge (or lack thereof) regarding the property; we have provided a blank user questionnaire in Appendix G for this purpose. RNC cannot be responsible for any user's failure to comply with these responsibilities.

2.6. Validity of Report

This report may be presumed to be valid for one year from its cover date, excepting that if acquisition of the property occurs more than 180 days after the date of this report, certain information in the report must be updated in accordance with ASTM E1527-13, §4.6.

3. User Provided Information

3.1. Title Records

A Preliminary Title Report regarding the subject property, prepared by First American Title Company and dated November 22, 2019, was provided.

3.2. Environmental Liens or Activity and Use Limitations

Based on a review of the title documents, no Environmental Liens and/or Activity Use Limitations, which indicate a past or present release of a hazardous substance or petroleum products, were recorded. No other knowledge of environmental liens was identified by the user.

3.3. Owner, Property Manager, and Occupant Information

According to the Preliminary Title Report, the property is owned by "1936 Alum Rock Avenue LLC, An Idaho Limited Liability Company."

Darren Berberian serves as the "key site manager," and has managed the proposed redevelopment of the property.

3.4. User Interview

Darren Berberian has provided various information over the past three years.

3.4.1. Specialized Knowledge

Darren Berberian has provided various information over the past three years, beginning with the initial assessment and acquisition of the property, through the completion of a leaking UST remediation process, and working with various agencies to permit the redevelopment of the site.

3.4.2. Commonly Known or Reasonably Ascertainable Information

Mr. Berberian is aware that the site is the subject of a leaking UST site, and has participated in the remediation process under the oversight of the Santa Clara County Department of Environmental Health.

3.4.3. Valuation Reduction for Environmental Issues

The user reported that the purchase price of the property was consistent with the property being impaired by a known leaking UST impact.

4. Records Review

4.1. Physical Setting

4.1.1. Topography

According to the USGS topographic map[1] covering the subject property and vicinity, the subject property is located at an elevation of approximately 95 feet above mean sea level, on terrain which slopes slightly down toward the northwest. Silver Creek, a channelized seasonal drainage, passes about 100 feet to the east of the property, flowing northward toward San Francisco Bay.

4.1.2. Groundwater

The subject property is underlain by a confined aquifer system located within the Santa Clara Valley. Historically, that aquifer has been over-pumped creating a severe land subsidence problem, but today it is part of a well-managed groundwater storage system that receives artificial recharge around the valley margins. The confining layer part of the aquifer occurs at the surface beneath the subject property. It is about 30 to 40 feet thick, it consists of low

[1] San Jose East, California 7.5' quadrangle; 2015.

permeability silty clay, and contains thin laterally discontinuous beds of fine sand. The underlying aquifer is several hundred feet thick, and consists of sands, gravels, and beds of silty clay. The contact between the two layers is gradational and displays properties of both layers. Groundwater monitoring data collected by RNC Environmental from 2016 to 2019 found perched groundwater typically at about 10 feet below ground surface.

Silver Creek is the closest surface water body to the site. It is located 185 feet northeast of the former UST pit at an elevation of approximately 80 ft AMSL, and it is part of the Coyote Creek watershed. Silver Creek flows northwest towards Coyote Creek. The closest point to Coyote Creek from the site is 1.3 miles west–northwest. Coyote Creek enters the San Francisco Bay about 11 miles northwest of the site. Surface elevation at the site is 95 ft AMSL, so the regional topographic gradient is approximately 0.0016 ft/ft dipping to the northwest.

4.2. Environmental Records Sources

On December 2, 2019, RNC conducted a review of data files obtained from various local, state and federal regulatory agencies, to determine whether there are publicly available records regarding hazardous materials for the subject and surrounding properties. All sources and minimum search distances specified by ASTM E1527-13 were utilized.

A full report of the findings, including a detailed description of the agencies contacted and sources reviewed is provided in **Appendix E**.

4.2.1. Liens and Use Restrictions

The State of California, Department of Toxic Substances Control DTSC maintains three sources of information regarding properties with deed restrictions:

- The EnviroStor database includes sites cleaned up under DTSC oversight, and specifies whether a deed restriction was place on a property
- The DTSC Hazardous Waste Management Program (HWMP) has also developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office.
- The DTSC list of Border Zone sites includes facilities where nearby properties, not directly effected by a lien, may still have some activity use limitations.

The US Environmental Protection Agency maintains three databases which may include information about liens and land use restrictions, if they have been established on a listed property:

- Comprehensive Environmental Response Compensation and Liability Information System List (CERCLIS)
- RCRIS, Corrective Action sites
- Brownfields Assessment, Cleanup and Redevelopment Exchange System (ACRES)

The subject property is not listed in any of these sources as having a deed restriction, and there are no Border Zone sites within one-half mile of the property.

4.2.2. Active Hazardous Waste Cleanup Sites

Federal and State records of existing hazardous waste cleanup sites were reviewed to identify National Priority List (NPL), RCRA Corrective Action (CORRACTS) sites and State NPL-equivalent sites within one mile of the subject property. Federal and State records were reviewed to identify non-NPL CERCLIS sites and other state and regional agency-identified sites within one-half mile.

One active cleanup sites were identified within the specified search distances.

SITE NAME	SITE_TYPE	STATUS	ADDRESS
SC FUELS (FORMERLY COAST OIL)	CLEANUP PROGRAM SITE	OPEN - VERIFICATION MONITORING	2075 ALUM ROCK AVE

SC Fuels is located about 1,000 feet northeast of the subject property. Per RWQCB:

> SC Fuels (formerly Coast Oil Company, LLC) owns and operates a petroleum bulk storage facility, which is presently used to store diesel fuel, kerosene, antifreeze, lubricating oil, and motor oil. The site has been a bulk storage/distribution facility for petroleum products since the early 1950s. The facility has more than 50 aboveground storage tanks with a combined capacity of over 900,000 gallons containing diesel fuel, kerosene, bulk oil, and petroleum solvents. During the operational history of this facility, a number of releases have occurred. However, many releases have not been fully documented. The Discharger has conducted investigations of soil and groundwater contamination since 1990 and interim remedial measures were implemented in 1993.

Active remediation is no longer occurring on this site; ongoing groundwater monitoring is in place to assure that no new impacts occur. Based on this status, there is no evidence to indicate that this site has any potential to impact the subject property.

4.2.3. Previously Regulated Sites

Federal and State records were reviewed to identify Delisted NPL Sites, "No Further Action" sites, and Brownfield sites within one-half mile of the subject property.

Two former cleanup or remediation sites and two Brownfields sites were identified within one-half mile of the subject property:

SITE NAME	SITE_TYPE	STATUS	ADDRESS
CORTEZ PROPERTY	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2055 ALUM ROCK AVENUE

SITE NAME	SITE_TYPE	STATUS	ADDRESS
MEXICAN HERITAGE GARDENS, LAGOW PROPERTY	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1794 ALUM ROCK AVENUE
1948 Alum Rock Ave	Brownfield	Assessed	1948 Alum Rock Ave
1932 SHORTRIDGE AVENUE	Brownfield	Assessed	1932 SHORTRIDGE AVENUE

The **Cortez** and **Mexican Heritage Gardens** properties are both reported as cleanup sites by RWQCB; both were completed and closed in the 1990s. Both sites are about a quarter mile from the subject property; there is no indication that either site had any potential to impact the subject property.

The City of San Jose received Brownfields funding to investigate two listed sites. 1948 Alum Rock is the adjacent property to the east of the subject property, formerly occupied by a towing and auto-wrecking yard. The investigation found that no cleanup of the site was required. 1932 Shortridge Avenue is a storage yard adjacent to the east of the previous property; it status is not available. There is no evidence of impacts to the subject property from these sites.

4.2.4. Leaking Underground Fuel Tanks

State Leaking Underground Fuel Tanks records were reviewed to identify sites within one-half mile of the subject property.

Twenty-one leaking UST sites were identified:

SITE NAME	SITE_TYPE	STATUS	ADDRESS
FARMERS SUPPLY	LUST CLEANUP SITE	OPEN - ELIGIBLE FOR CLOSURE	1936 ALUM ROCK AVENUE
EZ-FILL	LUST CLEANUP SITE	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	2149 ALUM ROCK AVENUE
MARTINA FAMILY TRUST	LUST CLEANUP SITE	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	1694 ALUM ROCK AVENUE
7-ELEVEN #15946	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2044 MCKEE RD

SITE NAME	SITE_TYPE	STATUS	ADDRESS
7-ELEVEN #18039	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1639 ALUM ROCK AVE
ALUM ROCK HARDWARE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2243 ALUM ROCK AVE
ALUM ROCK TIRES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1898 ALUM ROCK AVE
B&H BRAKE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1737 ALUM ROCK AVE
BRINDOS PROPERTY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	147 S KING RD
COAST OIL COMPANY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2075 ALUM ROCK AVE
EXXON #7-0267	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2290 ALUM ROCK AVENUE
GOLDEN VALLEY PLAZA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1855 ALUM ROCK AVE.
MAYFAIR PACKING	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2000 SAN ANTONIO E/PRESERVATION DR
MONTES AUTO SALES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1665 ALUM ROCK AVE
OLIVER DE SILVA, INC.	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12 N SUNSET AVE
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE
ROBO CAR WASH	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1695 ALUM ROCK AVE
RYLAND HOMES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	115 S JACKSON AVE
STANDARD OIL (FORMER)	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2230 ALUM ROCK AVENUE
THUNDERBIRD GOLF COURSE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	221 S KING RD

SITE NAME	SITE_TYPE	STATUS	ADDRESS
U.S. RENTALS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2101 ALUM ROCK AVENUE

Records for this site were obtained through SWRCB's Geotracker system. Sixteen of the sites, generally arrayed to the northeast and southwest of the subject property along Alum Rock Avenue, have been completed. We found no evidence of offsite impacts from any of this sites that could impact the subject property. A review of RWQCB files for the **EZ-Fill** and **Martina Family Trust** also sites shows no evidence of off-site impacts with any potential to impact the subject property.

The **Farmers Supply** site is the subject property. One 500-gallon UST, which was located adjacent to the southeast corner of the main building, was removed from the site in 1985. Later investigations determined that contaminated soil and groundwater was present under the property. As of April 21, 2017, 1936 Alum Rock Avenue LLC acquired the property and accepted responsibility for implementing site remediation under the oversight of the Santa Clara County Department of Environmental Health (SCCDEH). Pacific West Communities, as managing partner of 1936 Alum Rock Avenue LLC, retained RNC Environmental and Ryan Geologic and Environmental Services to complete a site investigation and to implement remedial actions.

During an August 10, 2018 meeting with SCCDEH, in−situ chemical oxidation was selected as the best remedial option to address gasoline remaining in the subsurface of the site. PersulfOx™ was selected as the preferred oxidizing reagent based on recommendations from Regenesis, a leading manufacturer of in−situ chemical amendments. Geologist Richard Ryan supervised the pressure injection of PersulfOx™, conducted in a series of five events from October 2018 through February 2019. Remediation status reports are included in Appendix H.

Post-remediation site investigation included a grab groundwater sample and soil vapor sampling. The July 2019 soil vapor and groundwater samples were collected approximately 150 days after the final ISCO injection event. The groundwater sample collected from the primary impact area found non-detectable levels of benzene in groundwater for the first time. A decreasing concentration trend for benzene in groundwater is now well established. The low dissolved benzene concentration in the source area and the decreasing concentration trend indicate that site conditions can be anticipated to improve in the future. Based on results, the site meets the criteria for case closure under the SWRCB low−threat policy.

A passive soil vapor sample from above the primary impact area found non-detectable levels of benzene, 8.1 $\mu g/m^3$ of ethylbenzene, and non−detectable levels of naphthalene. Those soil vapor concentrations meet low−threat criteria for a residential exposure scenario.

4.2.5. Accidental Spills and Releases

The Emergency Response Notification System (ERNS) was reviewed for records of accidental spills and releases of hazardous material on the subject property.

No accidental spills or releases were identified.

4.2.6. Fuel Storage and Waste Management Activities

Federal and State sources were reviewed to identify underground storage tanks and/or hazardous materials handlers and waste generators on the subject property and any adjacent property. California Division of Oil, Gas, and Geothermal Resources records were also reviewed for active and historic oil and gas wells.

Neither the subject property nor any adjacent property is listed as a hazardous waste generator or underground storage tank site. No oil or gas wells were identified.

4.2.7. Waste Management Activities in Surrounding Area

Federal and State sources were reviewed to identify RCRA Treatment, Storage and Disposal Facilities and solid waste facilities within one-half mile of the subject property.

No facilities hazardous waste transporters or landfills were identified.

4.2.8. Cortese List

The California Environmental Protection Agency is responsible for compiling a list of known contaminated sites, generally referred to as the "Cortese List." The list is used for planning, rather than regulatory purposes, and is compiled from the following sources:

Contaminated or potentially contaminated hazardous waste sites listed in the CAL Sites database by DTSC;

Leaking Underground Storage Tanks with known groundwater contamination, listed by the California State Water Resources Control Board;

Landfills which have evidence of groundwater contamination or known migration of hazardous materials, listed by the California Integrated Waste Management Board.

Each of these sources is separately referenced in this report. As a leaking UST site with groundwater contamination, the subject property qualifies for the Cortese List.

4.3. Historical Use Information

4.3.1. Recorded Land Title Records

Chain of title records were provided by the previous owner. The earliest document provided shows that the property was owned by Gabriel and Marian Mijares, David's parents, who transferred the ownership into a family trust in 1980. David became trustee after his parents' passing; he transferred the property from the trust to the current ownership arrangement in 2015. Records show that the elder Mijares couple were in the feed and grain business. The Preliminary Title Report indicates that the subject parcel was created in 1904.

4.3.2. AERIAL PHOTOGRAPHS

Aerial photographs of the subject property were obtained from the U. S. Geological Survey, via EarthExplorer[2] and/or Google Earth. Copies of the aerial photos are included in Appendix D of this report.

Aerial Photograph Review

Year	Subject Property	Surrounding Properties
1948	The property is developed with the main structures which are on the site today - a feed store building and two residences with detached garages. The balance of the parcel includes one shed, and apparent outdoor storage areas.	Surrounding properties include a mix of single-family homes to the south and west, commercial buildings along Alum Rock Ave., and farmland to the north of Alum Rock Ave.
1954	Little detail visible due to low photo resolution	Significant increase in surrounding residential development. Property to the north across Alum Rock Ave is now a drive-in theater.
1960	A new shed is present south of the store building.	Silver Creek has been channelized. Adjacent properties to east and west are large commercial lots, of similar dimensions as the subject property. Adjacent parcel to south has been subdivided into single-family residences.
1968	Two additional sheds and outdoor storage bins line the west boundary of the property.	Numerous vehicles appear parked on the adjacent property to the east.
1974	No significant changes apparent	Generally similar land uses; some additional residential infill apparent.
1981	No significant changes apparent	No significant changes apparent
1998	No significant changes apparent	New commercial strip mall located across Alum Rock Ave to the north. Drive-in theater site redeveloped as residential subdivision.
2002	No significant changes apparent	No significant changes apparent

[2] http://earthexplorer.usgs.gov/

Year	Subject Property	Surrounding Properties
2004	No significant changes apparent	Adjacent property to the west has been developed as an apartment complex. Parcel to the south of the apartments and adjacent to the south portion of the subject property is occupied by numerous vehicles.
2007	Buildings remain on property, but it appears to be unused.	Apartments adjacent to southwest portion of property under construction
2011	Several vehicle parked in south portion of property	Adjacent apartments complete.
2016	Assorted vehicles and stored materials on south portion of property.	East-adjacent property no longer full of vehicles; appears to be a landscaping storage yard.
2018	Subject property is vacant	Landscaping supplies appear to be absent

4.3.3. USGS Topographic Maps

Historic U. S. Geologic Survey topographic maps of the San Jose California, 7.5' quadrangle, were reviewed. Copies of the maps are included in Appendix D of this report.

Topographic Map Review

Year	Subject Property	Surrounding Properties
1899	No development shown on the property.	The property is located in a rural area, just east of a developed area labeled "East San Jose." Alum Rock Ave is mapped in its present alignment; Silver Creek passes near the property to the east.
1953	2-3 buildings are shown on the subject property.	Numerous residences are shown along the main streets in the area, with a mix of open spaces between. land north of Alum Rock Ave remains rural

Year	Subject Property	Surrounding Properties
1961	Subject property and surrounding area are urbanized, with individual buildings not mapped.	Property is surrounded by urban development to the east, south, and west. To the north are a drive-in theater, a golf course east of the drive-in, and orchards farther north of there.
1968	No changes apparent.	Some additional infill development in the surrounding area.
1973	No changes apparent.	Additional infill; golf course and orchards have been redeveloped.
1980	No changes apparent.	Additional infill; I-680 freeway now mapped.
2015	No changes apparent.	New map format shows less detail; site is in an urbanized area.

4.3.4. Sanborn Insurance Company Maps

The Sanborn Map Company produced a series of large-scale maps, dating from 1867 to the present and depicting the commercial, industrial, and residential sections of some twelve thousand cities and towns in North America. The maps show significant detail regarding dwellings, commercial buildings, and factories. Where available, Sanborn maps are a valuable source of information about past land uses.

No Sanborn maps were identified which cover the subject property. The most recent map we identified, dated 1950, shows property a quarter mile beyond the San Jose City limit, at King Road.

4.3.5. Property Tax Files

County Assessor records indicate that the property is vacant, with an assessed value of site improvements of $0.

4.3.6. Zoning

The City of San Jose General Plan shows the property designated as “Urban Village.” for high-density residential development. The zoning designation is “MS-G,” Main Street Ground Floor Commercial district. The MS-G district “is intended to provide a mix of commercial and residential uses integrated in a pedestrian-oriented design with a focus on active commercial uses at the ground level along the main street frontage.”

4.3.7. Other Public Information

An internet search identified no significant additional information.

5. Site Reconnaissance

A visual and physical reconnaissance of the subject property was first conducted on June 28, 2016, by Neil O'Hara. The reconnaissance was conducted by walking around the entire perimeter of the property, and crossing the property as needed to assure that the entire site was observed. Then-property-owner David Mijares and realtor Dan Ritter were present, and provided access to the interior of the store building and sheds. The two houses were renter-occupied; the interiors were not accessed, but Mr. Mijares confirmed that their use was strictly residential.

The property was most recently revisited by Mr. O'Hara on December 3, 2019. The property is now vacant. A chain-link fence is present across the street frontage, but the gates have been knocked down, so the property is not secure.

A site map and photographs of the subject property are attached to this report in Appendices A and B. A site visit/assessment checklist is attached to this report as Appendix C.

5.1. Site and Vicinity General Characteristics

The property is located in a mixed-use urbanized area, with primarily commercial and multi-family properties along Alum Rock Avenue, and single-family residences in the surrounding area. Alum Rock Avenue is currently undergoing a significant rehabilitation, including the installation of bus islands to improve public transit access. The area was primarily farmland and orchards until the 1950s.

5.2. Current Use of the Property

As of December 2019, the property is vacant.

In 2016, the front half of the former feed store building was used by a retail aquarium and pet bird shop. The rear portion of the building was used for office and storage space by Mr. Mijares. A portion of the yard and shed space is used by a one-man salvage/recycling business; another portion by a plastering contractor. Two houses with detached garages, located in the northeast corner of the property, were separated from the balance of the property by a fence; both were occupied by residential tenants.

5.2.1. Descriptions of Structures, Roads, Other Improvements on the Site

In 2016, the site was developed with one single-story former feed and garden/hardware retail store with a partial second floor, six storage sheds and outdoor storage areas. Two single family residences with detached garages occupied the northeast quarter of the property, separated from the commercial portion by a fence. The store building was wood framed with a stucco facade and other walls and roof of corrugated metal. The sheds were a mix of wood frame, open sided pole structures, and corrugated metal. The residences were single story wood-framed structures with detached garages.

As of December 2019, no buildings remain on the property. An asphalt driveway which formerly surrounded the feed store remains, defining the building's former perimeter.

5.2.2. Potable Water Supply

Public water service was provided to the property. No service is currently active.

5.2.3. Sewage Disposal System

Public sewer service is provided to the property. No service is currently active. Based on the proximity of the property to the San Jose City limits at the time the property was originally developed, we presume that city water and sewer services were available at the time, and the site is unlikely to have had a private well or septic system.

Observations On Subject Property

Observation	YES	NO	Comments
Hazardous Substances Associated with Identified Uses		X	
Storage Tanks		X	A 500-gallon UST was reportedly removed from the property in 1984.
Drums		X	Drums containing waste soil from remediation work have been removed from the site.
Hazardous Materials Containers		X	
Unidentified Containers		X	
Pits, Ponds or Lagoons		X	
Drains or Sumps		X	
Pools of Liquid		X	
Wells (supply or monitoring)		X	All monitoring wells have been abandoned under the oversight of the Santa Clara Valley Water District.
Odors		X	
Fill soil and debris	X		Moderate trash is present throughout the site.
Soil Stains, Stressed Vegetation	X		Soils in the rear portion of the property are stained black.
Stains or Corrosion		X	

Observation	YES	NO	Comments
Potential Asbestos-Containing Materials		X	All buildings have been removed from the property. According to the City of San Jose demolition permit, no asbestos abatement was required.
Potential lead-based paint		X	All buildings have been removed from the property.

5.3. Current Uses of the Adjoining Properties

North: Alum Rock Avenue; commercial strip mall.

East: Appears to be used as a truck maintenance facility. No signs identifying the operator were observed. Several dump trucks were present in the maintenance area; this facility may be related to the landscape contracting company that was known to occupy the site in 2016.

South: single-family residences

West: Apartments.

Observed Conditions On Adjoining Properties

Observation	YES	NO	Comments
Hazardous Substances Associated with Identified Uses	X		Petroleum products presumable used in vehicle maintenance
Storage Tanks		X	
Drums		X	
Hazardous Materials Containers		X	
Unidentified Containers		X	
Pits, Ponds or Lagoons		X	
Drains or Sumps		X	
Pools of Liquid		X	
Wells (supply or monitoring)		X	

Observation	YES	NO	Comments
Odors		X	
Fill soil and debris		X	
Soil Stains, Stressed Vegetation		X	
Stains or Corrosion		X	

6. INTERVIEWS

6.1. OWNERS AND OCCUPANTS

Then-owner David Mijares and realtor Dan Ritter were interviewed on the property in 2016. Both were aware of the ongoing cleanup of the historic UST leak; Mr. Mijares has been cooperating with Santa Clara County in an effort to complete remediation and obtain case closure. Mr. Ritter provided copies of numerous documents relating to this case, which are discussed below. Other than this situation, Mr. Mijares is unaware of the presence of any hazardous materials on the property and is unaware of any lawsuits, liens or other regulator actions against the property, either past, present, or pending.

Mr. Mijares stated that his father bought the property and constructed the retail building in 1947 to 1948; the two residences were built around the same time. The property was used a a farm supply store until about 2005; the aquarium/bird store, a plaster contractor, and a salvage/recycling business are the only occupants of the commercial portion of the property since that time.

The two houses were strictly residential rentals, and have never been used for any business purposes.

An area of stained soil near the southeast fence line was reported in a Phase I assessment prepared in 2005 by Lowney Associates. Mr. Mijares stated that this was determined to have been causes by dumping of used oil by the towing business that then occupied the adjacent property. He arranged for that business to cease this practice and to excavate the stained soil. No staining was observed at the present time, and weed growth in the area appeared healthy.

All work conducted on the site by RNC Environmental since 2016 has been under the direction of Darren Berberian, as representative of the current ownership group. Mr. Berberian is unaware of any significant additional information beyond that contained throughout this report.

6.2. Government Officials

6.2.1. Santa Clara County Department of Environmental Health

The Santa Clara County Department of Environmental Health (SCCDEH) is the Certified Unified Program Agency ("CUPA") responsible for all oversight of hazardous materials storage, releases or spills, underground storage tanks, above ground storage tanks, and leaking underground storage tanks in Santa Clara County.

Remediation work conducted by RNC Environmental since 2016 was completed under the oversight of SCCDEH. Travis Flora has been the project manager. It is beyond the scope of this assessment to provide a complete compilation of all correspondence with SCCDEH; the full official record is available on geotracker.[3]

On November 27, 2019, SCCDEH issued a Proposed Case Closure public notice, including the following statement:

> As required by the State Water Resources Control Board's Resolution #2012-0016, this case has been reviewed against the Low-Threat Underground Storage Tank (UST) Case Closure Policy (LTCP) and it has been determined to meet the criteria for case closure based on the information submitted to our office by your consultant. This letter is to notify you that the DEH is notifying all potentially affected parties in accordance with the LTCP. Public comments shall be accepted for 60 days. After the public comment period has closed, the DEH shall determine whether to proceed with closure of your site or if additional information will be required to address substantive public comments.

7. Phase II Assessment

A Phase II assessment of the property was conducted in August 2016 by RNC Environmental and Ryan GES (See Appendix G). The objective of the assessment was to evaluate overall conditions of the property relating to its use as a feed store, separate from the leaking underground fuel tank remediation. The south half of the property was known to have been used as a storage and equipment yard. This assessment found that:

The southern portion of the site is covered by 2-3 feet of black soil, which appears to be the result of application of a dust suppressant. It contains low levels of petroleum hydrocarbons. It does not to represent a significant environmental concern at the site.

Elevated concentrations of arsenic and lead were found in three soil borings in the west-central portion of the property. These borings are all located within 20 feet of each other, and the proximity of their location implies a spill of some sort affecting that area. The depth and

[3] https://geotracker.waterboards.ca.gov/profile_report?global_id=T10000001657

full lateral extent of impact is currently unknown but an initial estimated volume of soil to be removed would be 900 cubic feet, assuming an area of 30 feet by 10 feet extending 3 feet deep.

Petroleum-contaminated soil from the former UST was found not to extend to any significant horizontal distance from the UST site.

8. Evaluation

8.1. Findings

This assessment has found that:

- The subject property was developed in the 1940s. The original construction included a farm supply store and two single-family residences. Several sheds — some partial, some enclosed — were added in the following years.
- The farm supply store was operated continuously by the same owners until approximately 2005.
- From 2005 through 2016, the front portion of the building was occupied by a retail fish/bird pet store. The rear portion was used as office/storage space. Some of the sheds and yard space were used by a plastering contractor and by a salvage/recycling operator.
- The two residences were tenant-occupied, and have no history of any non-residential use.
- Use of the property prior to the 1940s is undetermined, but was likely agricultural. Alum Rock Avenue existed at least as far back as 1899.
- A 500-gallon underground fuel storage tank (UST) was formerly located near the southeast (rear) corner of the store. The tank was removed in 1984; the removal was retroactively permitted in 1985, with no soil or groundwater testing conducted at the time. Testing conducted in 2007 determined that contaminated soil and groundwater were present as a result of a historic leak in the UST.
- Then owner, David Mijares, began assessment and remediation of the site in 2009, under the oversight of the Santa Clara County Department of Environmental Health. Between 2009 and 2016, semi-annual groundwater monitoring events were conducted, in order to assess the overall extent of soil and groundwater contamination. An area of contaminated soil and groundwater was identified at the location of the former UST, and extending underneath the southern portion of the store building.
- In January 2016, contaminated soil from the former tank location was excavated and disposed of offsite. Post-remediation monitoring indicated that additional soil and groundwater contamination remained on the site beneath the building, then inaccessible for excavation.

- Pacific West Communities, as managing partner of 1936 Alum Rock Avenue LLC, acquired the property in April 2017, and accepted responsibility for implementing site remediation under the oversight of the Santa Clara County Department of Environmental Health (SCCDEH). Pacific West retained RNC Environmental and Ryan Geologic and Environmental Services to complete a site investigation and to implement remedial actions.
- In consultation with SCCDEH, in−situ chemical oxidation was selected as the best remedial option to address gasoline remaining in the subsurface of the site. Geologist Richard Ryan supervised the pressure injection of PersulfOx™, conducted in a series of five events from October 2018 through February 2019.
- Post-remediation site investigation included a grab groundwater sample and soil vapor sampling. The July 2019 soil vapor and groundwater samples were collected approximately 150 days after the final ISCO injection event. The groundwater sample collected from the primary impact area found non-detectable levels of benzene in groundwater for the first time. A decreasing concentration trend for benzene in groundwater is now well established. The low dissolved benzene concentration in the source area and the decreasing concentration trend indicate that site conditions can be anticipated to improve in the future. Based on results, the site meets the criteria for case closure under the SWRCB low−threat policy.
- A passive soil vapor sample from above the primary impact area found non-detectable levels of benzene, 8.1 μg/m3 of ethylbenzene, and non−detectable levels of naphthalene. Those soil vapor concentrations meet low−threat criteria for a residential exposure scenario.
- On November 27, 2019, SCCDEH issued a Proposed Case Closure public notice. Following a 60-day public comment period, the case will be closed, unless additional information is required to address substantive public comments.
- All monitoring wells associated with the leaking underground fuel tank cleanup have be destroyed under the oversight of the Santa Clara County Water District.
- The southern portion of the site is covered by 2-3 feet of black soil, which appears to be the result of application of a dust suppressant. It contains low levels of petroleum hydrocarbons. It does not to represent a significant environmental concern at the site.
- Elevated concentrations of arsenic and lead were found in three soil borings in the west-central portion of the property. These borings are all located within 20 feet of each other, and the proximity of their location implies a spill of some sort affecting that area. The depth and full lateral extent of impact is currently unknown but an initial estimated volume of soil to be removed would be 900 cubic feet, assuming an area of 30 feet by 10 feet extending 3 feet deep.

- Petroleum-contaminated soil from the former UST was found not to extend to any significant horizontal distance from the UST site.
- There are numerous leaking UST sites and several past and present hazardous materials cleanup sites within one-half mile of the property, mostly located along Alum Rock Avenue. There is no evidence of off-site impacts to the subject property from any of these sites.

8.2. Data Gaps

None of the limitations of this assessment has result in a data gap of any significance.

8.3. Opinions

It is anticipated that site preparation for construction on the site will include excavation and removal of the upper three feet of soil. As a result, the shallow area of arsenic- and lead-contaminated soil will be removed, and no further remediation of this area will be required.

The leaking underground fuel case, once closure is completed as anticipated, will represent a historical recognized environmental condition. As part of its approval of the site redevelopment, the City of San Jose may require re-evaluation of site conditions to confirm that they meet residential standards.

8.4. Conclusions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13, of 1936 Alum Rock Avenue (APN 481-19-003), located in the city of San Jose, Santa Clara County, California, "the property". Any exceptions to, or deletions from, this practice are described in the Limitations Section of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property, except for the following:

- The subject property is the site of a leaking underground storage tank, with historical evidence of contaminated soil and groundwater. Remediation has been completed, and the site is formally eligible for closure, pending completion of a 60-day public comment period.
- An area of soil of approximately 300 square feet in area and three feet deep, contains concentrations of arsenic and lead which exceed level considered acceptable for residential development.

9. Signature of Environmental Professional

"I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in the §312.10 of 40 CFR part 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR part 312."

12/9/19

Neil O'Hara
Environmental Professional

10. Statement of Qualifications

The US EPA All Appropriate Inquiry rule defines an environmental professional as someone who "possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases of hazardous substances on, at, in, or to a property, sufficient to meet the objectives and performance factors of the rule. In addition, an environmental professional must have either a state or tribal issued certification or license and three years of relevant full-time work experience; a Baccalaureate degree or higher in science or engineering and five years of relevant full-time work experience; or ten years of relevant full-time work experience."

Neil O'Hara meets and exceeds this requirement based on the following qualifications:

- Bachelor of Science, Environmental Planning & Management; University of California, Davis, 1974.
- 30+ years professional full-time experience, including:

RNC Environmental, LLC. Founding partner, 2004; sole proprietor since 2007.

Neil O. Anderson & Associates, Lodi, CA. Senior Environmental Specialist, 1998-2004.

O'Hara Environmental, Volcano, CA. Independent consultant, 1995-1998.

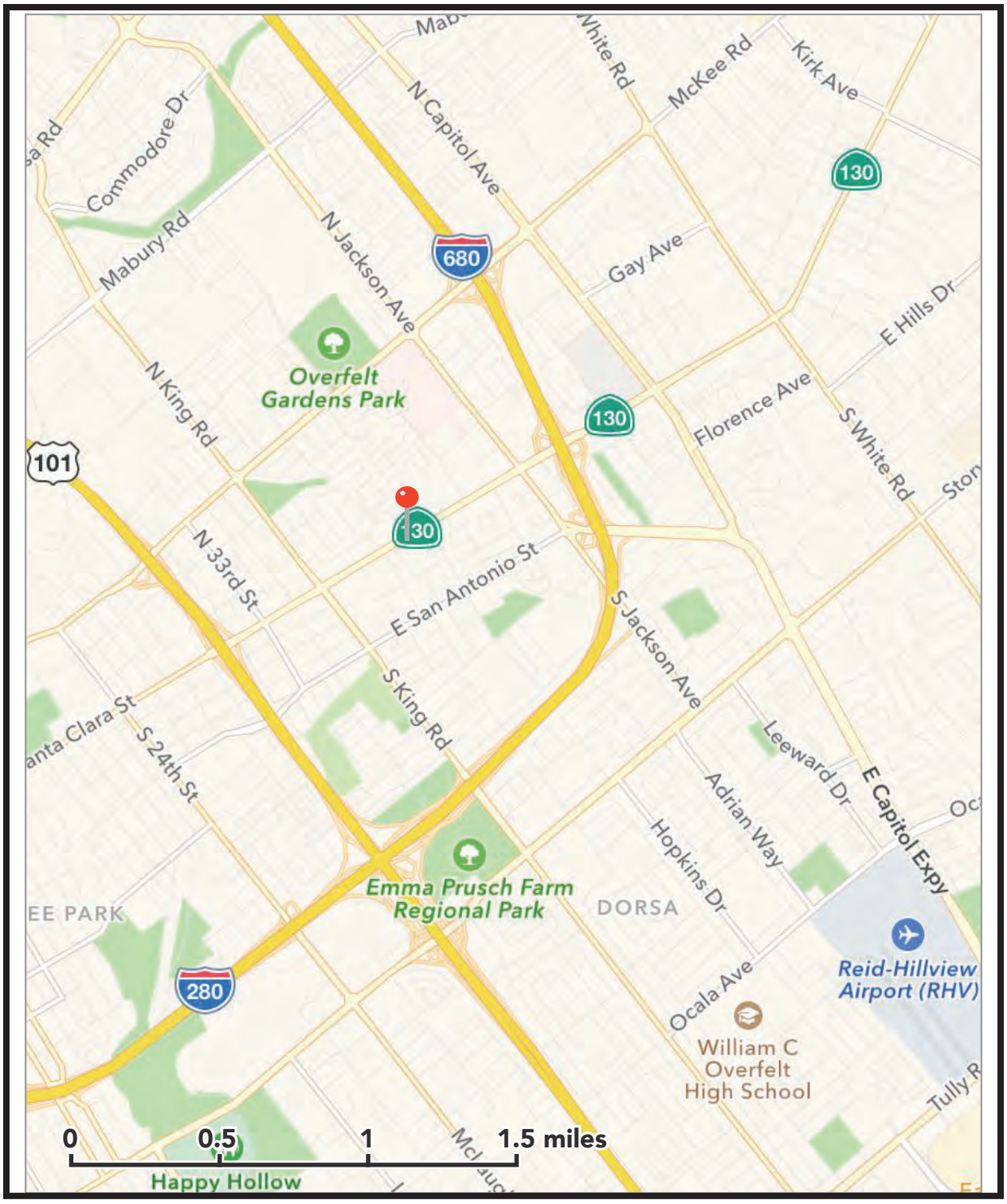
Sugnet & Associates, Roseville, CA. Water Quality Specialist, 1992-1995.

Limnion Corp., Concord, CA. Senior Biologist, 1989-1992.

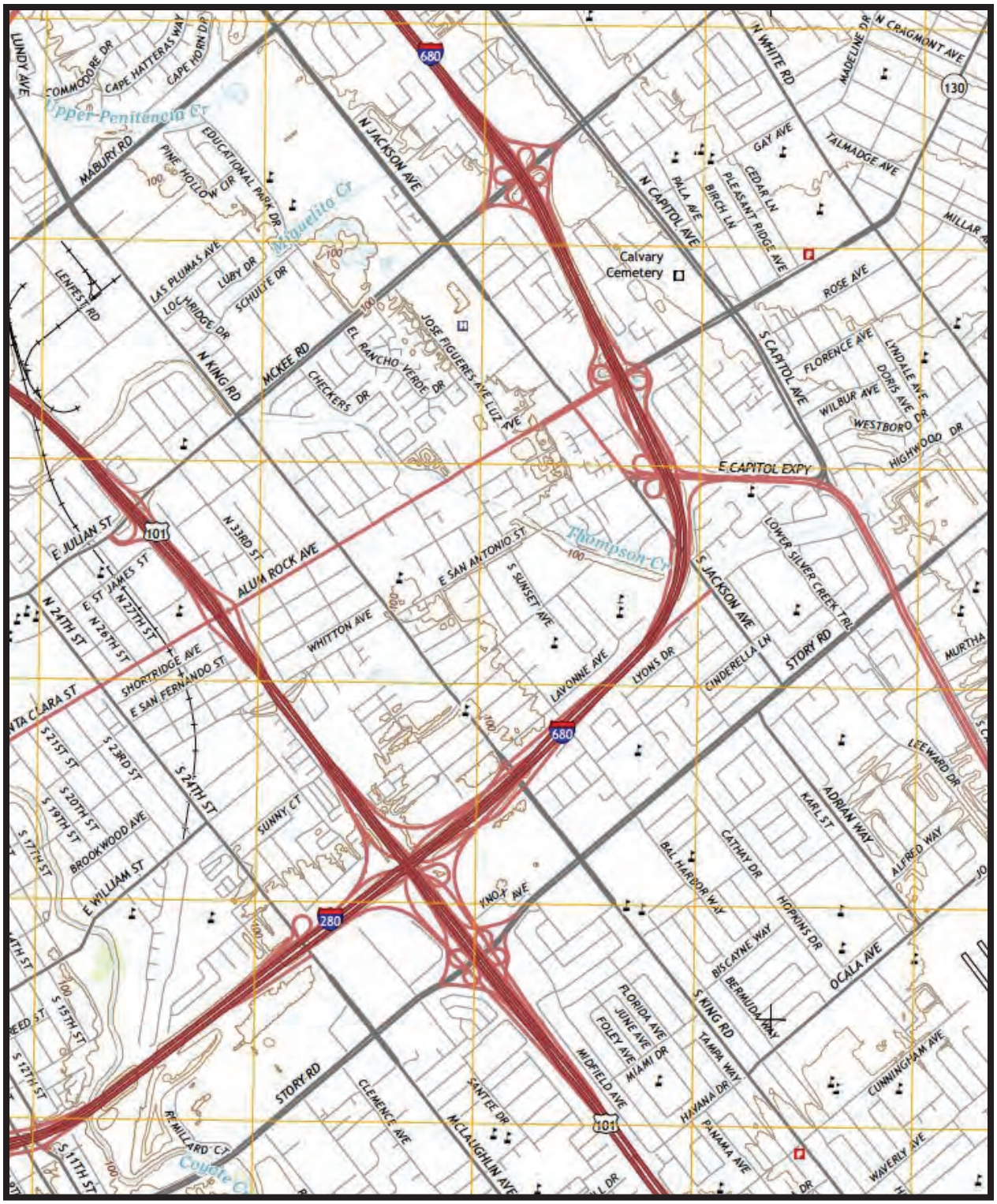
Mr. O'Hara was a California Registered Environmental Assessor (REA) from 1993 until the REA program was cancelled in 2012.

Mr. O'Hara's career in the environmental sciences includes 25+ years as a consultant and 15 years as an educator. His areas of expertise include environmental site assessment and due diligence, biological resources evaluation and wetlands assessment, CEQA compliance and regulatory compliance. He has conducted environmental assessments, trained and supported others in conducting such work, and provided third-party review services for a real estate investment fund. He has conducted over 200 Phase I Environmental Site Assessments, and provided third-party reviews for hundreds more.

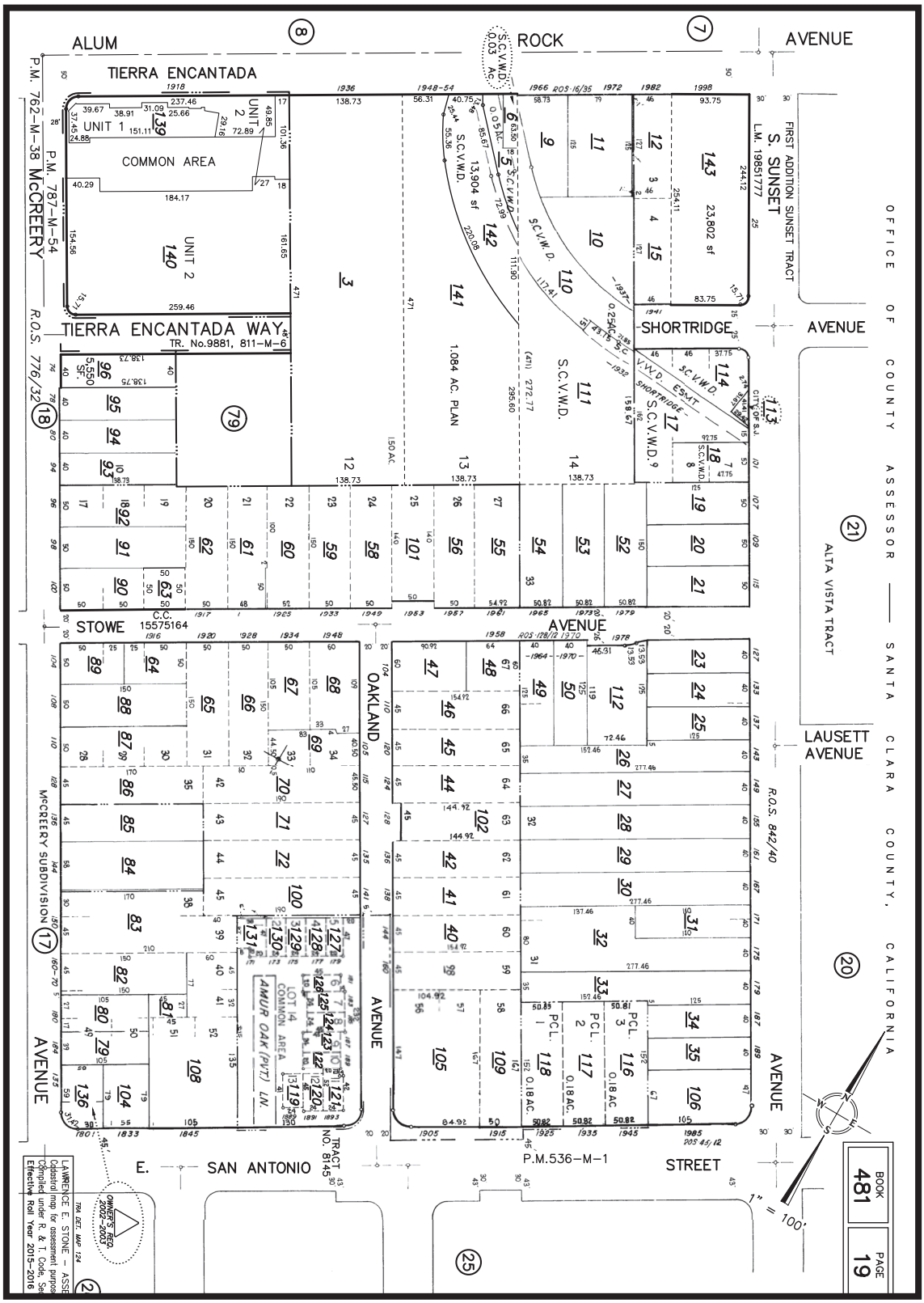
A. Location Maps



Location Map



USGS Topographic Map, San Jose East quad, 2015



Assessor's Parcel Map

Aerial Photo, 2015

B. Photographs

Looking south across property

Looking north across property

Former location of houses

Former location of Farmer's Supply building; former UST location in foreground

Assorted inert junk on subject property

Dark stained soil in rear portion of property

Adjacent homes to south

Adjacent apartments to west

Truck repair to east

Storage on east adjacent property

Looking west on Alum Rock Avenue

Commercial property to north across Alum Rock Avenue

Looking east along Alum Rock Avenue

Building at front of adjacent property to east

C. Site Assessment Checklist

RNC Environmental, LLC
Phase I Site Reconnaissance Checklist

Project #	Site location	Date	By
1606K	*1936 Alum Rock Avenue San Jose, Ca*	*12/3/19*	*Neil O'Hara*

General Description of Property
Level 1.5± acre parcel in mixed-use residential/ commercial area. Disturbed soil surface.

General Description of Buildings
None. Asphalt remains from former driveway around farmers supply store

	Observed Land Uses
Subject Property	Front portion of store building is a retail aquarium/bird shop. Rear portion is office/storage. Occupants of sheds/yard space include a salvage business and a plastering contractor. Two houses are occupied by residential tenants. Vacant
North	*Across Alum Rock Ave.: a commercial strip mall. Occupants include restaurants, professional offices, retail shops and a laundomat.*
East	*Boarded-up cinder block building in front corner. Balance of property appears to be used as a truck maintenance business*
South	*Single-family residences*
West	*Apartment complex*

RNC Environmental, LLC
Phase I Site Reconnaissance Checklist

1936 Alum Rock Avenue
San Jose, Ca

Observed Hazardous Materials		
	Subject Property	**Adjacent Properties**
Any business typically associated with waste treatment, storage, disposal, processing, or recycling	[ ]Yes [✔]No	[✔]Yes [ ]No *Truck maintenance*
Pesticides, batteries, paints, or other chemicals	[ ]Yes [✔]No	[✔]Yes [ ]No *Truck maintenance*
Industrial drums or sacks of chemicals	[ ]Yes [✔]No	[ ]Yes [✔]No
Unidentified open or damaged containers	[ ]Yes [✔]No	[ ]Yes [✔]No
Evidence of underground/ aboveground storage tanks	[ ]Yes [✔]No	[ ]Yes [✔]No
Old or leaking electrical transformers	[ ]Yes [✔]No	[ ]Yes [✔]No
Comments		

RNC Environmental, LLC
Phase I Site Reconnaissance Checklist

1936 Alum Rock Avenue
San Jose, Ca

Physical Observations		
	Subject Property	**Adjacent**
Stained Soil	[✔]Yes [ ]No *Back portion of property is blackened*	[ ]Yes [✔]No
Stressed/dead vegetation?(other than seasonal)	[ ]Yes [✔]No	[ ]Yes [✔]No
Odors	[ ]Yes [✔]No	[ ]Yes [✔]No
Trash and debris	[✔]Yes [ ]No *Moderate*	[ ]Yes [✔]No
Fill soil	[ ]Yes [✔]No	[ ]Yes [✔]No
Wastewater discharges	[ ]Yes [✔]No	[ ]Yes [✔]No
Pits/ponds/lagoons	[ ]Yes [✔]No	[ ]Yes [✔]No
Monitoring wells	[ ]Yes [✔]No	[ ]Yes [✔]No
Comments		

Water and Wastewater	
Potable water supply	[ ] Public [ ] Private well [ ] Other [✔] None
Sewage disposal	[ ] Public [ ] Private septic [ ] Other [✔] None
Discharges to surface or pond	[ ]Yes [✔]No
Wetlands or surface waters	[ ]Yes [✔]No

D. Historical Photos and Maps

1948

1954

1960

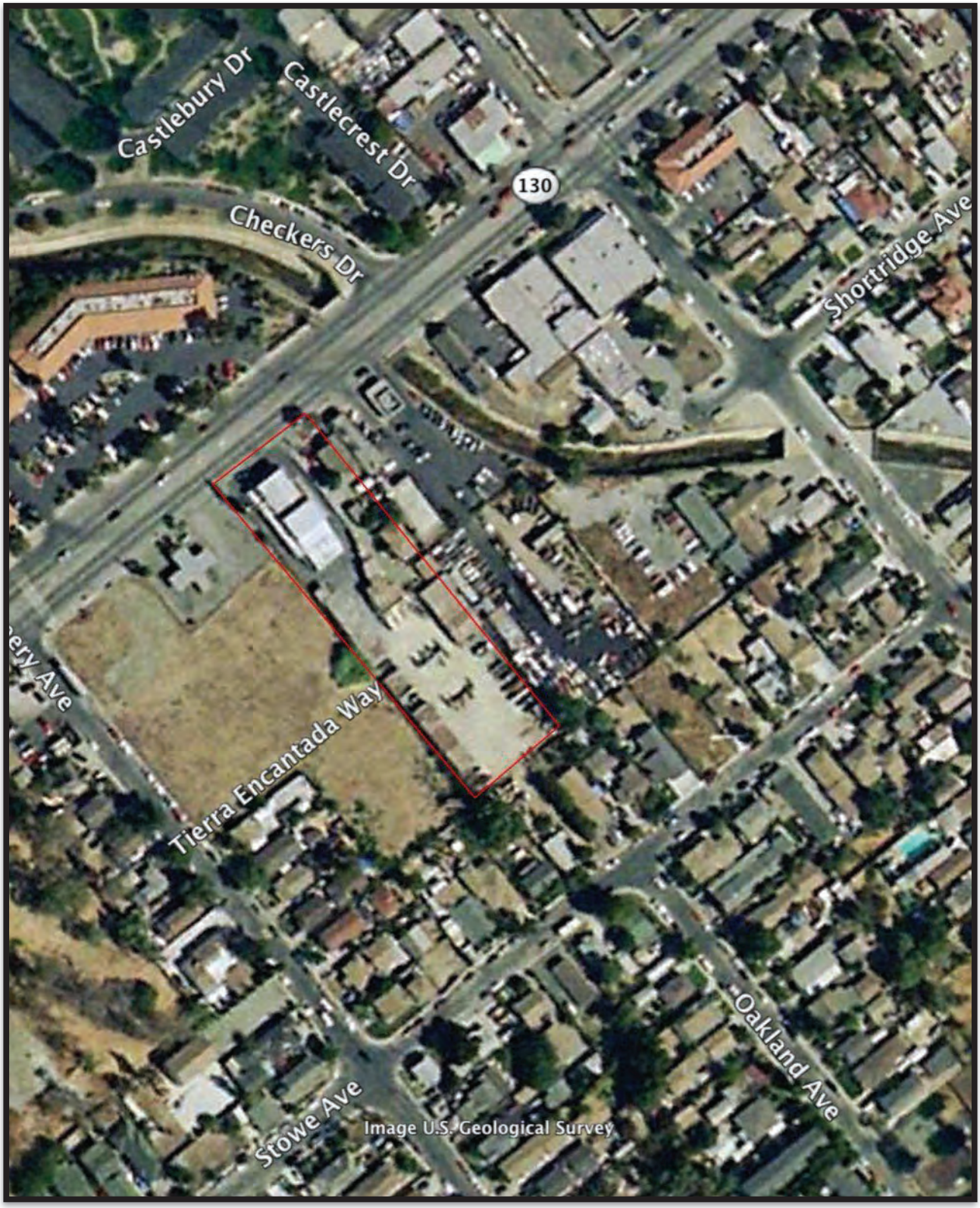
1968

1974

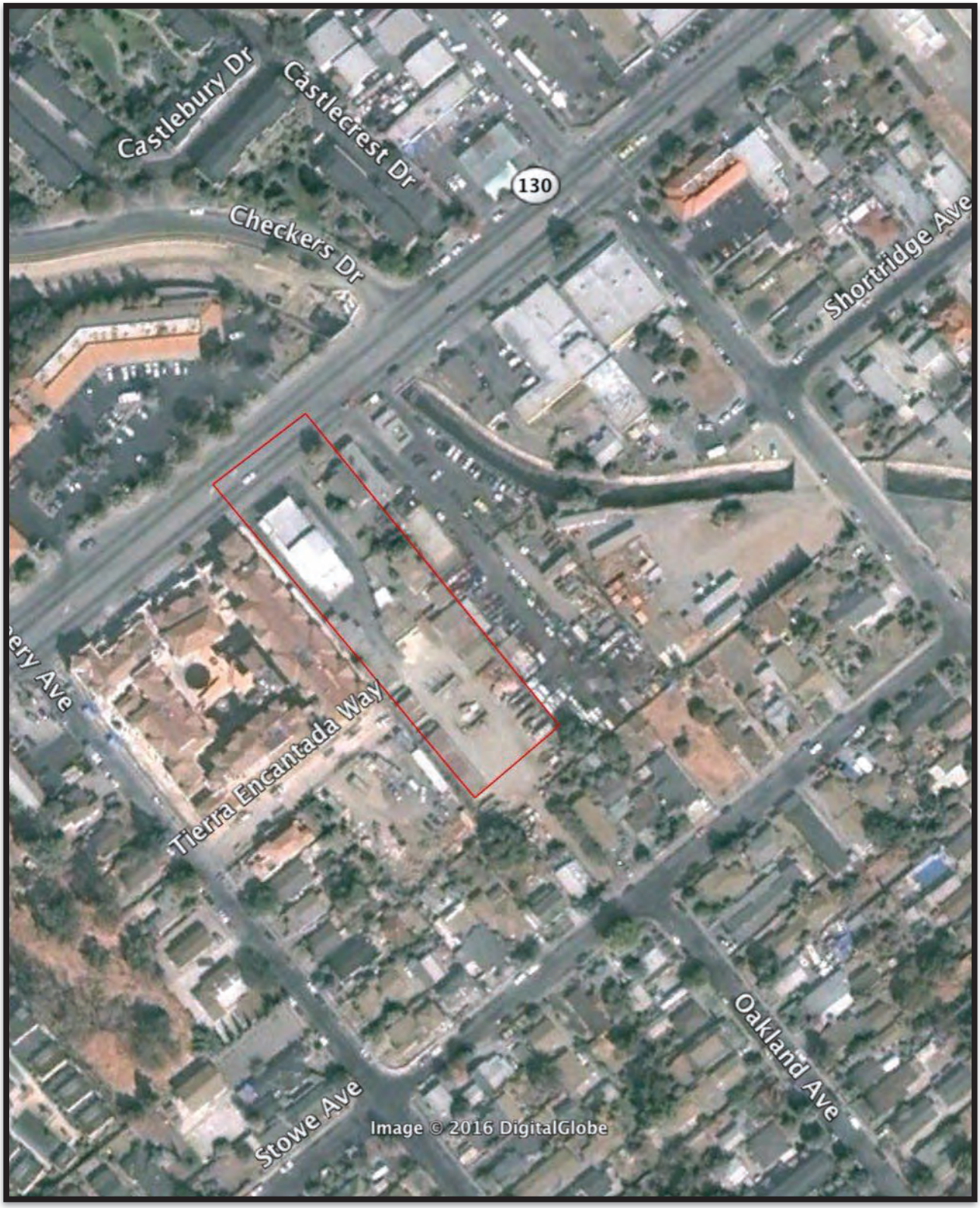
1981


Castlebury Dr
Castlecrest Dr
130
Checkers Dr
Shortridge Ave
S Sunset Ave
Tierra Encantada Way
Stowe Ave
Oakland Ave
Image U.S. Geological Survey

1998


Castlebury Dr
Castlecrest Dr
130
Checkers Dr
Shortridge Ave
Tierra Encantada Way
Oakland Ave
Stowe Ave
Image U.S. Geological Survey

2002


Castlebury Dr
Castlecrest Dr
130
Checkers Dr
Shortridge Ave
Tierra Encantada Way
Stowe Ave
Oakland Ave
Image © 2016 DigitalGlobe

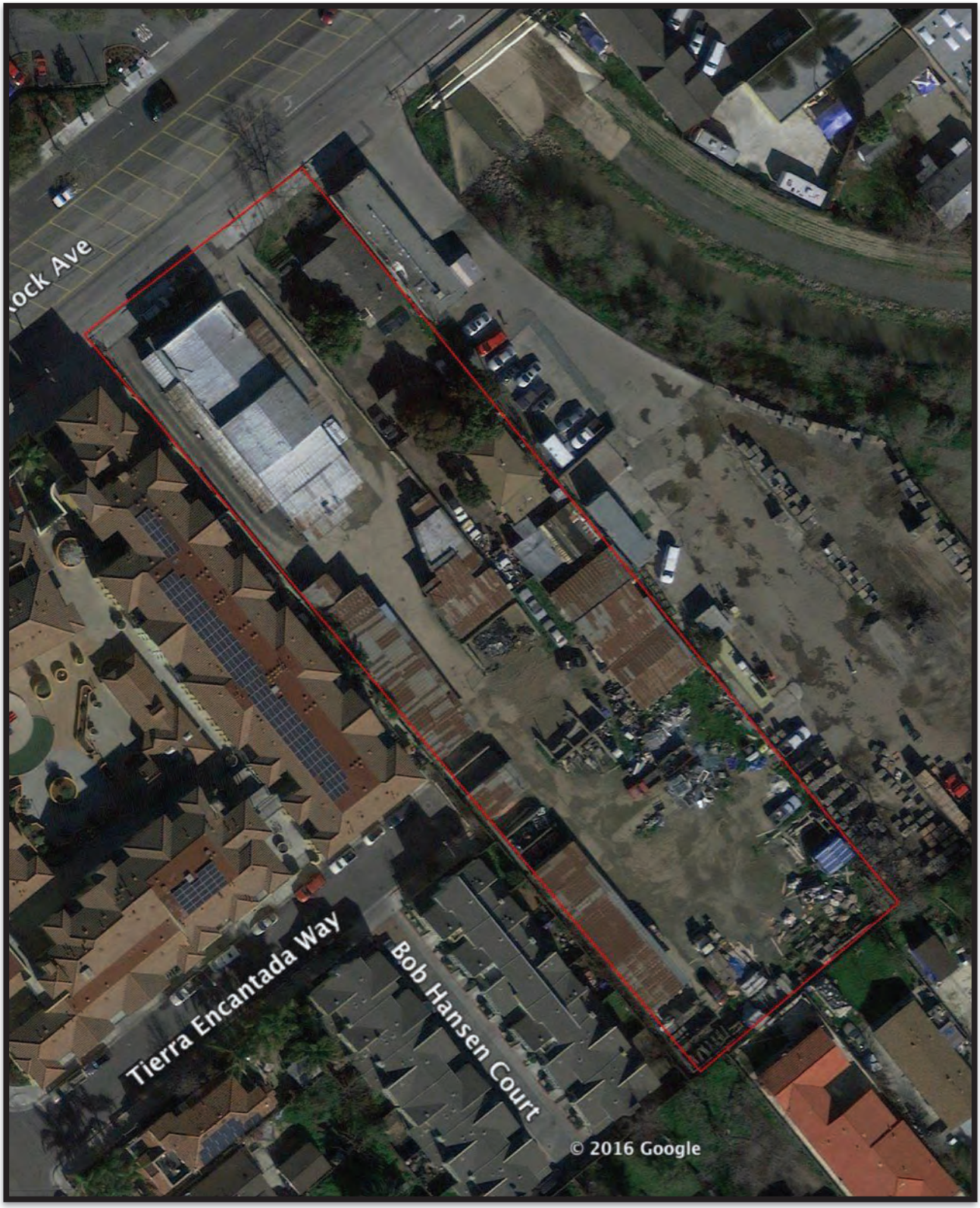
2004


Castlebury Dr
Checkers Dr
130
Shortridge Ave
Tierra Encantada Way
Stowe Ave
Oakland Ave

2007

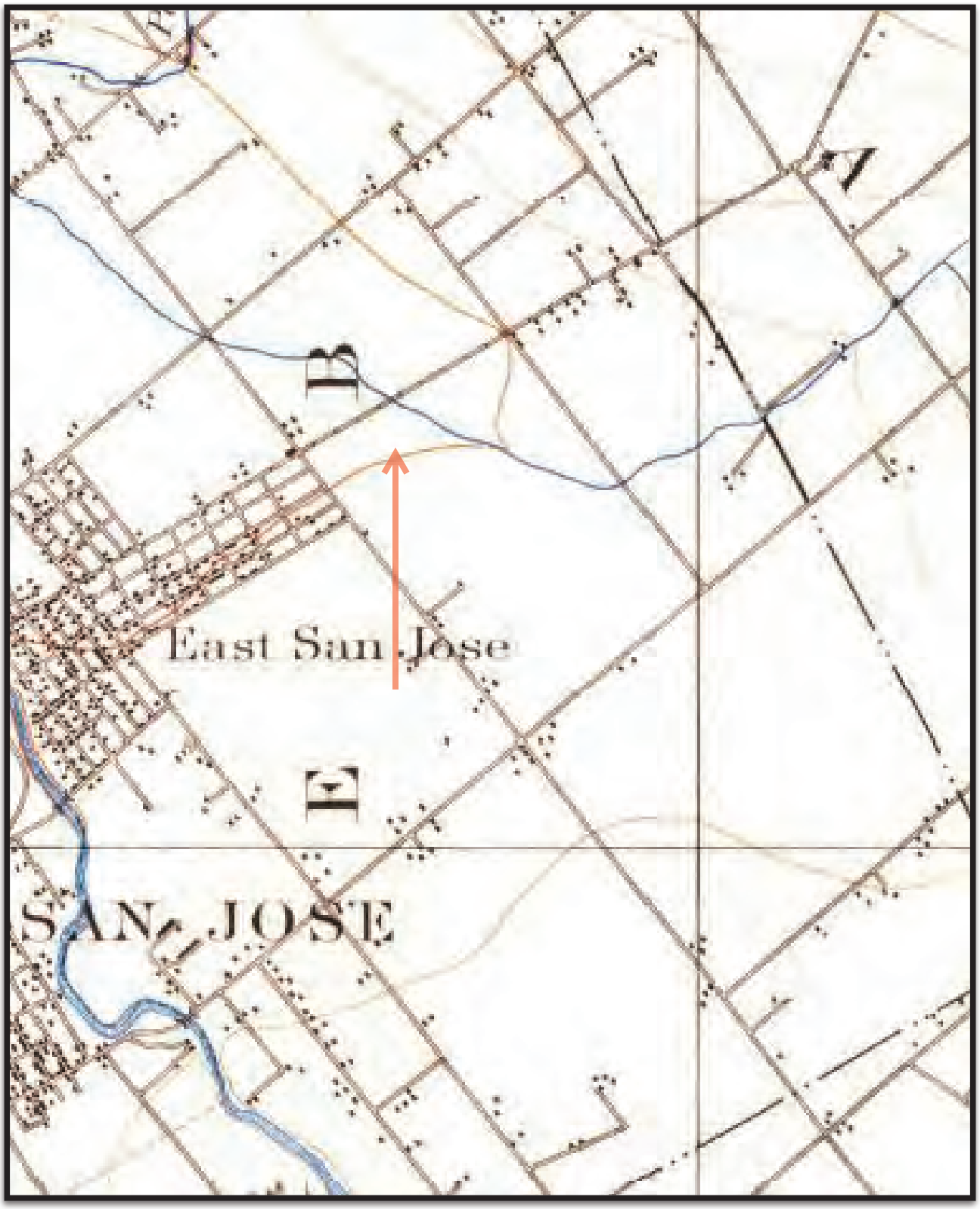

Castlebury Dr
130
Shortridge Ave
Tierra Encantada Way
Stowe Ave
Oakland Ave

2011

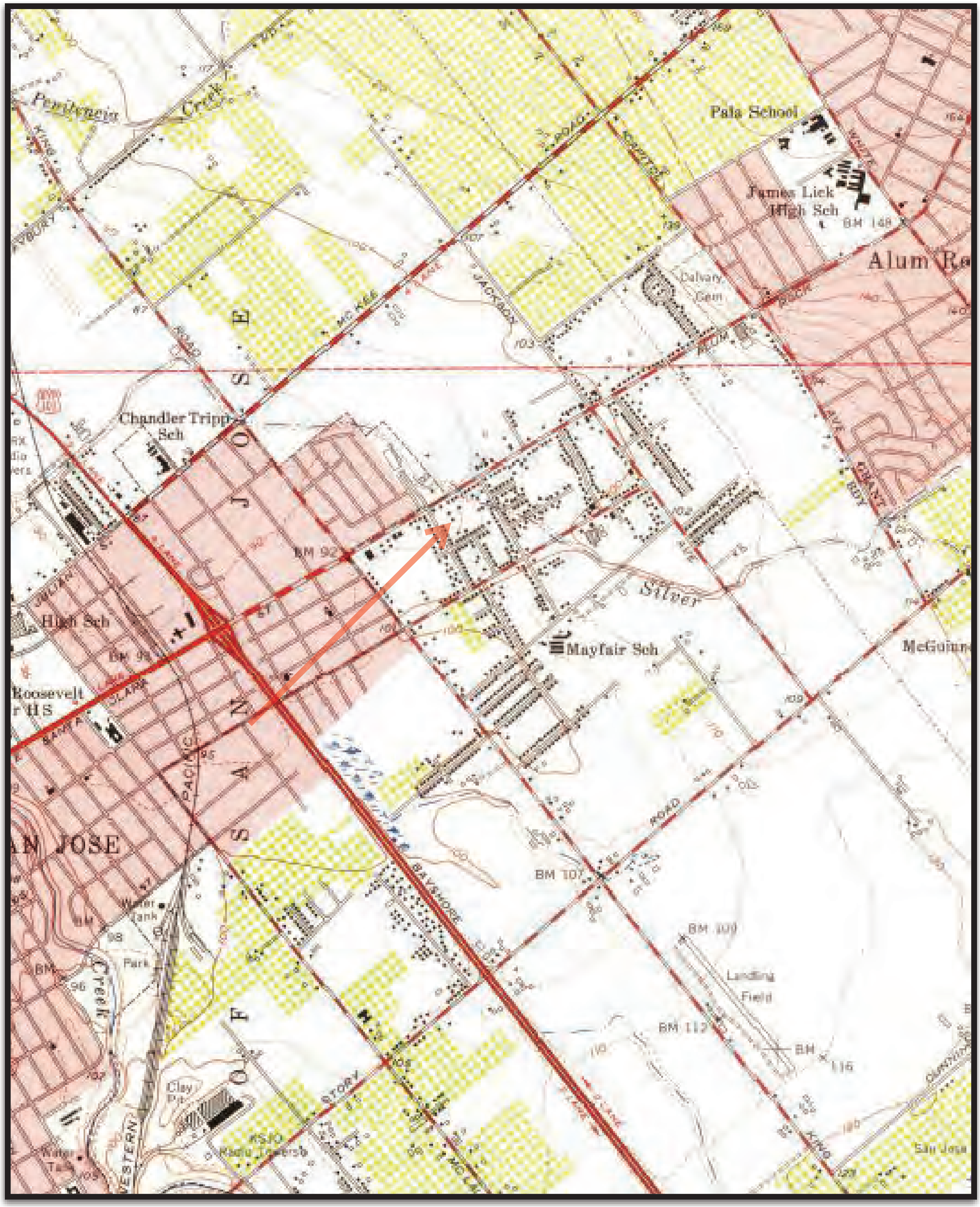


2016

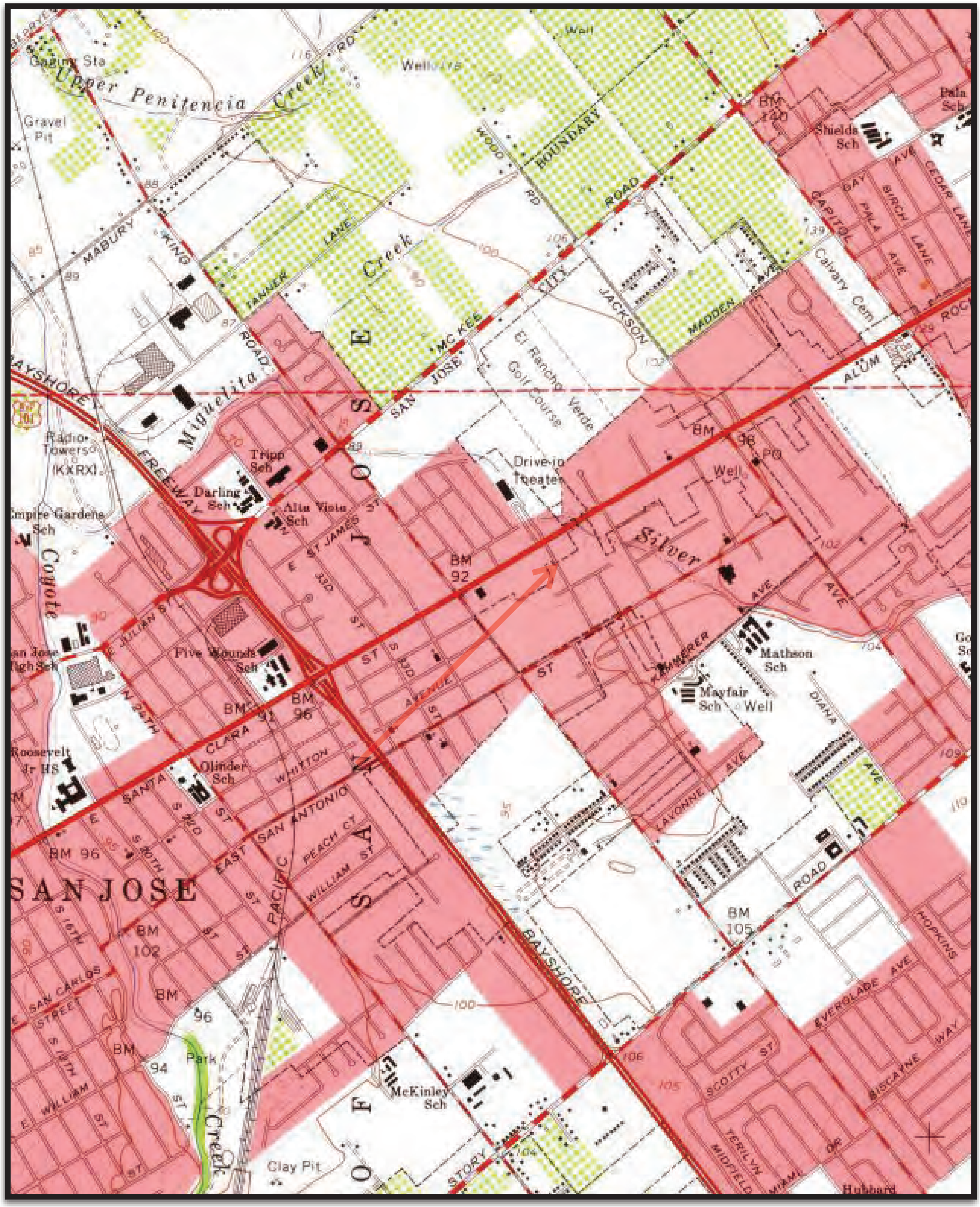
2018



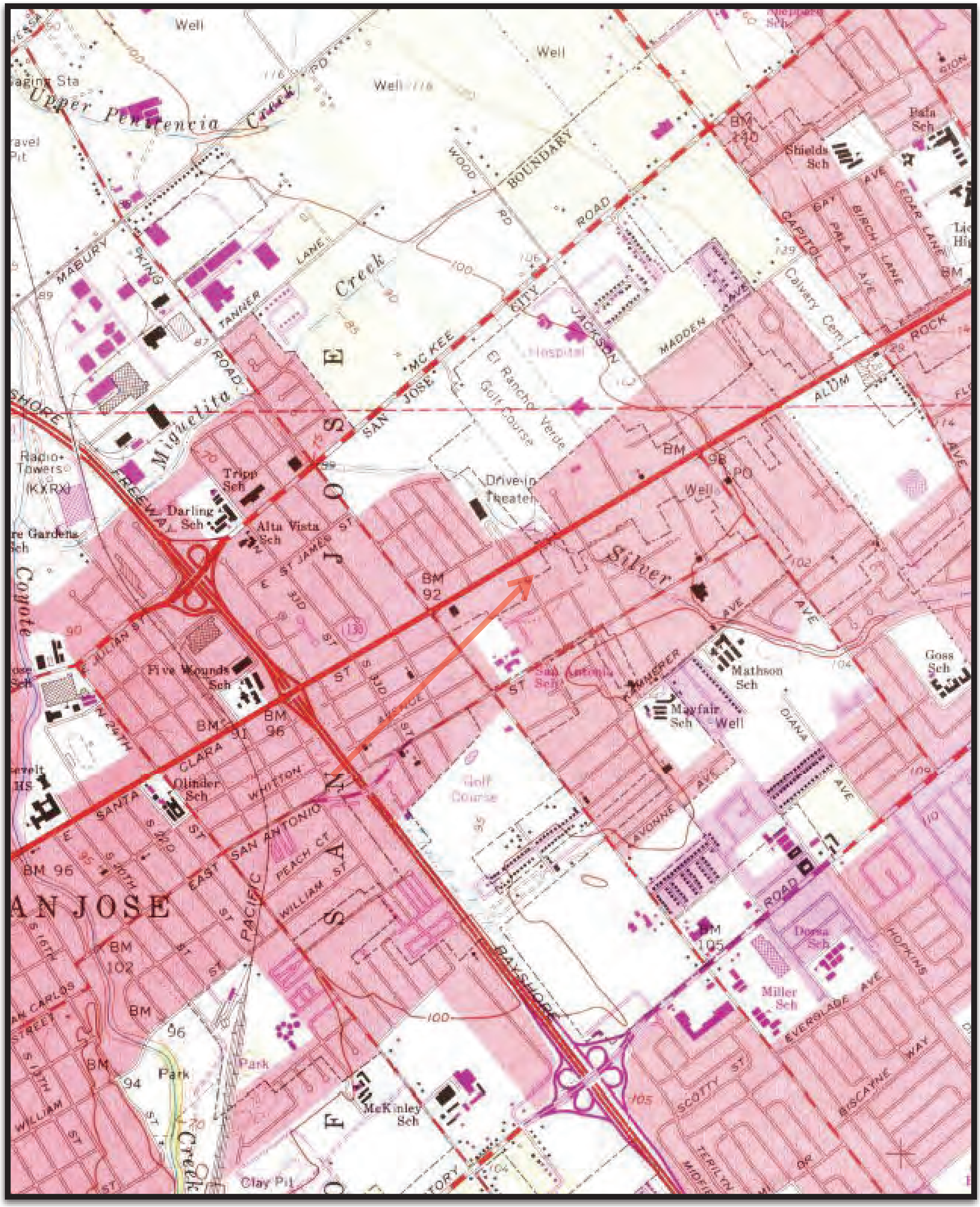
1899


Penitencia Creek
Pala School
James Lick High Sch
BM 148
Alum Ro
Calvary Cem
Chandler Tripp Sch
JACKSON
BM 92
Silver
High Sch
BM 93
Mayfair Sch
McGuinn
Roosevelt
HS
SAN JOSE
BM 107
BM 109
Landing Field
BM 112
BM 116
Clay Pit
KSJO Radio Towers
San Jose

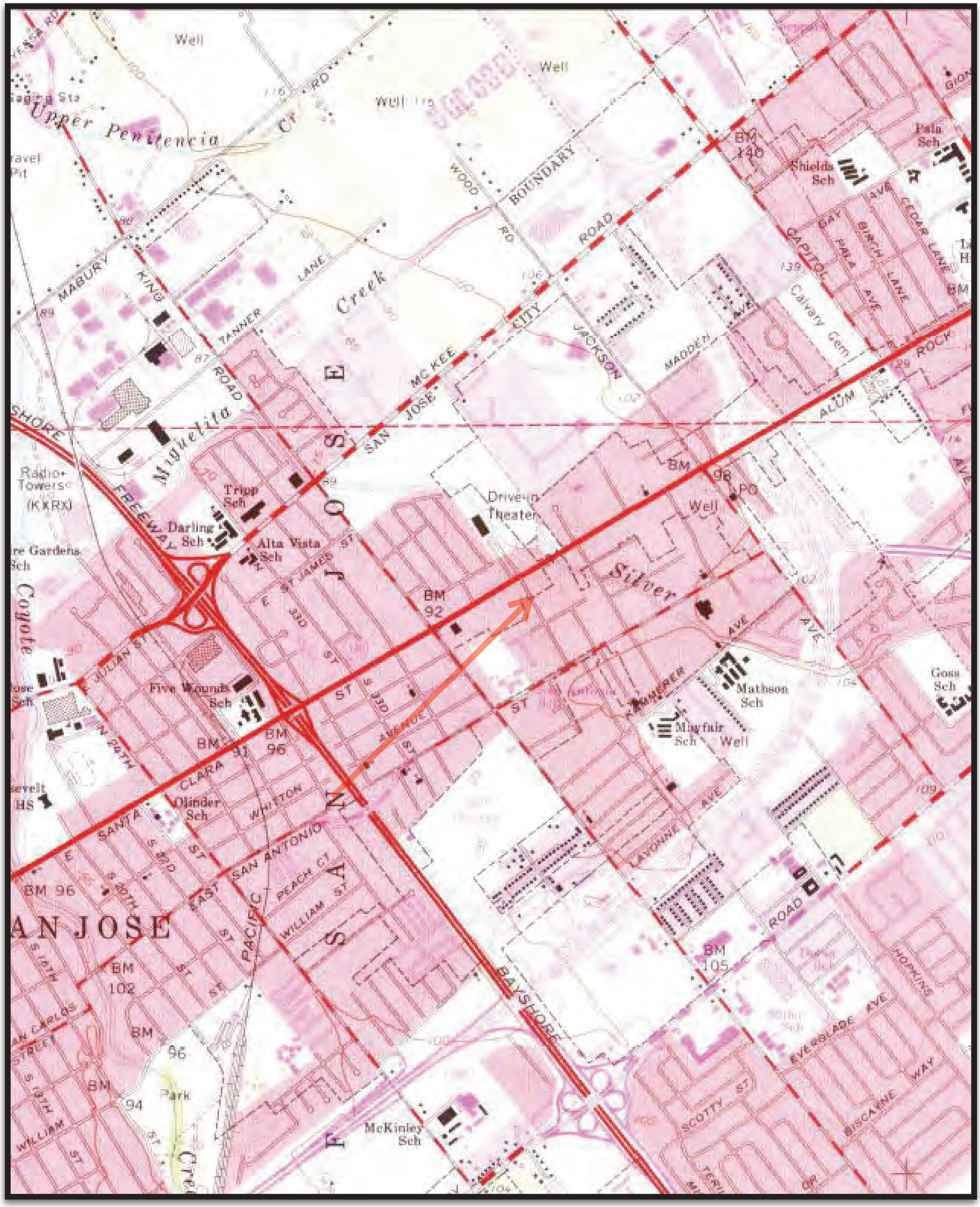
1953


SAN JOSE
Upper Penitencia Creek
Miguelita
Coyote Creek
Silver Creek
BOUNDARY ROAD
MC KEE
ALUM ROCK
BAYSHORE FREEWAY
Tripp Sch
Darling Sch
Alta Vista Sch
Five Wounds Sch
Olinder Sch
Roosevelt Jr HS
Mathson Sch
Mayfair Sch
McKinley Sch
Shields Sch
Drive-in Theater
El Rancho Verde Golf Course
Calvary Cem
Radio Towers (KXRX)
Gravel Pit
Clay Pit
Park

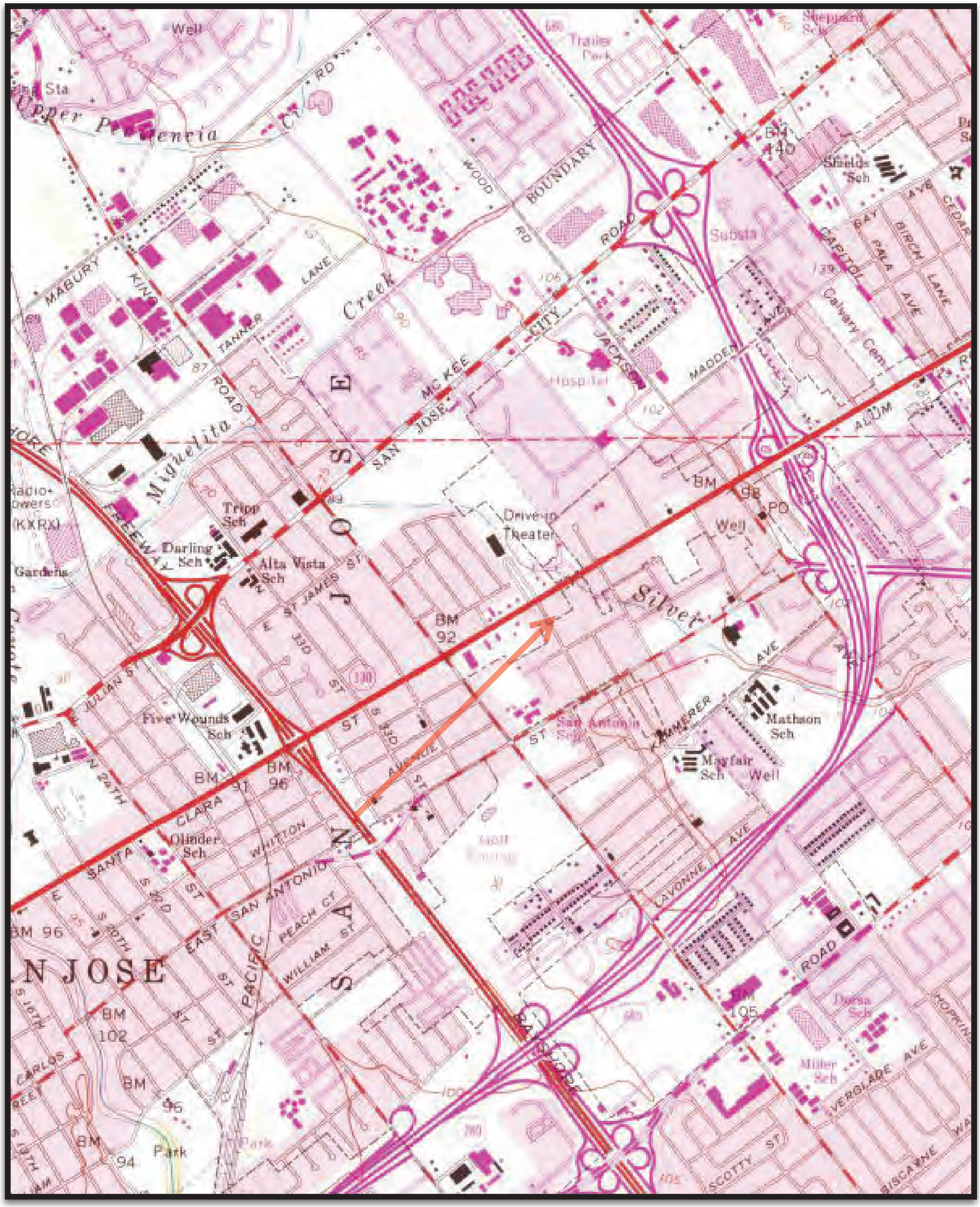
1961


Upper Penitencia Creek
MABURY
KING
ROAD
TANNER
LANE
Creek
MC KEE
SAN JOSE
BOUNDARY
ROAD
CITY
JACKSON
MADDEN
ALUM ROCK
El Rancho Verde Golf Course
Hospital
Miguelita
Radio Towers (KXRX)
Tripp Sch
Darling Sch
Alta Vista Sch
Drive-in Theater
Silver
Coyote
Five Wounds Sch
Mathson Sch
Mayfair Sch
San Antonio Sch
Goss Sch
Shields Sch
Calvary Cem
CAPITOL
Olinder Sch
SANTA CLARA
WHITTON
EAST SAN ANTONIO
PEACH CT
WILLIAM
PACIFIC
SAN JOSE
Golf Course
BAYSHORE
Dorsa Sch
Miller Sch
EVERGLADE AVE
HOPKINS
BISCAYNE WAY
SCOTTY ST
McKinley Sch
Park
Clay Pit
Creek
DIANA AVE
AVONNE AVE
FREEWAY

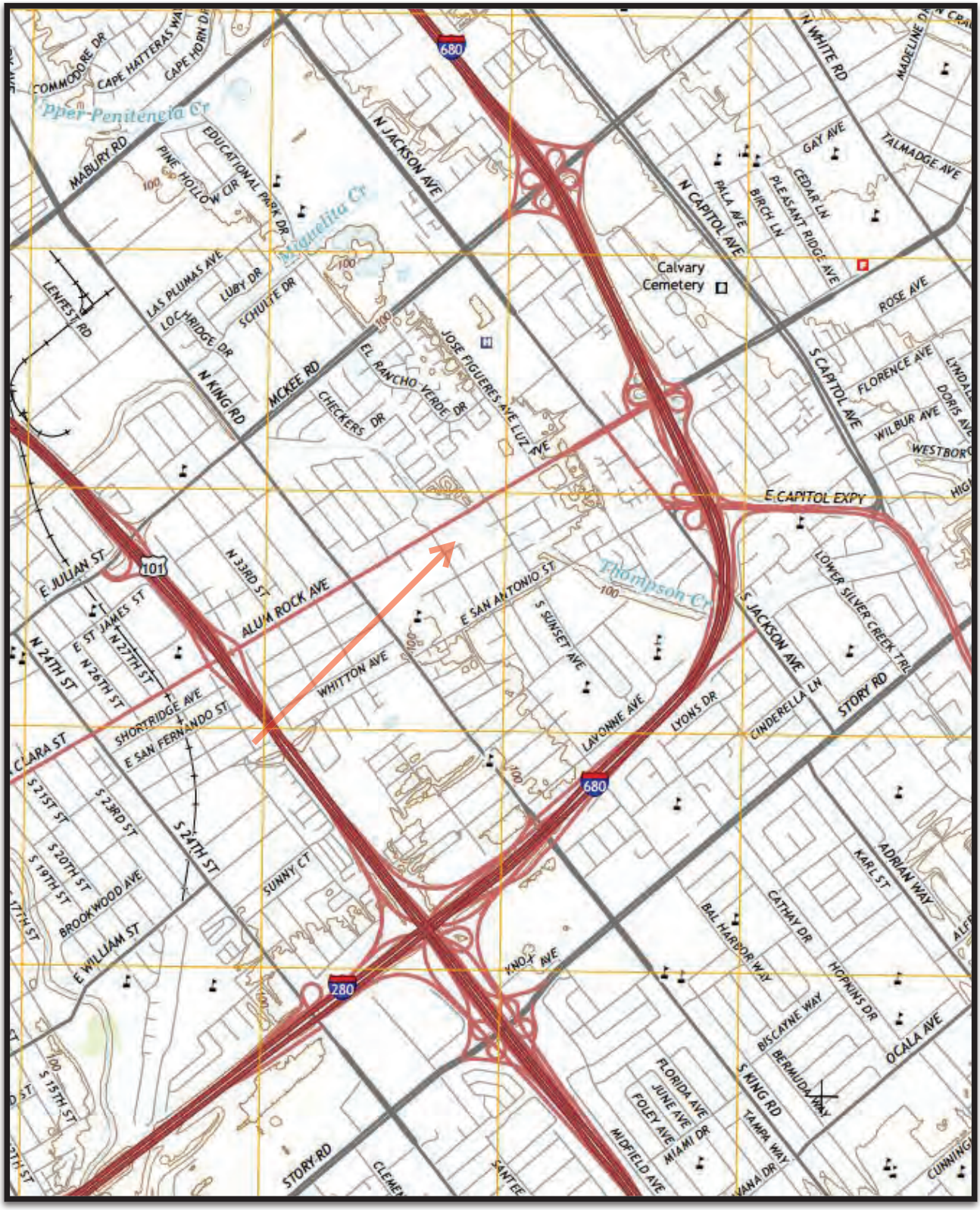
1968


Well
Upper Penitencia Cr
MABURY
KING
TANNER
LANE
Creek
WOOD RD
BOUNDARY
ROAD
CITY
JACKSON
MADDEN
MC KEE
SAN JOSE
Miguelita
Radio Towers
(KXRX)
FREEWAY
Darling Sch
Alta Vista Sch
Drive-in Theater
Silver
ALUM ROCK
Calvary Cem
CAPITOL
Shields Sch
Pala Sch
Mathson Sch
Mayfair Sch
Five Wounds Sch
Olinder Sch
SANTA CLARA
WHITTON
SAN ANTONIO
PEACH CT
WILLIAM ST
BAYSHORE
LAVONNE AVE
McKinley Sch
Park
Goss Sch
SCOTTY ST
EVERGLADE AVE
BISCAYNE WAY
HOPKINS
AN JOSE

1973


Trailer Park
Upper Penitencia Cr
BOUNDARY
WOOD RD
MABURY RD
KING
TANNER
LANE
Creek
McKEE
SAN JOSE
CITY
ROAD
JACKSON
MADDEN
CAPITOL
Shields Sch
Calvary Cem
Hospital
Miguelita
Radio towers (KXRX)
Trapp Sch
Darling Sch
Alta Vista Sch
Drive-in Theater
Silver
Gardens
JULIAN ST
Five Wounds Sch
E ST JAMES ST
Mathson Sch
Mayfair Sch
Well
Olinder Sch
SANTA CLARA
WHITTON
SAN ANTONIO
PEACH CT
WILLIAM ST
PACIFIC
N JOSE
SAN JOSE
BM 96
BM 92
BM 102
Park
LAVONNE
AVE
ROAD
Dorsa Sch
Miller Sch
VERGLADE AVE
SCOTTY ST
BISCAYNE

1980


680
N JACKSON AVE
N WHITE RD
MADELINE DR
CAPE HATTERAS WAY
CAPE HORN DR
COMMODORE DR
Upper Penitencia Cr
MABURY RD
PINE HOLLOW CIR
EDUCATIONAL PARK DR
Miguelita Cr
GAY AVE
TALMADGE AVE
N CAPITOL AVE
PALA AVE
BIRCH LN
CEDAR LN
PLEASANT RIDGE AVE
Calvary Cemetery
LENFEST RD
LAS PLUMAS AVE
LOCHRIDGE DR
LUBY DR
SCHULTE DR
N KING RD
MCKEE RD
CHECKERS DR
EL RANCHO VERDE DR
JOSE FIGUERES AVE
LUZ AVE
ROSE AVE
S CAPITOL AVE
FLORENCE AVE
WILBUR AVE
E CAPITOL EXPY
E JULIAN ST
101
N 33RD ST
ALUM ROCK AVE
E ST JAMES ST
N 27TH ST
N 26TH ST
N 24TH ST
SHORTRIDGE AVE
E SAN FERNANDO ST
WHITTON AVE
E SAN ANTONIO ST
S SUNSET AVE
Thompson Cr
S JACKSON AVE
LOWER SILVER CREEK TRL
CINDERELLA LN
STORY RD
LAVONNE AVE
LYONS DR
E CLARA ST
S 21ST ST
S 23RD ST
S 20TH ST
S 19TH ST
S 24TH ST
BROOKWOOD AVE
SUNNY CT
E WILLIAM ST
280
KNOX AVE
BAL HARBOR WAY
CATHAY DR
KARL ST
ADRIAN WAY
HOPKINS DR
BISCAYNE WAY
BERMUDA WAY
OCALA AVE
S KING RD
TAMPA WAY
FLORIDA AVE
JUNE AVE
FOLEY AVE
MIAMI DR
WILDFIELD AVE
S 15TH ST
STORY RD

2015

E. Government Records Search

Regulatory Records Review

1936 Alum Rock Avenue
San Jose, California 95116

December 2, 2019

RNC Environmental, LLC • 151 Nursery Street, Ashland, OR 97520 • (888)485-3330 • rnc-enviro.com

HAZARDOUS WASTE CLEANUP SOURCES[1]

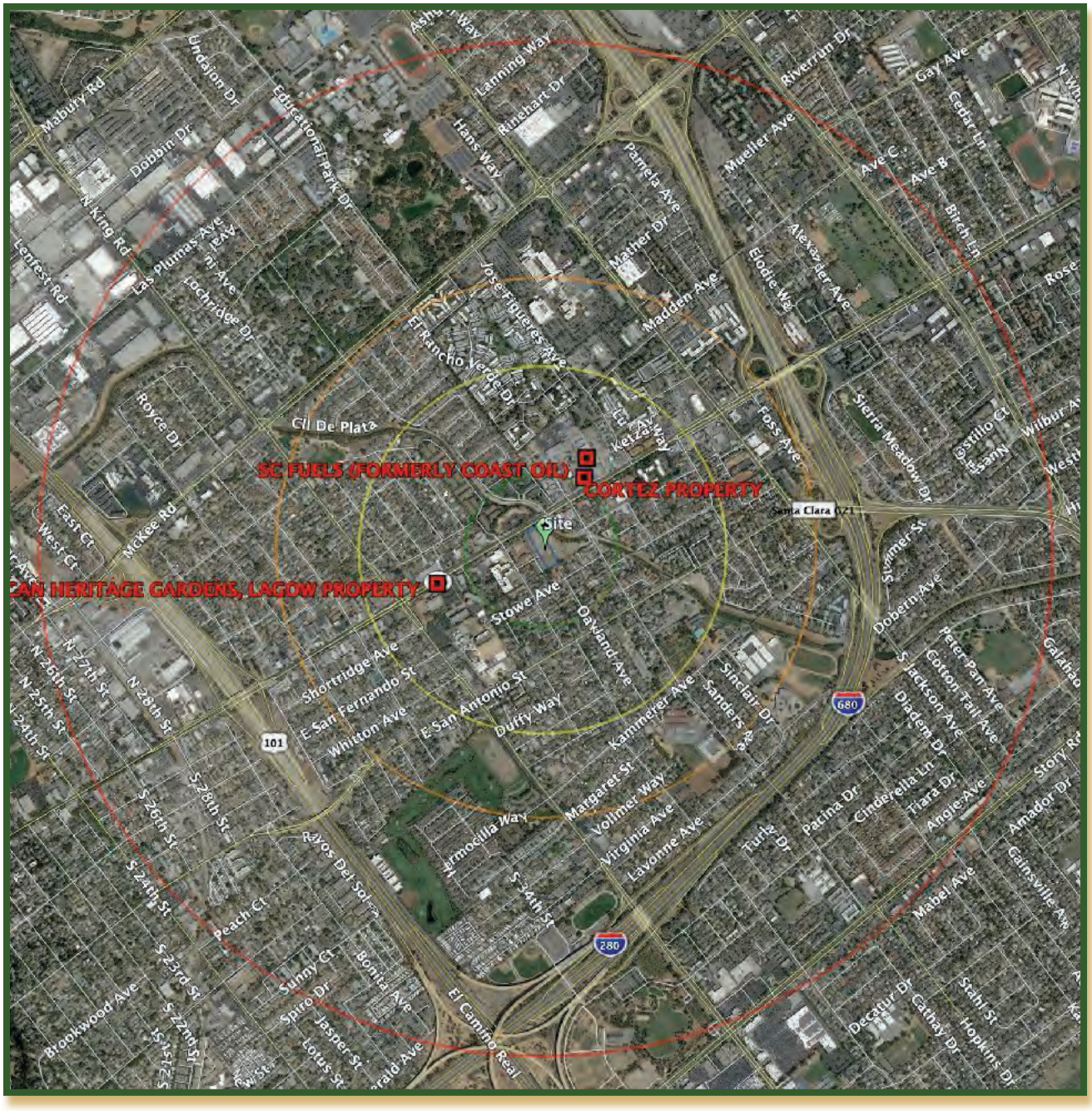
Sites	Source	Search	Found
"Superfund" National Priority List (N P L)	U S Environmental Protection Agency: • Enviromapper • Cleanups In My Community	1 Mi.	**0**
Non-N P L Federal Cleanup Sites	U S Environmental Protection Agency: • Enviromapper • Cleanups In My Community	0.5 Mi.	**0**
R C R A Corrective Action (Corracts)	U S Environmental Protection Agency: • Enviromapper • Enforcement And Compliance History Online (E C H O)	1 Mi.	**0**
State-Response Cleanup Sites	California Department Of Toxic Substances Control: • Envirostor	1 Mi.	**0**
Regional/Local Oversight	California State Water Resources Control Board: • Geotracker	0.5 Mi.	**3**
Voluntary Cleanup	California State Water Resources Control Board: • Geotracker	0.5 Mi.	**0**
Previously Regulated Sites			
Delisted N P L	U S Environmental Protection Agency: • Cleanups In My Community	0.5 Mi.	**0**
No Further Action	U S Environmental Protection Agency: • Cleanups In My Community	0.5 Mi.	**0**
Brownfields	U S Environmental Protection Agency: • Cleanups In My Community	0.5 Mi.	**2**

[1] EnviroMapper: https://www.epa.gov/emefdata/em4ef.home
Cleanups in My Community: https://www.epa.gov/cleanups/cleanups-my-community
Enforcement and Compliance History Online: https://echo.epa.gov
EnviroStor: http://www.envirostor.dtsc.ca.gov/public/
GeoTracker: http://geotracker.waterboards.ca.gov

Hazardous Waste Cleanup Site Findings

SITE NAME	SITE_TYPE	STATUS	ADDRESS
CORTEZ PROPERTY	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2055 ALUM ROCK AVENUE
MEXICAN HERITAGE GARDENS, LAGOW PROPERTY	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1794 ALUM ROCK AVENUE
SC FUELS (FORMERLY COAST OIL)	CLEANUP PROGRAM SITE	OPEN - VERIFICATION MONITORING	2075 ALUM ROCK AVE
1948 Alum Rock Ave	Brownfield	Assessed	1948 Alum Rock Ave
1932 SHORTRIDGE AVENUE	Brownfield	Assessed	1932 SHORTRIDGE AVENUE

MAP 1: HAZARDOUS WASTE CLEANUP SITES



Subject Property
0.1 mile
0.33 mile
0.5 mile
1.0 mile

Leaking Underground Fuel Tanks and Waste Management Activities[2]

Sites	Source	Search	Found
Leaking Underground Fuel Tanks (L U F T)	California State Water Resources Control Board: • Geotracker	0.5 Mi.	**21**
R C R A Treatment, Storage And Disposal Facilities (T S D)	U S Environmental Protection Agency: • Enforcement And Compliance History Online (E C H O)	0.5 Mi.	**0**
Solid Waste Sites (Landfills)	California Department Of Resources Recycling And Recovery: • Solid Waste Information System (S W I S)	0.5 Mi.	**0**

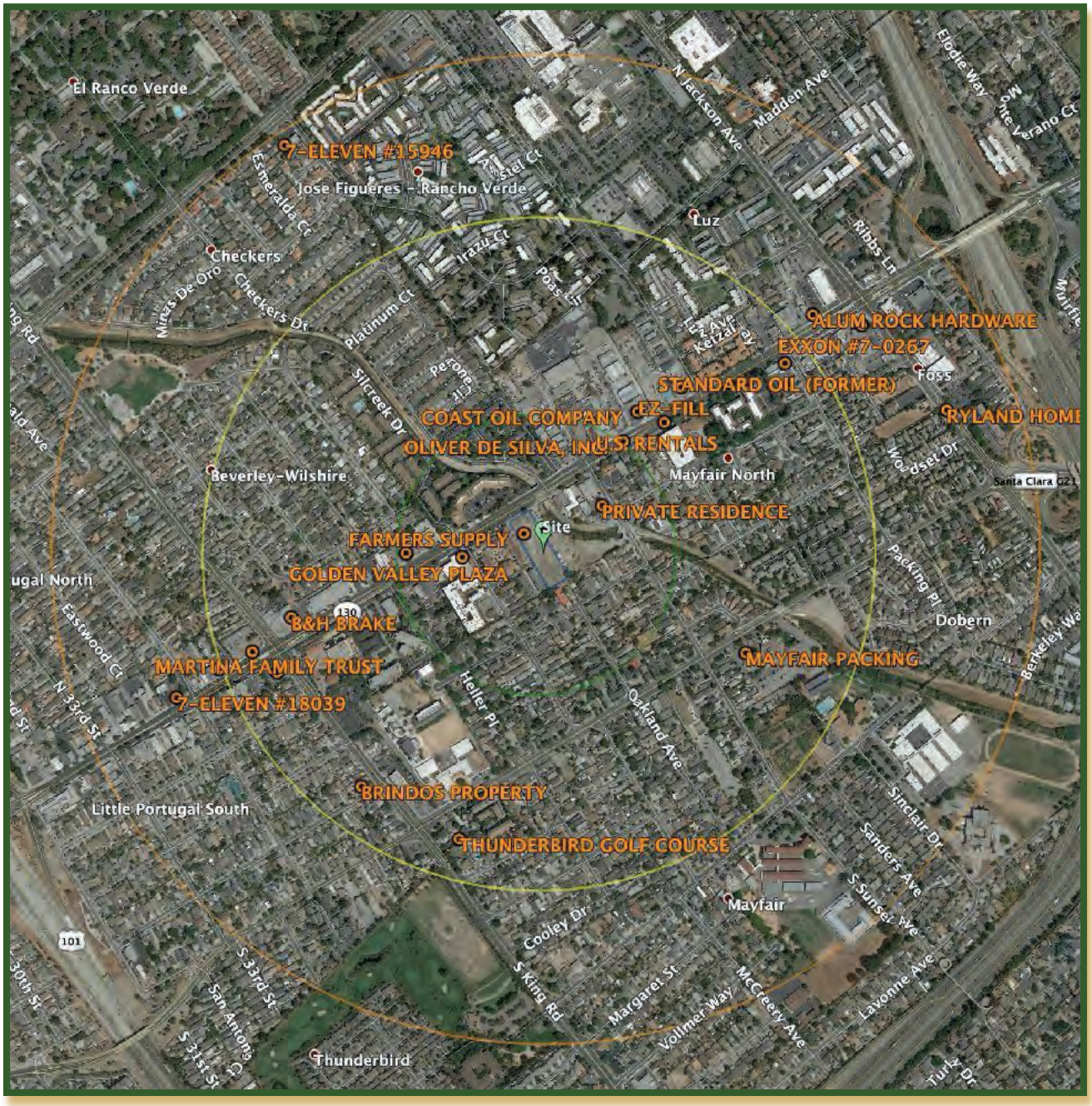
Leaking Underground Fuel Tanks and Waste Management Findings

SITE NAME	SITE_TYPE	STATUS	ADDRESS
FARMERS SUPPLY	LUST CLEANUP SITE	OPEN - ELIGIBLE FOR CLOSURE	1936 ALUM ROCK AVENUE
EZ-FILL	LUST CLEANUP SITE	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	2149 ALUM ROCK AVENUE
MARTINA FAMILY TRUST	LUST CLEANUP SITE	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	1694 ALUM ROCK AVENUE
7-ELEVEN #15946	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2044 MCKEE RD
7-ELEVEN #18039	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1639 ALUM ROCK AVE
ALUM ROCK HARDWARE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2243 ALUM ROCK AVE
ALUM ROCK TIRES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1898 ALUM ROCK AVE
B&H BRAKE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1737 ALUM ROCK AVE

[2] SWIS: http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx

SITE NAME	SITE_TYPE	STATUS	ADDRESS
BRINDOS PROPERTY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	147 S KING RD
COAST OIL COMPANY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2075 ALUM ROCK AVE
EXXON #7-0267	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2290 ALUM ROCK AVENUE
GOLDEN VALLEY PLAZA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1855 ALUM ROCK AVE.
MAYFAIR PACKING	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2000 SAN ANTONIO E/PRESERVATION DR
MONTES AUTO SALES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1665 ALUM ROCK AVE
OLIVER DE SILVA, INC.	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	12 N SUNSET AVE
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE
ROBO CAR WASH	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1695 ALUM ROCK AVE
RYLAND HOMES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	115 S JACKSON AVE
STANDARD OIL (FORMER)	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2230 ALUM ROCK AVENUE
THUNDERBIRD GOLF COURSE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	221 S KING RD
U.S. RENTALS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2101 ALUM ROCK AVENUE

MAP 2: LEAKING UNDERGROUND FUEL TANKS AND WASTE MANAGEMENT ACTIVITIES



Subject Property
0.1 mile
0.33 mile
0.5 mile

FUEL STORAGE, HAZARDOUS WASTE AND SPILLS[3]

Sites	Source	Search	Found
Registered Underground Storage Tanks	California State Water Resources Control Board: • Geotracker	Site And Adjacent	**0**
Historical Underground Storage Tanks	California State Water Resources Control Board: • Geotracker	Site And Adjacent	**0**
Hazardous Waste Generators (R C R A)	U S Environmental Protection Agency: • Enviromapper	Site And Adjacent	**0**
Waste Generator Manfiests	CA Department Of Toxic Substances Control: • Hazardous Waste Tracking System (H W T S)	Site	**0**
Oil And Gas Wells	California Division Of Oil, Gas And Geothermal Resources: • Well Finder	Site	**0**
Spills	U S Coast Guard: • National Response Center (Formerly The Emergency Response Notification System)	Site	**0**

Fuel Storage, Waste and Spills Findings

Site	Address	Source	Status
None			

[3] HWTS: http://hwts.dtsc.ca.gov/report_list.cfm
Well Finder: http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx
National Response Center (formerly the Emergency Response Notification System): http://www.nrc.uscg.mil (data dowloaded to local file for database search)

LIENS AND USE RESTRICTIONS

Sites	Source	Search	Found
Liens And Use Restrictions	U S Environmental Protection Agency: • Enviromapper	Site	**0**
	California State Water Resources Control Board: • Geotracker	Site	**0**

Liens and Use Restrictions

Site	Address	Source	Status
None			

MAP3: SITE AND ADJACENT PROPERTIES

FUEL STORAGE AND WASTE MANAGEMENT
LIENS AND USE RESTRICTIONS
ACCIDENTAL SPILLS AND RELEASES

Subject Property
0.1 mile

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Cortez Property (Global ID: T10000007360) 2055 Alum Rock Avenue SAN JOSE, CA 95116	Completed - Case Closed	11/9/1995		24	SAN FRANCISCO BAY RWQCB (REGION 2) *(LEAD)* - CASE ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISO*** *SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED
						0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			11/9/1995				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48107020

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Mexican Heritage Gardens, Lagow Property (Global ID: T10000007688) 1794 Alum Rock Avenue SAN JOSE, CA 95116	Completed - Case Closed	4/11/1997		23	SAN FRANCISCO BAY RWQCB (REGION 2) *(LE* *#: 43S0483* ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR:*** *NONE SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED
						0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			4/11/1997				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
No APN Found

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
SC Fuels (formerly Coast Oil) (Global ID: SL373241181) 2075 ALUM ROCK AVE SAN JOSE, CA 95116	Open - Verification Monitoring	11/17/2008	1/1/1990	30	SAN FRANCISCO BAY RWQCB (REGION 2) (L *#: 43S0703*

SITE HISTORY

SC Fuels (formerly Coast Oil Company, LLC) owns and operates a petroleum bulk storage facility, which is presently used to store diesel fuel, kerosene, antifreeze, lubricatin motor oil. The site has been a bulk storage/distribution facility for petroleum products since the early 1950's. The facility has more than 50 aboveground storage tanks with a capacity of over 900,000 gallons containing diesel fuel, kerosene, bulk oil, and petroleum solvents. During the operational history of this facility, a number of releases have o However, many releases have not been fully documented.

The Discharger has conducted investigations of soil and groundwater contamination since 1990 and interim remedial measures were implemented in 1993. An estimated 1,2 gallons of free product have been recovered and over 16.7 million gallons of water have been treated. Soil vapor extraction (SVE) was implemented in January 1995 in the o source area to reduce hydrocarbon concentrations in soil and prevent further leaching of hydrocarbons to groundwater. The SVE system was turned off in September 2002 influent concentrations of hydrocarbons had been steadily approaching zero. The SVE system has recovered over 110,000 pounds of hydrocarbons.

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
FREE PRODUCT REMOVAL	1/19/2004	12/8/2004		1,400 Gallons	Free product recovery system restarted. 1,200 to 1,600 gallons of free product estimated removed.
FREE PRODUCT REMOVAL	9/15/2002	7/31/2003			Free product recovery system operated.
SOIL VAPOR EXTRACTION (SVE)	1/1/1995	9/1/2002	Soil	110,000 Pounds	110000 pounds of hydrocarbons recovered.
PUMP & TREAT (P&T) GROUNDWATER	5/27/1993	9/15/2003	Water		

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD
Waste Oil / Motor / Hydraulic / Lubricating	Industrial	GW - Agricultural Supply, GW - Freshwater Replenishment, GW - Industrial Process Supply (PROC), GW - Industrial Service Water Supply (IND), GW - Municipal and Domestic Supply, SW - No Beneficial Use		1/1/1990	

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			6/28/2019	7/25/2019	7/25/2019		

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48107019

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
LD-3	10/25/2018	OTHER	ND	ND	ND	00 UG/L	ND
LD-5	10/15/2008	OTHER	ND	ND	ND	ND	ND
MW-10	10/15/2008	OTHER	ND	ND	ND	ND	ND
MW-11	5/24/2019	OTHER	ND	ND	ND	ND	ND
MW-13	5/24/2019	OTHER	2.3 UG/L	ND	ND	ND	ND
MW-14	5/24/2019	OTHER	ND	ND	ND	ND	ND
MW-15	5/24/2019	OTHER	ND	ND	ND	ND	ND
MW-16	10/25/2018	OTHER	ND	ND	ND	00 UG/L	ND
MW-17	10/15/2008	OTHER	ND	ND	ND	ND	ND
MW-18	5/24/2019	OTHER	ND	ND	ND	ND	ND
MW-2	5/24/2019	OTHER	ND	ND	ND	1.1 UG/L	ND
MW-3	10/30/2007		ND	ND	ND	ND	38 UG/L
MW-5	10/15/2008	OTHER	3.5 UG/L	ND	ND	1.2 UG/L	20 UG/L
SB-15	3/5/2018	OTHER	0.77 UG/L	ND	ND	ND	ND
US-1	10/15/2008	OTHER	1.5 UG/L	0.42 UG/L	ND	1.3 UG/L	6.4 UG/L

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
S2-1	3/5/2018		ND	ND	ND	ND	ND
S2-2	3/5/2018		ND	ND	ND	ND	ND
S2-3	3/5/2018		ND	ND	ND	ND	ND
S2-4	3/5/2018		ND	ND	ND	ND	ND
S2-5	3/5/2018		ND	ND	21 UG/KG	ND	ND

S2-6	3/5/2018	ND	ND	ND	ND	ND
S2-7	3/5/2018	ND	ND	660 UG/KG	4400 UG/KG	ND
S2-8	3/5/2018	11 UG/KG	ND	13 UG/KG	91 UG/KG	ND
S2-9	3/5/2018	ND	ND	1600 UG/KG	4500 UG/KG	ND
SPOIL PILE	3/5/2018	ND	ND	ND	ND	ND

MOST RECENT GEO_WELL DATA VIEW ESI S

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
MW-1	10/5/2016		N	
MW-10	5/24/2019	8.97	U	
MW-11	5/24/2019	8.72	N	
MW-13	5/24/2019	7.6	N	
MW-14	5/24/2019	8.56	N	
MW-15	5/24/2019	12.32	N	
MW-16	5/24/2019	11.91	U	
MW-17	10/5/2016		N	
MW-18	5/24/2019	12.26	N	
MW-2	5/24/2019	9.07	N	
MW-3	10/30/2007	12.36	Y	
MW-4	10/5/2016		N	
MW-5	10/5/2016		N	
MW-7	10/5/2016		N	
MW-8	10/5/2016		N	

United States Environmental Protection Agency

Cleanups >> Cleanups in My Community

Search EPA.gov

Brownfields Property Progress Profile

More D

1948 ALUM ROCK AVENUE
Property ID: 103242
Other Names for this Site

- Facility Informa System)
- Other Names fo
- Brownfields Gra

This profile provides a summary of the accomplishments reported to the US EPA by a Brownfields grant recipient or Targeted Brownfields Assessment Contractor at this Brownfields property.

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Property Location

Assessment & Cleanup Activities and Progress Summary

This property has been assessed.

View Summary of the Property Progress>>

View Assessment

Assessment & Cleanup Results and Impact Summary

Each property is assessed to determine if any contaminants are found.

If the property is under an assessment grant from EPA, information on this assessment is reported to EPA.

If the Brownfields grantee has provided information to EPA about the media affected or the contaminants found, you'll find that information below.

View Media and Contaminants Reported>>

EPA Region 09 implements the Brownfields program for the state in which this property is located.

Assessment Activities >>

View Cleanup Activities>

View

If the property is contaminated and is being cleaned up under a cleanup grant from EPA, information on the cleanup may be reported to EPA.

View Media Addressed and

United States Environmental Protection Agency

Cleanups >> Cleanups in My Community

Search EPA.gov

Brownfields Property Progress Profile

More D

1932 SHORTRIDGE AVENUE
Property ID: 103161
Other Names for this Site

- Facility Informa System)
- Other Names fo
- Brownfields Gra

This profile provides a summary of the accomplishments reported to the US EPA by a Brownfields grant recipient or Targeted Brownfields Assessment Contractor at this Brownfields property.

Legal Notices

USE THIS LINK TO SHARE! Because your browser window probably doesn't show the site ID in the web address, copy won't work. Be sure to use the following link to share this page:

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Property Location

Assessment & Cleanup Activities and Progress Summary

This property has been assessed.

View Summary of the Property Progress>>

View Assessment

Assessment & Cleanup Results and Impact Summary

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If the property is under an assessment grant from EPA, information on this assessment is reported to EPA.

If the Brownfields grantee has provided information to EPA about the media affected or the contaminants found, you'll find that information below.

View Media and Contaminants Reported>>

EPA Region 09 implements the Brownfields program for the state in which this property is located.

Assessment Activities >>

View Cleanup Activities>

View

If the property is contaminated and is being cleaned up under a cleanup grant from EPA, information on the cleanup may be reported to EPA.

View Media Addressed and

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
7-Eleven #15946 (Global ID: T0608500076) 2044 McKee Rd SAN JOSE, CA 95116	Completed - Case Closed	6/28/2000	6/18/1985	34	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR:*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR:*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 06S1E3*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTIO
SOIL VAPOR EXTRACTION (SVE)	1/8/1991	2/24/1993			

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline		SW - Municipal and Domestic Supply		6/18/1985		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			5/5/2004	4/3/2017			

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48159001

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
7-Eleven #18039 (Global ID: T0608501350) 1639 Alum Rock Ave SAN JOSE, CA 95116	Completed - Case Closed	3/11/1999	3/20/1992	28	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR:*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR:*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E0*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	3/19/1992	3/11/1999			

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline		SW - Municipal and Domestic Supply		3/20/1992		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			3/11/1999	10/11/2018			

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48113127

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Alum Rock Hardware (Global ID: T0608500129) 2243 Alum Rock Ave SAN JOSE, CA 95116	Completed - Case Closed	1/20/2000	6/12/1987	32	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISO*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	12/10/1994	1/20/2000			

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline		SW - Municipal and Domestic Supply		6/12/1987		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			9/5/2001				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO V
JACKSON WELL 02 - INACTIVE	4310011-057	Active Raw	G	102	668 fe

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48106019

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Alum Rock Tires (Global ID: T0608568517) 1898 Alum Rock Ave SAN JOSE, CA 95116	Completed - Case Closed	12/29/1995	1/1/1992	28	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR:*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR:*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E0*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline		SW - Municipal and Domestic Supply		1/1/1992		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			12/29/1995				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
48118068	Santa Clara Valley - Santa Clara (2-009.02)	Santa Clara - Coyote Creek (205.30)

COUNTY

Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
B&H Brake (Global ID: T0608595480) 1737 Alum Rock Ave SAN JOSE, CA 95116	Completed - Case Closed	6/27/1996	1/1/1991	29	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR:*** *JE KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR:*** *N SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E03E*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
		SW - Municipal and Domestic Supply		1/1/1991		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			6/27/1996				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48109036

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Brindos Property (Global ID: T0608507309) 147 S King Rd SAN JOSE, CA 95116	Completed - Case Closed	12/16/1993	1/1/1991	29	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
		SW - Municipal and Domestic Supply		1/1/1991		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			12/16/1993				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48116046

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
COAST OIL COMPANY (Global ID: T0608500438) 2075 ALUM ROCK AVE SAN JOSE, CA 95116	Completed - Case Closed	6/12/1997	5/2/1989	31	SAN FRANCISCO BAY RWQCB (REGION 2) *(LEAD)* - *CASE* ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISO*** *SPECIFIED* ***CASEWORKER:*** *ADRIANA CONSTANTINESCU* - ***SU*** *DAVID ELIAS* SANTA CLARA COUNTY LOP ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISO*** *JENNIFER KAAHAAINA* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 43-03*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED
Gasoline			Tank	5/2/1989		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			2/27/2002				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO V
JACKSON WELL 02 - INACTIVE	4310011-057	Active Raw	G	102	1464 fe

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48107019

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
EXXON #7-0267 (Global ID: T0608501887) 2290 ALUM ROCK AVENUE SAN JOSE, CA 95116	Completed - Case Closed	9/20/2005	5/12/1995	25	SANTA CLARA COUNTY LOP *(LEAD)* - *CASE #: 07S1E03A* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISC*** *SPECIFIED*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	1/1/1997	1/1/1998			

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline	Commercial	GW - Municipal and Domestic Supply		5/12/1995		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			9/19/2005	9/20/2005	5/18/2005		4/29/2004

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO V
JACKSON WELL 02 - INACTIVE	4310011-057	Active Raw	G	102	477 fe

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48122049

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
MW1	3/29/2005	ND	ND	ND	ND	ND	1.4 UG/L	
MW3	3/29/2005	69.4 UG/L	ND	ND	ND	ND	67.4 UG/L	
MW4	3/29/2005	ND	ND	ND	ND	0.8 UG/L	8.4 UG/L	
MW5	3/29/2005	65.5 UG/L	ND	ND	ND	ND	15.9 UG/L	
MW6	3/29/2005	ND	ND	ND	ND	ND	ND	
MW7	3/29/2005	ND	ND	ND	ND	ND	0.6 UG/L	
MW8	3/29/2005	ND	ND	ND	ND	ND	1.3 UG/L	
MW91S	3/29/2005	53.4 UG/L	ND	ND	ND	ND	48.8 UG/L	71.1
MW94M	3/29/2005	ND	ND	ND	ND	ND	16.6 UG/L	349
MW97D	3/29/2005	ND	ND	ND	ND	ND	0.7 UG/L	18.5

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
MW1	3/29/2005	16.21	N	
MW3	3/29/2005	16.88	N	
MW4	3/29/2005	16.5	N	
MW5	3/29/2005	16.16	N	
MW6	3/29/2005	17.45	N	
MW7	3/29/2005	15.68	N	
MW8	3/29/2005	18.06	N	
MW91S	3/29/2005			
MW94M	3/29/2005			
MW97D	3/29/2005			

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
EZ-FILL (Global ID: T0608500593) 2149 ALUM ROCK Avenue SAN JOSE, CA 95116	Open - Assessment & Interim Remedial Action	1/29/2018	7/18/1990	29	SANTA CLARA COUNTY LOP *(LEAD)* - *CASE #: 07S1E* ***CASEWORKER:*** *TRAVIS L. FLORA* - ***SUPERVISC*** *JENNIFER KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #:* ***CASEWORKER:*** *Regional Water Board* - ***SUPERV*** *NONE SPECIFIED*

SITE HISTORY

1990

Four Underground Storage Tanks (USTs) were removed. It was reported that all of the USTs were corroded and free product was visible in soil and groundwater beneath the excavation. The USTs consisted of the following:

- One 10,000 gallon UST;
- One 8,000 gallon unleaded gasoline UST;
- One 6,000 gallon regular gasoline UST; and
- One 550 gallon waste oil UST.

Numerous on and off-site soil and groundwater investigations have been conducted at the site. 26 groundwater monitoring wells (MW-1 through MW-26 and three extractio (COEX-1 through COEX-3).

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	6/7/1990	9/9/9999			

RISK INFORMATION

VIEW LTCP CHECKLIST | VIEW PATH TO CLOSURE PLAN | VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMP. WELLS
Gasoline	Commercial	GW - Municipal and Domestic Supply	Tank	7/18/1990	Close and Remove Tank	0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT C REQUES
YES	NO	Santa Clara Valley Water District (Geotracker July 8, 2013)	10/17/2019	9/27/2019	9/26/2019		

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO V
JACKSON WELL 02 - INACTIVE	4310011-057	Active Raw	G	102	1205 fe

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48107017

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
COEX-1	7/31/2019	OTHER	1800 UG/L	8.5 UG/L	19 UG/L	OTHER	ND	
COEX-2	7/30/2019	OTHER	11000 UG/L	450 UG/L	470 UG/L	OTHER	120 UG/L	
COEX-3	7/30/2019	OTHER	10000 UG/L	660 UG/L	720 UG/L	OTHER	340 UG/L	
CPT-1	2/20/2014	OTHER	110 UG/L	290 UG/L	15 UG/L	OTHER	7.3 UG/L	
CPT-2	2/20/2014	OTHER	150 UG/L	160 UG/L	3500 UG/L	OTHER	1.5 UG/L	
CPT-3	2/21/2014	OTHER	13000 UG/L	16000 UG/L	3100 UG/L	OTHER	310 UG/L	
CPT-3A	1/30/2015	OTHER	370 UG/L	100 UG/L	870 UG/L	OTHER	3.1 UG/L	
CPT-4	2/20/2014	OTHER	20000 UG/L	2900 UG/L	12000 UG/L	OTHER	ND	
CPT-5	1/29/2015	OTHER	17 UG/L	2 UG/L	46 UG/L	OTHER	ND	
CPT-6	2/9/2016	OTHER	35 UG/L	23 UG/L	17 UG/L	OTHER	1.6 UG/L	
CPT-7	2/10/2016	OTHER	460 UG/L	450 UG/L	940 UG/L	OTHER	ND	
CPT-8	2/11/2016	OTHER	5800 UG/L	17 UG/L	9.4 UG/L	OTHER	ND	
MW-1	7/30/2019	OTHER	1100 UG/L	86 UG/L	130 UG/L	OTHER	ND	
MW-10	12/18/2003		3300 UG/L	540 UG/L	1900 UG/L	1900 UG/L	ND	
MW-10R	7/30/2019	OTHER	1.5 UG/L	2.1 UG/L	18 UG/L	OTHER	3 UG/L	
MW-11	12/18/2003		ND	ND	ND	ND	7.3 UG/L	
MW-11R	11/29/2017	OTHER	ND	ND	ND	OTHER	ND	
MW-12	11/29/2017	OTHER	ND	ND	ND	OTHER	ND	
MW-13	2/22/2017	OTHER	ND	ND	ND	OTHER	ND	
MW-14	2/22/2017	OTHER	ND	ND	ND	OTHER	ND	
MW-15	7/30/2019	OTHER	16000 UG/L	3900 UG/L	2100 UG/L	OTHER	64 UG/L	
MW-16	7/30/2019	OTHER	6900 UG/L	1300 UG/L	950 UG/L	OTHER	ND	
MW-17	7/31/2019	OTHER	8100 UG/L	3300 UG/L	2000 UG/L	OTHER	ND	

MW-18	7/31/2019	OTHER	2700 UG/L	2800 UG/L	640 UG/L	OTHER	ND	
MW-19	7/30/2019	OTHER	13000 UG/L	1500 UG/L	970 UG/L	OTHER	100 UG/L	
MW-2	7/30/2019	OTHER	31 UG/L	1 UG/L	64 UG/L	OTHER	ND	
MW-20	7/30/2019	OTHER	12000 UG/L	1600 UG/L	1800 UG/L	OTHER	ND	
MW-21	7/31/2019	OTHER	9900 UG/L	650 UG/L	1000 UG/L	OTHER	ND	
MW-22	7/30/2019	OTHER	5900 UG/L	780 UG/L	1300 UG/L	OTHER	ND	
MW-22R	8/1/2012	OTHER	6900 UG/L	2700 UG/L	2000 UG/L	OTHER	ND	
MW-23	7/30/2019	OTHER	960 UG/L	35 UG/L	270 UG/L	OTHER	ND	
MW-23B	7/30/2019	OTHER	ND	ND	ND	OTHER	ND	
MW-24	7/31/2019	OTHER	13000 UG/L	8100 UG/L	1900 UG/L	OTHER	ND	
MW-24B	7/30/2019	OTHER	9.2 UG/L	4.4 UG/L	3.4 UG/L	OTHER	1.2 UG/L	
MW-3	11/29/2017	OTHER	ND	ND	ND	OTHER	1.2 UG/L	
MW-4	7/30/2019	OTHER	85 UG/L	0.89 UG/L	0.72 UG/L	OTHER	6.1 UG/L	
MW-5	7/30/2019	OTHER	800 UG/L	160 UG/L	320 UG/L	OTHER	ND	
MW-6	12/18/2003		6.6 UG/L	ND	ND	ND	2.1 UG/L	1
MW-6R	11/29/2017	OTHER	ND	ND	ND	OTHER	ND	
MW-7	12/18/2003		21 UG/L	15 UG/L	150 UG/L	120 UG/L	ND	
MW-7R	11/29/2017	OTHER	ND	ND	1.2 UG/L	OTHER	ND	
MW-8	11/29/2017	OTHER	ND	ND	ND	OTHER	ND	
MW-9	11/29/2017	OTHER	ND	ND	ND	OTHER	ND	
SB-1	7/24/2018	OTHER	ND	ND	ND	OTHER		
SB-10-W	2/5/2004		ND	ND	ND	ND	ND	
SB-11-W	2/5/2004		150 UG/L	ND	69 UG/L	ND	42 UG/L	
SB-2	7/24/2018	OTHER	ND	ND	ND	OTHER		
SB-3	7/24/2018	OTHER	ND	ND	ND	OTHER		
SB-4	5/22/2007		ND	0.84 UG/L	ND	0.72 UG/L	ND	

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
CPT-1	2/20/2014		ND	ND	ND		
CPT-2	2/20/2014		ND	ND	ND		
CPT-3	2/20/2014		62 UG/KG	ND	ND		
CPT-4	2/20/2014		240 UG/KG	ND	21 UG/KG		
MW-10	9/18/2002		ND	ND	6400 UG/KG	6000 UG/KG	ND
MW-10R	6/28/2012		450 UG/KG	1600 UG/KG	10000 UG/KG		ND
MW-11	9/18/2002		ND	ND	ND	ND	ND
MW-11R	6/27/2012		ND	ND	ND		ND
MW-22	6/27/2012		3400 UG/KG	2500 UG/KG	6200 UG/KG		ND
MW-6R	6/28/2012		ND	ND	ND		ND
SB-1	7/24/2018		ND	ND	ND		
SB-11-11.5	2/5/2004		ND	ND	ND	ND	ND
SB-2	7/24/2018		ND	ND	ND		
SB-3	7/24/2018		ND	ND	ND		
SB-4	5/22/2007		ND	ND	ND	ND	ND
SV-1	6/15/2012		ND	ND	ND		ND
SV-2	6/15/2012		ND	ND	ND		ND
SV-3	6/15/2012		ND	ND	ND		ND
SV-5	7/13/2018		ND	ND	ND		
SV-6	7/13/2018		ND	ND	ND		

MOST RECENT GEO_WELL DATA

VIEW ESI S

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
COEX-1	7/30/2019	12	N	
MW-1	7/30/2019	12.2	N	
MW-10	12/18/2003	12.69	U	
MW-10R	7/30/2019	11.04	N	
MW-11	12/18/2003	12.74	U	
MW-11R	7/30/2019		U	
MW-12	7/30/2019	12.13	N	
MW-13	7/30/2019	12.02	N	
MW-14	7/30/2019		U	
MW-15	7/30/2019	11.53	N	
MW-16	7/30/2019	10.92	N	
MW-17	7/30/2019	9.76	N	
MW-18	7/30/2019	10.15	N	
MW-19	7/30/2019	11.83	N	
MW-2	7/30/2019	11.21	N	
MW-20	7/30/2019	11.8	N	
MW-21	7/30/2019	11.27	N	
MW-22	7/30/2019	11.66	N	
MW-23	7/30/2019	11.31	N	
MW-23B	7/30/2019	12.06	N	
MW-24	7/30/2019	12.03	Y	11.91
MW-24B	7/30/2019	12.41	N	
MW-3	7/30/2019	11.14	N	
MW-4	7/30/2019	10.79	N	
MW-5	7/30/2019	10.81	N	
MW-6	12/18/2003	12.86	U	
MW-6R	7/30/2019	11.9	N	
MW-7	12/18/2003	12.63	U	

MW-7R	7/30/2019	10.23	N
MW-8	7/30/2019	11.31	N
MW-9	7/30/2019	11.1	N

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Farmers Supply (Global ID: T10000001657) 1936 Alum Rock Avenue SAN JOSE, CA 95116	Open - Eligible for Closure	11/27/2019	3/10/2006	14	SANTA CLARA COUNTY LOP *(LEAD)* - *CASE #: 07S1E03F* ***CASEWORKER:*** *TRAVIS L. FLORA* - ***SUPERVISOR:*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 14-* ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISC*** *SPECIFIED*

SITE HISTORY

One UST was removed on 4.12.1985 . Three monitoring wells were developed on 6.21.07. Groundwater was sampled on 8/13/07 and 8/17/09. Groundwater samples collect three monitoring wells during the third quarter of 2009 were reported to have up to 87,000 parts per billion (ppb) TPHg, and 14,000 ppb benzene. MTBE was reported below detection limit; however, the detection limit was as high as 1,100 ppb. Additional site assessment, wells survey and quarterly groundwater monitoring has been requested to performed.

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION

VIEW LTCP CHECKLIST | VIEW PATH TO CLOSURE PLAN | VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEA IMPACTE
Benzene, Toluene, Xylene, MTBE / TBA / Other Fuel Oxygenates, Gasoline	Commercial	GW - Groundwater Recharge, GW - Municipal and Domestic Supply	Other	3/10/2006	Close and Remove Tank	

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CL REQUEST
NO	NO	Santa Clara Valley Water District	11/27/2019	8/22/2019	4/23/2018		4/23/2018

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48119003

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
MW-1	4/11/2018	1070 UG/L	5.5 UG/L	ND	2.1 UG/L	OTHER	ND
MW-2	4/11/2018	661 UG/L	10 UG/L	1.6 UG/L	4.8 UG/L	OTHER	ND
MW-3	4/11/2018	20600 UG/L	3500 UG/L	360 UG/L	2800 UG/L	OTHER	ND
MW-4	4/11/2018	57200 UG/L	1400 UG/L	11000 UG/L	3200 UG/L	OTHER	ND
MW-5	4/11/2018	7600 UG/L	660 UG/L	1800 UG/L	340 UG/L	OTHER	ND
MW-6	4/11/2018	ND	ND	ND	ND	OTHER	ND
MW-7	4/11/2018	ND	ND	ND	ND	OTHER	ND
MW-8	4/11/2018	ND	ND	ND	ND	OTHER	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
DP-11	2/9/2013		ND		ND		
SG-1	2/9/2013		ND	ND	ND	ND	ND
SG-2	2/9/2013		ND	ND	ND	ND	ND

MOST RECENT GEO_WELL DATA

VIEW ESI S

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
MW-1	4/11/2018	6.04	N	
MW-2	4/11/2018	5.63	N	
MW-3	4/11/2018	6.42	N	
MW-4	4/11/2018	6.44	N	
MW-5	4/11/2018	6.16	N	
MW-6	4/11/2018	8.07	N	
MW-7	4/11/2018	5.11	N	
MW-8	4/11/2018	6.48	N	

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
GOLDEN VALLEY PLAZA (Global ID: T0608500850) 1855 ALUM ROCK AVE. SAN JOSE, CA 95116	Completed - Case Closed	10/27/2016	9/8/1992	27	SANTA CLARA COUNTY LOP *(LEAD)* - *CASE #: 07S1* SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #* ***CASEWORKER:*** *Regional Water Board* - ***SUPER*** *NONE SPECIFIED*

SITE HISTORY

The Site is currently occupied by medical offices with a paved parking lot. In August 1992, two 500 gallon underground storage tanks (UST) were removed from the site. Sub contamination was observed and reported during the UST removals and the fuel leak investigation case was opened in September 1992. Contaminants detected in soil and groundwater include TPHg (gasoline), TPHmo (motor oil), TPHk (kerosene), Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), and Methyl tert Butyl Ether (MtBE).

Several rounds of site investigation have adequately defined the nature and extent of contamination which is confined to the property boundaries. Soil excavation was used remediate subsurface contamination in the immediate vicinity of the former source.

Three monitoring wells have been installed to monitor groundwater contamination since the case was opened. Routine groundwater monitoring has occurred from 1993 to J The depth to groundwater beneath the site has varied between approximately 4 to 11 feet below grade.

Groundwater samples were last collected in July 2015 from the monitoring wells at the site. At that time, the following maximum concentrations were reported:

Contaminant Concentration (parts per billion) Well No.

TPHg (gasoline) 870 MW-1

TPHmo (motor oil) <500 MW-1

TPHk (kerosene) <340 MW-1

Benzene ND All wells

Toluene ND All wells

Ethylbenzene 0.36 MW-1

Xylenes ND All wells

MtBE ND All wells

*ND = Not detected above laboratory detection limits

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	8/11/1992	9/9/9999			

RISK INFORMATION

VIEW LTCP CHECKLIST | VIEW PATH TO CLOSURE PLAN | VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEA IMPACT
Benzene, Diesel, Ethylbenzene, Gasoline, Kerosene, Toluene, Waste Oil / Motor / Hydraulic / Lubricating, Xylene	Commercial	GW - Municipal and Domestic Supply	Other	9/8/1992	Close and Remove Tank	

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CL REQUEST
NO	NO	Santa Clara Valley Water District	10/27/2016	10/17/2016	2/1/2015		12/3/2015

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN

GW BASIN NAME

Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME

Santa Clara - Coyote Creek (205.30)

COUNTY

Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
MW-1	12/19/2014	OTHER	ND	ND	4 UG/L	39 UG/L	ND
MW-2	12/19/2014	OTHER	4.4 UG/L	2 UG/L	2.6 UG/L	4.7 UG/L	ND
MW-3	12/19/2014	OTHER	0.38 UG/L	ND	ND	ND	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
T1-1	6/10/2014		ND	ND	ND	ND	

MOST RECENT GEO_WELL DATA

VIEW ESI S

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
MW-1	12/19/2014	5.02	N	
MW-2	12/19/2014	5.02	N	
MW-3	12/19/2014	6.2	N	

County of Santa Clara
Department of Environmental Health

Hazardous Materials Compliance Division
Site Mitigation Program
1555 Berger Drive, Suite 300
San Jose, CA 95112-2716
(408) 918-3400 FAX (408) 280-6479

November 27, 2019

1936 Alum Rock Avenue LLC
c/o Pacific Companies
430 E State Street #100
Eagle, ID 83616-5901
via Mr. Darren Berberian (Darren@goldenwestcommunities.com)

Mr. David Mijares
Farmer's Supply, Inc.
P.O. Box 7865
San Jose, CA 95150

Subject: Fuel Leak Investigation Proposed Case Closure
Farmer's Supply, 1936 Alum Rock Avenue, San Jose, CA
Case No. 07S1E03F03f

Dear Responsible Parties:

As required by the State Water Resources Control Board's Resolution #2012-0016, this case has been reviewed against the Low-Threat Underground Storage Tank (UST) Case Closure Policy (LTCP) and it has been determined to meet the criteria for case closure based on the information submitted to our office by your consultant. This letter is to notify you that the DEH is notifying all potentially affected parties in accordance with the LTCP. Public comments shall be accepted for 60 days. After the public comment period has closed, the DEH shall determine whether to proceed with closure of your site or if additional information will be required to address substantive public comments.

In accordance with the DEH's Public Participation Plan, enclosed you will find a copy of the letter and distribution list mailed to all potentially affected parties. If you have any questions or know of other potentially affected parties, please contact me at (408) 918-3486 or by email.

Sincerely,

Digitally signed by
Travis L. Flora
Date: 2019.11.27
10:20:33 -08'00'

Travis L. Flora
Hazardous Materials Specialist II
Local Oversight Program
travis.flora@cep.sccgov.org

Attachments: Closure Public Participation Letter
Distribution List

cc: Rich Ryan, Ryan GES (rich@ryanges.com)
File – GeoTracker

County of Santa Clara
Department of Environmental Health

Hazardous Materials Compliance Division
Site Mitigation Program
1555 Berger Drive, Suite 300
San Jose, CA 95112-2716
(408) 918-3400 FAX (408) 280-6479

November 27, 2019

NOTICE OF OPPORTUNITY FOR PUBLIC COMMENT

IDENTICAL LETTER SENT TO ATTACHED LIST OF ADDRESSES

Subject: Fuel Leak Investigation Proposed Case Closure
Farmer's Supply, 1936 Alum Rock Avenue, San Jose, CA
Case No. 07S1E03F03f

Dear Interested Parties:

On May 1, 2012 the State Water Resources Control Board (SWRCB) adopted Resolution #2012-0016 which established the Low-Threat Underground Storage Tank (UST) Case Closure Policy (LTCP). The LTCP became effective on August 17, 2012. The LTCP was created to establish statewide guidelines for closure of UST release sites that pose a low threat. The LTCP requires oversight agencies to review all cases for potential case closure under the LTCP and close all cases that are determined to be eligible.

Site conditions must satisfy LTCP requirements, including: general requirements; groundwater criteria; petroleum vapor intrusion to indoor air criteria; and direct contact and outdoor air exposure criteria. The general requirements include but are not limited to: the site must be provided water by a public water system; the release consists only of petroleum; the extent of contamination has been defined; and the release does not pose a nuisance as defined by Water Code section 13050.

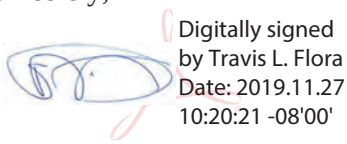
As required by the Resolution, this case has been reviewed against LTCP criteria, and it has been determined to satisfy the criteria for case closure based on the information submitted to our office by the Responsible Party. The DEH has not identified any unique criteria at this site that would make it ineligible for case closure under the SWRCB's LTCP. Therefore, County of Santa Clara Department of Environmental Health (DEH) staff is preparing to close the above-referenced fuel leak investigation case. In accordance with the DEH's Public Participation Plan, you are being notified that a 60-day public comment period has been opened. The DEH will accept written comments regarding the proposed case closure during this period.

The case file for this site, including the full analysis of this site compared to the LTCP is on the SWRCB's GeoTracker website on-line at http://geotracker.waterboards.ca.gov. Search for site address 1936 Alum Rock Avenue, San Jose, CA, or search for the "Global ID Number" T10000001657.

We invite any interested parties to comment on the proposed case closure. All comments must be made in writing to the DEH and received by **January 31, 2020**.

If you have any questions, please contact me at (408) 918-3486 or via email.

Sincerely,



Travis L. Flora
Hazardous Materials Specialist II
Local Oversight Program
travis.flora@cep.sccgov.org

Attachments: Distribution List

cc: Rich Ryan, Ryan GES (rich@ryanges.com)
File – GeoTracker

Links to resources:
State Water Resources Control Board's Low-Threat Underground Storage Tank Case Closure Policy
http://www.waterboards.ca.gov/water_issues/programs/ust/lt_cls_plcy.shtml

Water Code Section 13050 – Definition of Nuisance
http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=1859051591+0+0+0&WAISaction=retrieve

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER

Tools Reports UST Case Closures Information

FARMERS SUPPLY (T10000001657) - (MAP)

SIGN UP FOR EMAIL ALERTS

1936 ALUM ROCK AVENUE
SAN JOSE, CA 95116
SANTA CLARA COUNTY
LUST CLEANUP SITE (INFO)
PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGENCIES
SANTA CLARA COUNTY LOP *(LEAD)* - *CASE #: 07S1E03F03f*
CASEWORKER: TRAVIS L. FLORA
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 14-799*
CASEWORKER: Regional Water Board

CUF Claim #:	19660
CUF Priority Assigned:	B
CUF Amount Paid:	$167,707

LTCP CHECKLIST AS OF 11/27/2019

VIEW PATH TO CLOSURE PLAN BACK TO CASE SUMMARY

General Criteria - *The site satisfies the policy general criteria* — **YES**

a. Is the unauthorized release located within the service area of a public water system? **Name of Water System : Santa Clara Valley Water District**	**YES**
b. The unauthorized release consists only of petroleum (info).	**YES**
c. The unauthorized (primary) release from the UST system has been stopped.	**YES**
d. Free product has been removed to the maximum extent practicable (info).	**YES**
e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed (info).	**YES**
f. Secondary source has been removed to the extent practicable (info).	**YES**
g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15.	**YES**
h. Does a nuisance exist, as defined by Water Code section 13050.	**NO**

1. Media-Specific Criteria: Groundwater - *The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below.* — **YES**

EXCEPTION - Soil Only Case (Release has not Affected Groundwater - Info)	**NO**
Does the site meet any of the Groundwater specific criteria scenarios?	**YES**
1.5 - The regulatory agency determines, based on an analysis of site specific conditions, that the site under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame.	YES

2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - *The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c* — **YES**

EXCEPTION - Active Commercial Petroleum Fueling Facility	**NO**
Does the site meet any of the Petroleum Vapor Intrusion to Indoor Air specific criteria scenarios?	**YES**
2a - Scenario 4 (example): Direct Measurement of Soil Gas Concentrations	**YES**
i. Soil Gas Sampling Locations No Bioattenuation Zone: - Beneath or adjacent to an existing building: Soil gas sample is collected at least 5 feet below the bottom of the building foundation. - Future construction: The soil gas sample shall be collected from at least 5 feet below the ground surface (bgs).	
ii. Soil Gas Sampling Locations with Bioattenuation Zone: The criteria in Column A in the Soil Gas Criteria table (page 5 of the Policy) apply if the following requirements for a bioattenuation zone are satisfied:	**YES**

- Minimum of 5 feet of soil between the soil vapor measurement and the foundation of an existing or ground surface of future construction.	YES
- TPH (TPHg + TPHd) is <100 mg/kg (measured in at least two depths within the 5-ft zone)	YES
- Oxygen is ≥ 4% measured at the bottom of the 5-ft zone.	YES

3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - *The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below.*	**YES**
EXCEPTION - The upper 10 feet of soil is free of petroleum contamination	**NO**
Does the site meet any of the Direct Contact and Outdoor Air Exposure criteria scenarios?	**YES**
3(a) - Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in the following table (LINK) for the specified depth below ground surface.	YES

Additional Information

This case should be kept OPEN in spite of meeting policy criteria.

Explanation: YES
Pending public comment period.

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER

Tools Reports UST Case Closures Information

FARMERS SUPPLY (T10000001657) - (MAP)

SIGN UP FOR EMAIL ALERTS

1936 ALUM ROCK AVENUE
SAN JOSE, CA 95116
SANTA CLARA COUNTY
LUST CLEANUP SITE (INFO)
PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGENCIES
SANTA CLARA COUNTY LOP *(LEAD)* - *CASE #: 07S1E03F03f*
CASEWORKER: TRAVIS L. FLORA
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 14-799*
CASEWORKER: Regional Water Board

CUF Claim #:	**19660**
CUF Priority Assigned:	B
CUF Amount Paid:	$167,707

PATH TO CLOSURE PLAN FY 12/13 AS OF 11/27/2019

BACK TO LTCP CHECKLIST

IMPEDIMENT 1:

General Criteria D: Free product has NOT been removed to the maximum extent practicable

Step to Resolve Impediment 1 - Step 1:
FP observed in MW-4. Attempted removal via absorptive sock. Need additional groundwater sampling to confirm status of FP.

COMPLETION DATE	
PROJECTED DATE	**ACTUAL DATE**
7/30/2018	4/23/2018

IMPEDIMENT 2:

General Criteria F: Secondary source has NOT been removed to the extent practicable

Step to Resolve Impediment 2 - Step 1:
Due to pending redevelopment with school and residential, additional remediation is currently occurring to reduce dissolved concentrations, which could pose a potential GW to VI risk.

COMPLETION DATE	
PROJECTED DATE	**ACTUAL DATE**
6/30/2019	8/30/2019

IMPEDIMENT 3:

Media-Specific Criteria: Groundwater: The contaminant plume that exceeds water quality objectives is NOT stable or decreasing in areal extent, and does NOT meet all of the additional characteristics of one of the five classes of sites.

Step to Resolve Impediment 3 - Step 1:
FP observed in MW-4. Attempted removal via absorptive sock. Limited GW samples collected from perimeter wells. Need additional groundwater sampling to confirm status of FP and plume stability.

COMPLETION DATE	
PROJECTED DATE	**ACTUAL DATE**
7/30/2018	4/23/2018

IMPEDIMENT 4:

Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air: The site is NOT considered low-threat for the

vapor-intrusion-to-air pathway and site-specific conditions do NOT satisfy items 2a, 2b, or 2c .

Step to Resolve Impediment 4 - Step 1:
Site planned for redevelopment as a school, and soil vapor assessment indicates concentrations of benzene (or LRLs) in groundwater and soil vapor exceed RWQCB VI ESLs. Additional VI risk assessment is required.

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
4/30/2020	8/30/2019

IMPEDIMENT 5:

Additional Information: This case should be kept OPEN in spite of meeting policy criteria.

Step to Resolve Impediment 5 - Step 1:
Pending public comment period.

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
1/31/2020	

REQUIREMENTS ALONG PATH TO CLOSURE

DATE IDENTIFIED FOR CLOSURE	CLOSURE INITIATED BY	RP NOTIFICATION DATE	PUBLIC PARTICIPATION COMPLETION DATE	WELL DESTRUCTION LETTER DATE	WELL DESTRUCTION DATE	WASTE DISPOSAL DATE	LAND USE RESTRICTION DATE	SITE CLOSURE DATE
11/27/2019		11/27/2019	1/31/2019					

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Martina Family Trust (Global ID: T10000008291) 1694 Alum Rock Avenue SAN JOSE, CA 95116	Open - Assessment & Interim Remedial Action	1/11/2016	1/8/2016	4	SANTA CLARA COUNTY LOP *(LEAD)* - *CASE #: 0* ***CASEWORKER:*** *TRAVIS L. FLORA* - ***SUPER*** *JENNIFER KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) - *CAS*

SITE HISTORY

The site is located on the south corner of the intersection of Alum Rock Avenue and South King Road in San Jose, California, and operated as a gas station from approxima through 1977. Currently, the site consists of a single story, slab-on-grade building occupied by Chalateco Mexican Restaurant, an asphalt-paved parking lot, and landscapir Commercial businesses and residential properties surround the site. Subsurface investigations have been conducted at the site since April 2015.

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION

VIEW LTCP CHECKLIST | VIEW PATH TO CLOSURE PLAN | VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEAR IMPACTE
Benzene, Diesel, Ethylbenzene, Heating Oil / Fuel Oil, MTBE / TBA / Other Fuel Oxygenates, Naphthalene, Toluene, Xylene			Tank	1/8/2016		

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CL REQUEST
NO	NO	City of San Jose Muni Water	10/24/2019	10/18/2019	10/18/2019		6/18/2019

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48115107

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
MW-1	10/25/2018	OTHER	ND	ND	ND	ND	ND
MW-2	10/25/2018	OTHER	ND	ND	ND	ND	ND
MW-3	10/25/2018	OTHER	1.4 UG/L	ND	ND	ND	ND
MW-5	10/25/2018	OTHER	49 UG/L	13 UG/L	15 UG/L	8.5 UG/L	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
MW-1	10/27/2017		ND	ND	ND	ND	ND
MW-2	10/30/2017		ND	ND	ND	ND	ND
MW-3	10/26/2017		ND	ND	ND	ND	ND
MW-4	10/26/2017		ND	ND	ND	ND	ND
MW-5	10/26/2017		ND	ND	ND	ND	ND
SV-1	10/27/2017		ND	ND	ND	ND	ND
SV-2	10/26/2017		ND	ND	ND	ND	ND
SV-3	10/27/2017		ND	ND	ND	ND	ND
WASTE-1,2,	10/27/2017		ND	ND	ND	ND	

MOST RECENT GEO_WELL DATA

VIEW ESI S

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
MW-1	10/25/2018	84.16	N	
MW-2	10/25/2018	84.92	N	
MW-3	10/25/2018	84.69	N	
MW-5	10/25/2018	84.62	N	

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Mayfair Packing (Global ID: T0608501926) 2000 San Antonio E/Preservation Dr SAN JOSE, CA 95116	Completed - Case Closed	10/30/2001	12/18/1995	24	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR:*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E0*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	2/5/1996	8/20/1996			

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline		SW - Municipal and Domestic Supply		12/18/1995		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			6/3/2005				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48124046

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Montes Auto Sales (Global ID: T0608500952) 1665 Alum Rock Ave SAN JOSE, CA 95116	Completed - Case Closed	4/28/2000	2/3/1986	34	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline		SW - Municipal and Domestic Supply		2/3/1986		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			4/28/2000				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48112063

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Oliver de Silva, Inc. (Global ID: T0608500452) 12 N Sunset Ave SAN JOSE, CA 95116	Completed - Case Closed	9/8/2000	10/3/1984	35	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR:*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E0*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline		SW - Municipal and Domestic Supply		10/3/1984		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			9/8/2000				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
No APN Found

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
PRIVATE RESIDENCE (Global ID: T0608532848) PRIVATE RESIDENCE SAN JOSE, CA 95118	Completed - Case Closed	1/28/2000	6/15/1999	20	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOI*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISO*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Diesel		SW - Municipal and Domestic Supply		6/15/1999		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			1/28/2000				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48119143

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Robo Car Wash (Global ID: T0608574258) 1695 Alum Rock Ave SAN JOSE, CA 95116	Completed - Case Closed	2/4/1993	7/3/1990	29	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR:*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR:*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E03*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	9/5/1990	6/10/1991			

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline		SW - Municipal and Domestic Supply		7/3/1990		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			3/1/1994				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48112106

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Ryland Homes (Global ID: T0608570805) 115 S Jackson Ave SAN JOSE, CA 95116	Completed - Case Closed	6/16/2000	3/21/2000	20	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISOR:*** *KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISOR:*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1E03*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Diesel		SW - Municipal and Domestic Supply		3/21/2000		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			6/16/2000				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO V
JACKSON WELL 02 - INACTIVE	4310011-057	Active Raw	G	102	387 fe

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
No APN Found

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
STANDARD OIL (FORMER) (Global ID: T0608560113) 2230 ALUM ROCK AVENUE SAN JOSE, CA 95116	Completed - Case Closed	3/11/2010	12/30/2003	16	SANTA CLARA COUNTY LOP *(LEAD)* - *CASE #: 07S1E* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPER*** *NONE SPECIFIED*

SITE HISTORY

November 2003 Investigation: Previous site assessment activities included the drilling and sampling of eight onsite exploratory borings, designated SB-1 through SB-8, by A November 2003. Findings of the investigation indicated that petroleum hydrocarbons were present in soil and groundwater beneath the site. Total petroleum hydrocarbons (gasoline (TPHg), TPH as motor oil (TPHmo), and benzene were detected in groundwater samples at concentrations of up to 4,200 micrograms per liter (ìg/L), 2,300 ìg/L, and respectively. Methyl-tert butyl ether (MTBE) was not detected in any of the soil or groundwater samples collected from borings SB-1 through SB-8. During the investigation, groundwater was encountered at depths of approximately 16 ft below ground surface (bgs). Details of this investigation are presented in an AEI December 8, 2003 report en II Subsurface Investigation.

September 2004 Investigation: In September 2004, SAIC installed four onsite monitoring wells, designated MW-1 through MW-4, and drilled three onsite exploratory borings designated SB-9 through SB-11. SAIC also supervised a geophysical investigation at the site to confirm the removal of the USTs, and conducted a file review of eight nearby closed UST sites utilizing the online Santa Clara Valley Water District (SCVWD) Groundwater Cleanup Program Database, to determine if the petroleum hydrocarbons benea may be from an offsite source or sources. Findings of the investigation indicated that the USTs were

removed from the site, and that the TPHg present in soil and groundwater beneath the site were likely due to historical releases from the USTs and product dispenser island during the time the service station was in operation. SAIC identified a Coast Oil bulk plant at 2075 Alum Rock Avenue, located approximately 700 ft northwest of the subject possible offsite source for petroleum hydrocarbon contamination.

During the investigation, groundwater was encountered at a depth of approximately 15 ft bgs, and was calculated to flow toward the north at an approximate hydraulic grad 0.001. The highest concentrations of 470,000 ìg/L TPHg, 22,000 ìg/L TPHmo and 13,000 ìg/L benzene were detected in a groundwater sample collected from boring SB-10. Environmental Protection Agency [EPA] Method 8260) was not detected in any of the soil and groundwater samples collected from the borings for MW-1 through MW-4 and through SB-11. The origin of TPHmo beneath the site was determined to be unclear, since TPHmo was not detected at or above the laboratory detection limits in the soil an groundwater samples collected from well MW-1, located adjacent to the former waste oil UST.

Based on the results of the investigation, the lateral extent of the dissolved-phase petroleum hydrocarbon plume appeared to be adequately delineated, however, additional assessment to further assess the vertical extent of the plume was warranted. SAIC recommended additional onsite investigations to further assess the vertical extent of the the northern and eastern portion of the site. SAIC also recommended the installation of a 4-inch diameter monitoring well in the area of boring SB-10, in order to evaluate wa trends in the area of the former product dispenser islands. Finally, SAIC recommended the installation of a monitoring well up-gradient of the former UST complex to evaluat extent of the plume in the southern portion of the site. Details of the above investigations are presented in an SAIC October 27, 2004 report entitled Soil and Groundwater In Report.

2005 Soil and Groundwater Investigation: From December 28 through 30, 2004, and January 3, 2005, two exploratory soil borings, SB-12 and SB-13, and three groundwate wells, MW-5, MW-6 and MW-7, were installed onsite. Boring SB-12 was drilled to a total depth of 60 ft bgs. Boring SB-13 was drilled to a total depth of 65 ft bgs. Borings fo MW-6 and MW-7 were each drilled to a total depth of 30 ft bgs. The well boring for well MW-5 was drilled to total depth of 35 ft bgs. The borings were installed to obtain ver delineation of the dissolved-phase petroleum hydrocarbon plume in the northern and eastern portions of the

site, and to confirm that the plume had not migrated towards the municipal water supply wells located approximately 500 ft to the east-southeast. The monitoring wells were assess groundwater quality in the area of the former dispenser islands and up-gradient from the UST complex.

The highest concentrations of 190 milligrams per kilogram (mg/kg) TPHg, 8.3 mg/kg toluene, 5.7 mg/kg ethylbenzene, and 18 mg/kg total xylenes were detected in the soil s collected from well boring MW-5 at a depth of 20 ft bgs. The highest concentration of 4.6 mg/kg benzene was detected in the soil sample collected from well boring MW-5 a 25 ft bgs. Detectable concentrations of total recoverable petroleum hydrocarbons (TRPH) ranged from 23.4 mg/kg in the soil sample collected from boring SB-12 at a depth bgs, to 51.4 mg/kg in the soil sample collected from well boring MW-5 at 25 ft bgs. TPHd and MTBE were not

detected at or above laboratory detection limits in any of the soil samples analyzed.

The highest concentrations of 160,000 ìg/L TPHg, 4,800 ìg/L TPHd, 22,000 ìg/L benzene, and 4,000 ìg/L ethylbenzene were detected in the groundwater sample collected fr MW-7. The highest concentration of 28,000 ìg/L toluene was detected in the groundwater sample collected from well MW-5. The highest concentration of 13,000 ìg/L total x detected in the groundwater samples collected from wells MW-5 and MW-7. Detectable concentrations of TRPH ranged from 430 ìg/L in the groundwater sample collected SB-13 at firstencountered groundwater, to 6,900 ìg/L in the groundwater sample collected from well MW-5. The highest concentration of 6 ìg/L MTBE by EPA Method 8260 detected in the depth discrete groundwater sample collected from boring SB-12, at the depth interval of 56 to 60 ft bgs, and in the depth-discrete groundwater sample colle boring SB-13 at the depth interval of 46 to 48 ft bgs. Details of this investigation are presented in SAIC's February 14, 2005, Results of AdditionalSoil and Groundwater Inves Report.

March 2005 an Aquifer Pumping Test was conducted. Well MW-5 was used for groundwater extraction, and wells MW-2, MW-4 and MW-7 were used as observation wells. the pumping test data, transmissivity was estimated to range between 0.32 square feet per minute (sfpm) and 1.10 sfpm. Based on a saturated thickness of 54 ft, hydraulic was estimated to range between 5.5 feet per day (ft/day) to 19.1 ft/day. Storativity and specific yield were estimated to be 0.02 and 0.3, respectively. The radius of influence estimated to be in the range of 77 ft to 163 ft. The constant-rate pumping test time-series data demonstrated the characteristics of a heterogeneous, unconfined aquifer. Sto specific yield estimates further characterized the aquifer as unconfined.

March 2006 Bench Scale Treatability Study: In March 2006, a bench scale test was performed at the request of the DEH to evaluate several methods of applying Fenton's re soil and groundwater at the site. The results of the bench scale testing are presented in Environmental Bio-Systems, Inc.'s Fenton's Reagent Bench Test Report dated April which is attached to SAIC's April 28, 2006 Results of Bench Scale Treatability Study.

September 2006 Well Installation: In September 2006, SAIC oversaw the installation of onsite groundwater monitoring well, designated MW-8. The well boring for well MW-8 to a total depth of 30 ft bgs. Soil samples were collected continuously for lithologic logging and samples were preserved at approximate 5-ft depth intervals to the total dept possible chemical analysis. The boring for well MW-8 was converted to a groundwater monitoring well by the installation of a 2-inch diameter Schedule 40 polyvinyl chloride casing with a screened interval placed between the depths of 10 ft and 30 ft bgs. Selected soil samples collected from well boring MW-8 detected concentrations up to 170 TPHd, 2,100 mg/kg TPHg, 14 mg/kg benzene, 160 mg/kg toluene, 58 mg/kg ethylbenzene, and 260 mg/kg total xylenes from the sample collected at 25 ft bgs. Soil samples analyzed for the presence of MTBE. The analyzed grab groundwater sample collected from well boring MW-8 detected concentrations up to 990 ìg/L TPHd, 26,000 ìg/L TPH

ìg/L benzene, 5,100 ìg/L toluene, 790 ìg/L ethylbenzene, and 3,100 ìg/L total xylenes. MTBE was not detected at or above laboratory reporting limits.

June 2007 Remedial Well Installation: In June 2007, SAIC oversaw the installation of 7 AS wells, designated AS-1 through AS-7. The borings for wells AS-1 through AS-3 we a total depth of 24 ft bgs; borings for wells AS-4, AS-6 and AS-7 were drilled to a total depth of 25 ft bgs; and the boring for well AS-5 was drilled to a total depth of 28 ft bg was performed using 8-inch diameter hollow-stem augers. The borings were converted to AS wells by the installation of 1-inch diameter Schedule 40 PVC well casing with 0 slot size. AS well construction details are included in the boring logs. Selected soil samples were analyzed for the presence of TPHd, TPHg, benzene, toluene, ethylbenzene xylenes (BTEX) and MTBE. Concentrations of TPHd were detected up to 1,300 mg/kg from the sample collected at 25 ft bgs at well boring AS-4. Concentrations of TPHg w detected up to 13,000 mg/kg from the sample collected at 24.5 ft bgs at well boring AS-7. Benzene was detected in concentrations up to 160 mg/kg from the sample collec bgs at well boring AS-6. Toluene, ethylbenzene and total xylenes were detected at concentrations up to 1,400, 310 and 1,400 mg/kg, respectively, from the sample collected bgs at well boring AS-7.

In June 2007, SAIC also oversaw the conversion of 2 groundwater monitoring wells, MW-7 and MW-8, into SVE wells MW-7 and MW-8. The 2 wells were over-drilled to a to 30 ft bgs using 10-inch diameter augers. The borings were converted to SVE wells by the installation of 4-inch diameter Schedule 40 PVC well casing with 0.020 inch slot si screened interval for wells MW-7 and MW-8 is 7 ft to 30 ft bgs. Soil samples were not collected during the conversion of groundwater monitoring wells MW-7 and MW-8 into

January 2008, SVE and AS remediation system began operations at the site and continued through May 19, 2008. A new SVE blower was installed and began operation in S 2008 and continued through November 11, 2008. Approximately 120.3 pounds of TPHg, 1.70 pounds of benzene, and 2.06 pounds of MtBE were removed by this remediat

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
SOIL VAPOR EXTRACTION (SVE)	1/22/2008	11/13/2008	Soil	120 Pounds / 2 Pounds	120.3 lbs TPHg, 1.7 lbs Benzene, 2.06 lbs MtBE

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMP WELLS
Gasoline	Commercial	GW - Municipal and Domestic Supply	Other	12/30/2003	Close and Remove Tank	0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			3/11/2010	7/9/2010	7/9/2010		

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO V
JACKSON WELL 02 - INACTIVE	4310011-057	Active Raw	G	102	627 fe

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48121082

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
MW-1	10/14/2009	OTHER	ND	ND	ND	ND	ND	
MW-10	10/14/2009	OTHER	ND	ND	ND	ND	ND	
MW-2	10/14/2009	OTHER	ND	ND	ND	ND	ND	
MW-3	1/15/2009	OTHER	ND	ND	ND	ND	ND	
MW-4	1/15/2009	OTHER	ND	ND	ND	ND	ND	
MW-5	1/15/2009	OTHER	11 UG/L	ND	2 UG/L	1 UG/L	ND	2
MW-5A	3/26/2005	OTHER	180 UG/L	300 UG/L	63 UG/L	220 UG/L	3.1 UG/L	
MW-5B	3/25/2005	OTHER	2900 UG/L	5300 UG/L	750 UG/L	2600 UG/L	ND	
MW-5C	3/25/2005	OTHER	4300 UG/L	8100 UG/L	1100 UG/L	3900 UG/L	ND	
MW-5D	3/25/2005	OTHER	4000 UG/L	7500 UG/L	1000 UG/L	3600 UG/L	ND	
MW-6	10/14/2009	OTHER	ND	ND	ND	ND	ND	
MW-7	1/15/2009	OTHER	18 UG/L	0.5 UG/L	ND	1 UG/L	ND	4
MW-8	10/14/2009	OTHER	1 UG/L	ND	ND	ND	ND	
MW-9	10/14/2009	OTHER	ND	ND	ND	ND	ND	
QA	10/14/2009	OTHER	ND	ND	ND	ND	ND	
SB-10	9/15/2004	OTHER	13000 UG/L	37000 UG/L	16000 UG/L	58000 UG/L	ND	
SB-11	9/15/2004	OTHER	ND	1.3 UG/L	1.2 UG/L	3.9 UG/L	ND	
SB-12	12/30/2004	OTHER	ND	ND	ND	ND	5.4 UG/L	
SB-13	1/3/2005	OTHER	ND	ND	ND	ND	ND	
SB-9	9/15/2004	OTHER	ND	ND	ND	ND	ND	

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE
AS-1	6/12/2007		0.4 MG/KG	0.5 MG/KG	0.2 MG/KG	1 MG/KG	ND
AS-2	6/13/2007		6.1 MG/KG	19 MG/KG	4.9 MG/KG	19 MG/KG	ND
AS-3	6/13/2007		23 MG/KG	160 MG/KG	39 MG/KG	180 MG/KG	ND
AS-4	6/13/2007		65 MG/KG	340 MG/KG	61 MG/KG	220 MG/KG	ND
AS-5	6/13/2007		27 MG/KG	240 MG/KG	50 MG/KG	240 MG/KG	ND
AS-6	6/13/2007		160 MG/KG	1100 MG/KG	200 MG/KG	950 MG/KG	ND
AS-7	6/13/2007		140 MG/KG	1400 MG/KG	310 MG/KG	1400 MG/KG	ND
MW-1	9/15/2004		ND	ND	ND	ND	ND
MW-10	3/16/2009		ND	ND	ND	ND	ND
MW-2	9/16/2004		ND	ND	65 MG/KG	140 MG/KG	ND
MW-3	9/16/2004		ND	ND	ND	ND	ND
MW-4	9/17/2004		ND	ND	ND	ND	ND

MW-5	12/29/2004	4.6 MG/KG	8.3 MG/KG	5.7 MG/KG	18 MG/KG	ND
MW-6	12/28/2004	ND	ND	0.005 MG/KG	0.02 MG/KG	ND
MW-7	12/28/2004	1.1 MG/KG	0.2 MG/KG	0.7 MG/KG	1.3 MG/KG	ND
MW-8	9/13/2006	14 MG/KG	160 MG/KG	58 MG/KG	260 MG/KG	
MW-9	3/17/2009	ND	ND	ND	ND	ND
SB-10	9/15/2004	0.3 MG/KG	1.1 MG/KG	0.9 MG/KG	3.3 MG/KG	ND
SB-11	9/15/2004	ND	ND	ND	ND	ND
SB-12	12/30/2004	ND	ND	ND	ND	ND
SB-13	1/3/2005	ND	ND	ND	ND	ND
SB-14	3/4/2009	13 MG/KG	170 MG/KG	64 MG/KG	240 MG/KG	ND
SB-15	3/4/2009	140 MG/KG	1400 MG/KG	280 MG/KG	1300 MG/KG	ND
SB-16	3/4/2009	0.001 MG/KG	0.006 MG/KG	0.001 MG/KG	0.006 MG/KG	ND
SB-9	9/15/2004	ND	ND	ND	ND	ND
SP	1/3/2005	0.5 MG/KG	3 MG/KG	1.3 MG/KG	4.9 MG/KG	ND
WASTE	3/18/2009	ND	ND	ND	ND	

MOST RECENT GEO_WELL DATA VIEW ESI S

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
MW-1	10/14/2009	17.7	N	
MW-10	10/14/2009	17.1	N	
MW-2	10/14/2009	17.06	N	
MW-3	4/16/2009			
MW-4	4/16/2009			
MW-5	4/16/2009			
MW-6	10/14/2009	17.47	N	
MW-7	4/16/2009			
MW-8	10/14/2009	17.2	N	
MW-9	10/14/2009	17.49	N	

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
Thunderbird Golf Course (Global ID: T0608501444) 221 S King Rd SAN JOSE, CA 95116	Completed - Case Closed	12/5/1995	8/25/1992	27	SANTA CLARA COUNTY LOP *(LEAD)* ***CASEWORKER:*** *UST CASE WORKER* - ***SUPERVISC*** *JENNIFER KAAHAAINA* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISC*** *SPECIFIED* SANTA CLARA VALLEY WATER DISTRICT - *CASE #: 07S1*

SITE HISTORY

<NO SITE HISTORY ENTERED>

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	8/25/1992	12/5/1995			

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline		SW - Municipal and Domestic Supply		8/25/1992		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			2/1/1996				

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
48126075

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

CSM REPORT FOR PUBLIC NOTICING

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
U.S. RENTALS (Global ID: T0608511535) 2101 ALUM ROCK AVENUE SAN JOSE, CA 95116	Completed - Case Closed	12/12/2005	1/1/1993	27	SANTA CLARA COUNTY LOP *(LEAD)* - *CASE #: 07S1E03E* SAN FRANCISCO BAY RWQCB (REGION 2) ***CASEWORKER:*** *Regional Water Board* - ***SUPERVISC*** *SPECIFIED*

SITE HISTORY

Well US-1 will continue to be monitored by the adjacent Coast Oil facility (SLIC site)

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTIC
MONITORED NATURAL ATTENUATION	10/14/2004	9/15/2005			

RISK INFORMATION

VIEW CAS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTE
Gasoline	Commercial	GW - Municipal and Domestic Supply		1/1/1993		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLO REQUEST
			12/12/2005				4/14/2003

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

WELL NAME	STATE WELL #	STATUS	SOURCE	# TIMES SAMPLED	DIST TO V
JACKSON WELL 02 - INACTIVE	4310011-057	Active Raw	G	102	1308 fe

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
No APN Found

GW BASIN NAME
Santa Clara Valley - Santa Clara (2-009.02)

WATERSHED NAME
Santa Clara - Coyote Creek (205.30)

COUNTY
Santa Clara

PUBLIC WATER SYSTEM(S)

- **SAN JOSE WATER COMPANY** - ANDREW GERE, SAN JOSE, CA 95128
- **SANTA CLARA VALLEY WATER DISTRICT** - 5750 ALMADEN EXPRESSWAY, SAN JOSE, CA 95118

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER

VIEW ESI S

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL

VIEW ESI S

NO SOIL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT GEO_WELL DATA

VIEW ESI S

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

F. Title Records

First American Title

First American Title Company

484 North Prospect Street, Suite C
Porterville, CA 93257

Order Number:	54076098425 ()
Escrow Officer:	Ann Kay
Phone:	(559)306-3387
Fax No.:	(866)590-2169
E-Mail:	akay@firstam.com
E-Mail Loan Documents to:	PortervilleEDocs@firstam.com
Borrower:	An Idaho Limited Liability Company
Property:	1936 Alum Rock Avenue San Jose, CA 95116

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Exhibit A attached. *The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties.* Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Exhibit A. Copies of the policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of November 22, 2019 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

To Be Determined

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

1936 ALUM ROCK AVENUE LLC, AN IDAHO LIMITED LIABILITY COMPANY

The estate or interest in the land hereinafter described or referred to covered by this Report is:

FEE

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2019-2020.

First Installment:	$24,866.74, OPEN
Penalty:	$0.00
Second Installment:	$24,866.74, OPEN
Penalty:	$0.00
Tax Rate Area:	17-007
A. P. No.:	481-19-003

2. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

3. An easement for THE TRANSMISSION AND DISTRIBUTION OF ELECTRIC ENERGY and incidental purposes, recorded August 30, 1946 as BOOK 1372, PAGE 511 OF OFFICIAL RECORDS.

In Favor of:	PACIFIC GAS AND ELECTRIC COMPANY, A CALIFORNIA CORPORATION
Affects:	as described therein

4. An easement for UNDERGROUND COMMUNICATION FACILITIES and incidental purposes, recorded December 10, 1959 as BOOK 4633, PAGE 169 OF OFFICIAL RECORDS.

In Favor of:	THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY, A CORPORATION
Affects:	as described therein

5. An unrecorded lease dated April 21, 2017, executed by 1936 ALUM ROCK AVENUE LLC, AN IDAHO LIMITED LIABILITY COMPANY as lessor and PACIFIC WEST COMMUNITIES, INC., AN IDAHO CORPORATION as lessee, as disclosed by a MEMORANDUM OF LEASE recorded April 21, 2017 as DOCUMENT NO. 23630566 of Official Records.

   Defects, liens, encumbrances or other matters affecting the leasehold estate, whether or not shown by the public records.

6. The effect of a map purporting to show the land and other property, filed BOOK 906, PAGE 23 of Record of Surveys.

7. The condition that the property shall be used for the sole purpose of providing, construction and maintaining Affordable Housing, as more fully defined therein, and upon the terms, covenants and conditions in that certain document recorded May 17, 2019 as DOCUMENT NO. 24182349 of Official Records.

   Note: A written consent or waiver may be necessary from the public agency for any sale or refinance.

8. TERMS AND CONDITIONS of that certain Permit
   File No.: CP17-052
   Disclosed By: CERTIFICATE OF PERMIT
   Recorded: June 21, 2019 as Document No. 24208438, Official Records

   Reference is hereby made to the record for particulars.

9. Water rights, claims or title to water, whether or not shown by the public records.

10. The new lender, **if any**, for this transaction may be a Non-Institutional Lender. If so, the Company will require the Deed of Trust to be signed before a First American approved notary.

11. Rights of parties in possession.

Prior to the issuance of any policy of title insurance, the Company will require:

12. With respect to 1936 ALUM ROCK AVENUE LLC, a limited liability company:
a. A copy of its operating agreement and any amendments thereto;
b. If it is a California limited liability company, that a certified copy of its articles of organization (LLC-1) and any certificate of correction (LLC-11), certificate of amendment (LLC-2), or restatement of articles of organization (LLC-10) be recorded in the public records;
c. If it is a foreign limited liability company, that a certified copy of its application for registration (LLC-5) be recorded in the public records;
d. With respect to any deed, deed of trust, lease, subordination agreement or other document or instrument executed by such limited liability company and presented for recordation by the Company or upon which the Company is asked to rely, that such document or instrument be executed in accordance with one of the following, as appropriate:
(i) If the limited liability company properly operates through officers appointed or elected pursuant to the terms of a written operating agreement, such document must be executed by at least two duly elected or appointed officers, as follows: the chairman of the board, the president or any vice president, and any secretary, assistant secretary, the chief financial officer or any assistant treasurer;
(ii) If the limited liability company properly operates through a manager or managers identified in the articles of organization and/or duly elected pursuant to the terms of a written operating agreement, such document must be executed by at least two such managers or by one manager if the limited liability company properly operates with the existence of only one manager.
e. Other requirements which the Company may impose following its review of the material required herein and other information which the Company may require

INFORMATIONAL NOTES

Note: The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than the certain dollar amount set forth in any applicable arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. If you desire to review the terms of the policy, including any arbitration clause that may be included, contact the office that issued this Commitment or Report to obtain a sample of the policy jacket for the policy that is to be issued in connection with your transaction.

1. The property covered by this report is vacant land.

2. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

   None

3. We find no outstanding voluntary liens of record affecting subject property. Disclosure should be made concerning the existence of any unrecorded lien or other indebtedness which could give rise to any possible security interest in the subject property.

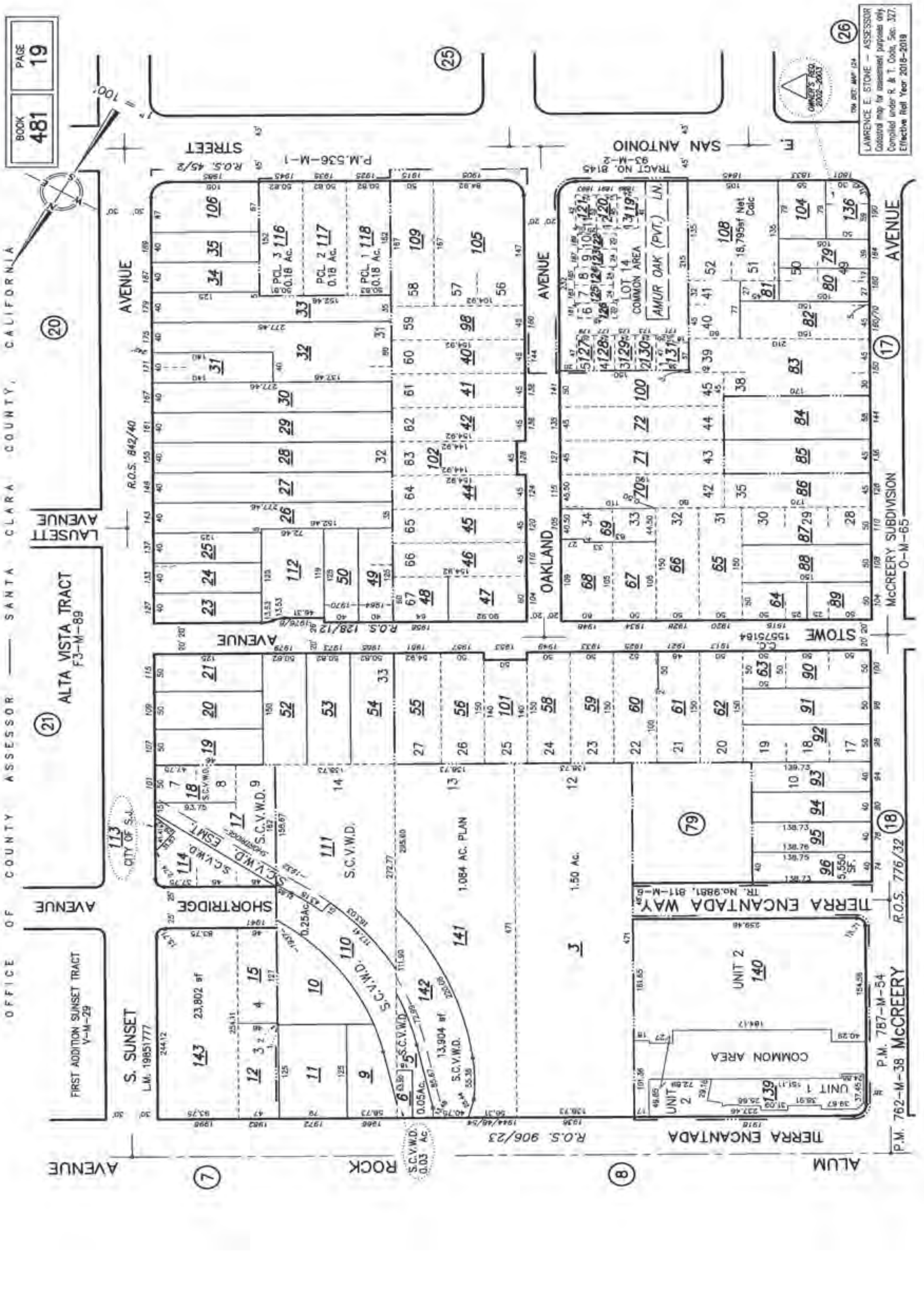
The map attached, if any, may or may not be a survey of the land depicted hereon. First American expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

LEGAL DESCRIPTION

Real property in the City of San Jose, County of Santa Clara, State of California, described as follows:

LOT TWELVE (12) AS DELINEATED AND SO DESIGNATED UPON MAP ENTITLED, "MAP OF THE ALTA VISTA TRACT, BEING JOS. H. RUCKER & CO'S SUBDIVISION OF PARTS OF 500 ACRE LOTS 48 AND 49, SAN JOSE CITY LANDS," AND WHICH SAID MAP IS FILED ON AUGUST 04, 1904, IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, IN VOL. "F3" OF MAPS, PAGE 89.

APN: 481-19-003


BOOK 481
PAGE 19
OFFICE OF COUNTY ASSESSOR — SANTA CLARA COUNTY, CALIFORNIA
ALTA VISTA TRACT
F3-M-89
LAUSETT AVENUE
SHORTRIDGE AVENUE
S. SUNSET
L.M. 19851777
FIRST ADDITION SUNSET TRACT
V-M-29
STREET
AVENUE
OAKLAND AVENUE
E. SAN ANTONIO
TRACT NO. 8145
93-M-2
McCREERY AVENUE
McCREERY SUBDIVISION
O-M-65
STOWE
ALUM ROCK AVENUE
TIERRA ENCANTADA
TERRA ENCANTADA WAY
TR. No.8881, 811-M-8
P.M. 787-M-54
P.M. 762-M-38
R.O.S. 776/32
R.O.S. 906/23
R.O.S. 128/12
R.O.S. 842/40
R.O.S. 45/2
P.M.536-M-1
AMUR OAK (PVT.) LN
LOT 14 COMMON AREA
COMMON AREA
UNIT 1
UNIT 2
S.C.V.W.D.
CITY OF S.J.
1.084 AC. PLAN
1.50 Ac.
LAWRENCE E. STONE — ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2018-2019

G. Previous Assessments

RNC ENVIRONMENTAL, LLC
3326 M Street, Sacramento, CA 95816
(888) 485-3330 • rnc-enviro.com

September 15, 2016
RNC Project Number 1606B

Mr. Darren Berberian
c/o Pacific West Communities, Inc.
430 E. State St, Suite 100
Eagle ID, 83616

Re: Phase II Environmental Site Investigation
1936 Alum Rock Avenue, San Jose, CA

Dear Darren:

The attached report describes the process and results of the investigation we conducted at 1936 Alum Rock Avenue on your behalf. Here's a summary of the results:

- The southern portion of the site is covered by 2-3 feet of black soil, which appears to be the result of application of a dust suppressant. It contains low levels of petroleum hydrocarbons, and does not appear to represent a significant environmental concern at the site.
- One soil sample located in the approximate center of the site contained elevated concentrations of pesticides, including arsenic, lead, and DDE. This was likely due to a spill in an area used for handling pesticides at the farm supply store.
- Petroleum-contaminated soil from the former UST does not extend to any significant horizontal distance from the UST site. The extent to which it extends beneath the building is not known.
- While some migration of petroleum into the underlying aquifer has been documented, there are no monitoring wells completed in the underlying aquifer and conditions there are unknown.

In a related item, a recent Review Summary Report prepared by the State Water Resources Control Board (copy also attached), which recommends the following:

- Conduct regular groundwater monitoring to assess current groundwater quality and to calculate groundwater trends,
- Define the extent of groundwater contamination to the northwest, southwest, and east, and
- Collect an additional round of soil vapor samples to assess vapor intrusion with recognition that tight soil conditions may increase cross contamination with atmospheric air.

Based on these findings, we are recommending the following additional investigation:

- Soils near the pesticide-impacted location will eventually need to be excavated and transported off−site for disposal at a licensed facility. Additional soil sampling in this area

is recommended to confirm the volume of impacted soil, in order to estimate disposal costs.

- As noted, the black soil staining appears to be environmentally innocuous. Limited additional soil sampling in this area is recommended to confirm the innocuous nature of the layer.
- Three monitoring wells should be installed in the sand and gravel aquifer and two rounds of groundwater monitoring should be conducted prior to transfer of property ownership.

It should also be noted that additional subsurface investigations will be needed around the former UST area, following removal of the building and prior to redevelopment of the property. The scope of remediation that may be necessary near the former UST cannot be estimated at this time.

Sincerely,
RNC Environmental

Neil O'Hara

September 15, 2016

Mr. Neil O'Hara
RNC Environmental, LLC
3326 M Street
Sacramento, CA 95816

RE: Soil Boring and Sampling Investigation
1936 Alum Rock Ave
San Jose, CA

Dear Neil –

The purpose of this letter report is to document the results of a soil boring investigation conducted at the above referenced site on August 19, 2016. Existing subsurface information available in the publically available GeoTracker database was also reviewed as part of the investigation. GeoTracker contains "environmental data from regulated facilities in California" and is maintained by the State Water Resources Control Board (SWRCB). The investigation has identified three areas of environmental impact at the site, and recommendations are made for additional investigation of subsurface conditions.

Document Review

The site was formerly occupied by Farmer's Supply, and a 550-gallon underground storage tank (UST) used for gasoline was removed from just behind the main building circa 1984[1]. Three groundwater monitoring wells were installed near the former UST location in June 2007. **Figure 1** is a site map showing features of interest.

Soil samples from well installation[2] clearly indicate elevated concentrations of petroleum constituents centered at about 25 feet bgl in all three wells. **Table 1** is a summary of those soil sampling results and show total petroleum hydrocarbons in the gasoline range (TPHg) as high as 860,000 micrograms per kilogram (µg/kg) and benzene concentrations as high as 2,900 µg/kg. An April 2016 summary of groundwater sampling results[3] indicate the depth to groundwater in the wells varies between about 7 to 13 ft bgl, TPHg concentrations vary between 30,900 and 73,000 micrograms per liter (µg/L), and benzene concentrations vary between 5,460 and 24,000 µg/L. The wells penetrate silty clay and reach depths of 30 feet below ground level (ft bgl). Note that the highest concentrations of petroleum constituents have been observed in MW-3 which is located inside the main building approximately 25 feet west-northwest of the former UST location.

[1] Lowney Associates, September 6, 2005. "Phase I Environmental Site Assessment", 20p., http://geotracker.Waterboards.ca.gov/esi/uploads/geo_report/3977792203/T10000001657.PDF.
[2] Georestoration, Inc. August 7, 2007. "Well Installation Report", 50p, http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4959596037/T10000001657.PDF.
[3] WellTest, Inc., April 23, 2016. "Grab Groundwater Sampling Report", http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9912437140/T10000001657.PDF

A report of soil boring investigation dated August 2011[4] included a deep boring and grab groundwater sample near MW-3. That boring (DP-3B) documented a sand and gravel layer existing at 36 ft bgl, and groundwater collected from that layer contained 200 µg/L TPHg, 8.3 µg/L benzene, and 100 µg/L of total petroleum hydrocarbons in the diesel range (TPHd). Each of these concentrations is at or above environmental screening level concentrations for groundwater. These results indicate that at least some petroleum had migrated downward from the silty clay into the underlying sand and gravel aquifer by 2011.

Soil was excavated from beneath the former UST location on January 2016[5] creating an excavation about 10 by 14 feet wide and 14 feet deep. After excavation, petroleum hydrocarbon staining was noted in the sidewalls from approximately 8.5 ft bgs to the base of the excavation. Also after excavation, a "temporary well MW-4" (28 ft total depth, screen from 14 to 28 ft bgl) was installed nearby the excavation and was found to contain 0.01 to 0.09 inches of free petroleum product during numerous gauging events conducted throughout May 2016.

Correspondence from the Santa Clara County Department of Environmental Health (SCCDEH) to Mr. David Mijares at Farmer's Supply dated June 30, 2016[6] indicated that case closure under the low threat closure policy was not appropriate due the presence of free product and dissolved phase petroleum constituents remaining in the subsurface after soil excavation and that adequate groundwater monitoring had not been conducted. A SWRCB case review document[7] dated August 2016 indicates the need for outstanding issues to be resolved as follows:

- additional groundwater monitoring (northwest, southwest and east of the former UST location) to define the extent of the dissolved phase plume and identify groundwater trends,
- the need for additional soil gas sampling to address the potential indoor air vapor intrusion threat indicated by > 1,000 µg/L benzene in groundwater at less than 30 ft bgl, and
- the status of free product removal must be addressed.

Scope of Subsurface Sampling

A total of seven borings were installed using a GeoProbe® rig on August 19, 2016. Four borings (B1 thru B4) were each advanced to a total depth of 5 feet and were located in the back half of the property. Three borings (B5 thru B7) were each advanced to a total depth of 24 to 27 feet and were located in a triangular pattern surrounding the former UST (see **Figure 1**).

Relatively undisturbed and continuous soil cores encased in acetate liners were retrieved from each boring for inspection by a professional geologist. The liners were cut open lengthwise, examined for lithology and signs of petroleum staining, and a description of the core was recorded in a written log (see **Appendix A**).

[4] WellTest, Inc. August 7, 2011. "Limited Soil and Groundwater Sampling and Testing Report (Report #2341)", 34p, http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9096934020/T10000001657.PDF
[5] WellTest, Inc. June 3, 2016. "Secondary –Source and Free Product Removal Documentation Report, Farmers Supply, 1936 Alum Rock Ave, San Jose, CA", 61p.
[6] Correspondence from SCCDEH to Mr. David Mijares, Farmers Supply, Inc., June 30, 2016. http://geotracker .waterboards.ca.gov/regulators/deliverable_documents/6380892693/07S1E03F03f.pdf.
[7] SWRCB Clean-up Fund Review Summary Report, August 2016. http://geotracker.waterboards.ca.gov/regulators /deliverable_documents/2320784628/19660%201st%20RSR%20Rationale%20for%20Concur%20August%202016.pdf

Soil samples were collected from the zone most likely to be adversely impacted in each core based on visual observations. Soil samples were collected into either an 8-ounce jar with Teflon® lined screw cap lid and/or into a 25 gram Encore® sampler. The sample containers were labeled with depth and location information and temporarily stored on ice in a cooler. Later the same day the samples were transported under proper chain of custody to Accutest Laboratoies in San Jose, CA.

Depending on the location of sample collection, laboratory analysis was for one or more groups of compounds as follows:

- Organo-chlorine pesticides (OCPs) by method SW-846 8081A,
- Metals by SW-846 6000/7000 series methods,
- Volatile organic compounds (VOCs) by method SW-846 8260,
- TPHg, TPHd, and/or TPHmo by method SW-846 8015M, or
- Extractable Petroleum Hydrocarbons by the Massachusetts Department of Environmental Protection method (MaDEP EPH) which includes 17 poly-nuclear aromatic hydrocarbons (PAHs) and 4 different aliphatic and aromatic hydrocarbon groups.

Storage and Equipment Yard

The first of three environmental impact areas identified during this investigation consists of the near surface soils around boring B4 in the storage and equipment yard (back two-thirds of the property).

A layer of black stained soil approximately 3 feet thick exists below the 6 to 12 inches of gravel covering the storage and equipment yard. This layer was observed in borings B-1 thru B-5 and was most pronounced at B-4. A total of four soil samples, one from each B-1 thru B-4, were collected from the top several inches of this layer for laboratory analysis. Samples were analyzed for TPH_{mo}, OCP, and metals. The sample from B-4 was additionally analyzed by MaDEP EPH.

Table 2 is a summary of laboratory analytical results for soil samples collected from the black stained soil layer. With the exception of the sample from B-4, there were no OCPs detected in any sample, there were no metals (except arsenic) detected above environmental screening levels (ESLs), and the concentration of TPHmo was also below ESLs. The sample from B4 contained arsenic and lead above ESLs and the pesticide dichlorodiphenyldichloroethylene (DDE). Five PAHs were detected in the B-4 sample but only one, benzo(a)pyrene was at a concentration above ESLs. The 4 different aliphatic and aromatic hydrocarbon groups are at concentrations below MaDEP Group S-1/GW-1 ESLs.

Note that arsenic is a naturally occurring constituent in soil at concentrations which typically exceed ESLs. The arsenic concentrations detected in soil at B-1 through B-3 are typical of naturally occurring concentrations. Also, toxaphene was not detected in any soil sample but the analytical detection limit for toxaphene was greater than the ESL for that compound. This is a common problem with toxaphene, and not of particular concern unless toxaphene was known to be used at the site.

Interpretation of data in **Table 2** is as follows:

(1) Black soil staining in the storage and equipment yard is the result of application of a dust suppressant containing low levels of PAH and aliphatic and aromatic hydrocarbons. It does not appear to represent a significant environmental concern at the site.

(2) The occurrence of DDE in sample B-4 is the result of a spill during operations at the former Farmer's Supply.
(3) The elevated concentration of arsenic (65.1 mg/kg) and lead (86.6 mg/kg) in sample B-4 is the result of a spill of lead arsenate pesticide during operations at the former Farmer's Supply.
(4) The mutual occurrence of DDE and lead arsenate in soil at B-4 marks the location where storage and handling of pesticides occurred at the former Farmer's Supply.
(5) Arsenic is a naturally occurring constituent in soil at a concentration of 9.4 to 9.9 mg/kg. Lead is a naturally occurring constituent in soil at a concentration of 8.1 to 9.4 mg/kg.

Groundwater Beneath Former UST

The second of three environmental impact areas identified during this investigation consists of the groundwater beneath the former UST.

Borings B5, B6, and B7 were located in a triangular pattern surrounding the former UST location and were all advanced to 24 to 27 ft bgl. These borings were left in an open-hole condition for several hours, and no groundwater accumulated in any of the three borings during that time. This confirms that the groundwater table in the silty clay had fallen to below 27 ft bgl.

No groundwater samples were collected during the August 19, 2016 soil boring event. Knowledge of dissolved petroleum constituents in groundwater is therefore based on literature review (see above **Document Review**).

Soils Surrounding the Former UST

The third of three environmental impact areas identified during this investigation consists of subsurface soil near the UST.

Borings B5, B6, and B7 were located in a triangular fashion surrounding the former UST location and were all advanced to 24 to 27 ft bgl. Natural soil colors for silty clay in the area are various mixtures of red and brown. Light and dark gray staining, characteristic of weathered petroleum, was observed in the bottom third of all three borings. One soil sample was collected in each boring from a dark gray, soft, silty, and presumably more permeable layer occurring near the base of each boring. Those samples were analyzed for TPHg, TPHd, and 81 VOCs. Results of laboratory analysis show only non-detectable concentrations for all analytes, with the exception that acetone and methylene chloride were detected but were flagged as lab contaminants.

Note the that the three monitoring wells installed in 2007 are 30 feet deep, and soil samples collected during well installation in 2007 clearly show the highest concentration of petroleum impact occurring at about 25 ft bgl. The samples collected at 24 to 26 feet deep in each boring should have found petroleum hydrocarbons if they were present.

Interpretation of the soil sample analytical results from B5, B6, and B7 is as follows:

(1) Laboratory analysis confirms that petroleum impact in soil from the former UST does not currently extend as far as the B5, B6, and B7 locations at the 24 to 26 foot depth interval.

(2) The light gray to dark gray staining observed in the bottom third of these three borings indicates that petroleum hydrocarbons had reached the B5, B6, and B7 locations.
(3) The dark gray staining at the base of B5, B6, and B7 may be the result of oxygen deficiency created by biologic activity acting to mineralize the petroleum constituents that had previously migrated to those depth locations.

Conclusions and Recommendations

Conclusions and recommendations based on the results of the soil boring investigation and document review are as follows:

(1) Soils near the B-4 location are impacted by pesticides and will eventually need to be excavated and transported off-site for disposal at a licensed facility. An accurate estimate of soil volume for removal cannot be made at this time. Additional soil sampling in this area is recommended to confirm the volume of soil impacted by pesticides prior to transfer of property ownership.
(2) Black soil staining throughout the equipment and storage yard area occurs just below the surface layer of gravel and contains low levels of PAHs. It appears to be environmentally innocuous. Limited additional soil sampling in this area is recommended to confirm the innocuous nature of the layer prior to transfer of property ownership.
(3) A release of petroleum hydrocarbons to a silty clay layer at the surface is known to have occurred. Indications are that subsurface migration of petroleum has been hindered by the physical nature of the silty clay and by artesian water table conditions existing in the underlying sand and gravel aquifer. While some migration of petroleum into the underlying aquifer has been documented, there are no monitoring wells completed in the underlying aquifer and conditions there are unknown. It is recommended that a monitoring well network be installed in the sand and gravel aquifer and two rounds of groundwater monitoring be conducted prior to transfer of property ownership.
(4) Additional subsurface investigations will be needed around the former UST area prior to re-development of the property. At a minimum, additional subsurface investigations must include soil gas sampling, free product monitoring and removal, and installation of the groundwater monitoring well network in the sand and gravel aquifer. Should additional remedial actions be required, it is likely a detailed Geoprobe® soil sampling program and/or additional groundwater monitoring wells in the sand and gravel aquifer, and/or removal of the existing building will be necessary prior to remedial action. The scope of remediation that may be necessary near the former UST cannot be estimated at this time.

Should you require any additional information or if you have any questions regarding this letter report then please feel free to contact me.

Sincerely,

Richard Ryan, P.G.

Attachments:

Table 1: Summary Soil Sample Analytical Results, June 2007 Well Installation

Well	Depth (ft)	TPHg	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
MW-1	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
MW-1	10	**13**	<0.005	**0.059**	<0.005	**0.043**	<0.05
MW-1	15	**40**	**0.026**	**0.41**	**0.4**	**0.012**	<0.05
MW-1	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
MW-1	25	**400**	<0.50	**2.8**	**4.4**	**14**	<5.0
MW-1	30	**4.9**	**0.45**	**0.033**	**0.58**	**0.46**	<0.05
MW-2	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
MW-2	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
MW-2	15	**1.7**	<0.005	<0.005	<0.005	<0.005	<0.05
MW-2	20	**9.2**	**0.053**	**0.13**	**0.2**	**0.045**	<0.05
MW-2	25	**860**	**1.6**	**19**	**18**	**73**	<5.0
MW-2	30	**4.9**	**0.9**	**0.046**	**0.49**	**0.36**	<0.05
MW-3	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
MW-3	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05
MW-3	15	**32**	**0.46**	**0.22**	**0.82**	**0.12**	<0.05
MW-3	20	**120**	**2.8**	**1.2**	**3.4**	**7.3**	<0.50
MW-3	25	**110**	**2.9**	**1.8**	**2.9**	**7.5**	<0.50
MW-3	30	<1.0	**0.012**	**0.011**	**0.009**	**0.017**	<0.05
	ESLs	100	0.044	2.9	3.3	2.3	0.023

Notes:

(1) All concentrations are in units of milligrams per kilogram (mg/kg), equivalent to parts per million (ppm).

(2) "<" indicates the analyte was not detected, the associated value is the analytical detection limit.

(3) Values which exceed environmental screening levels (ESLs) have been highlighted. ESLs from: SF Bay RWQCB, December 2013.

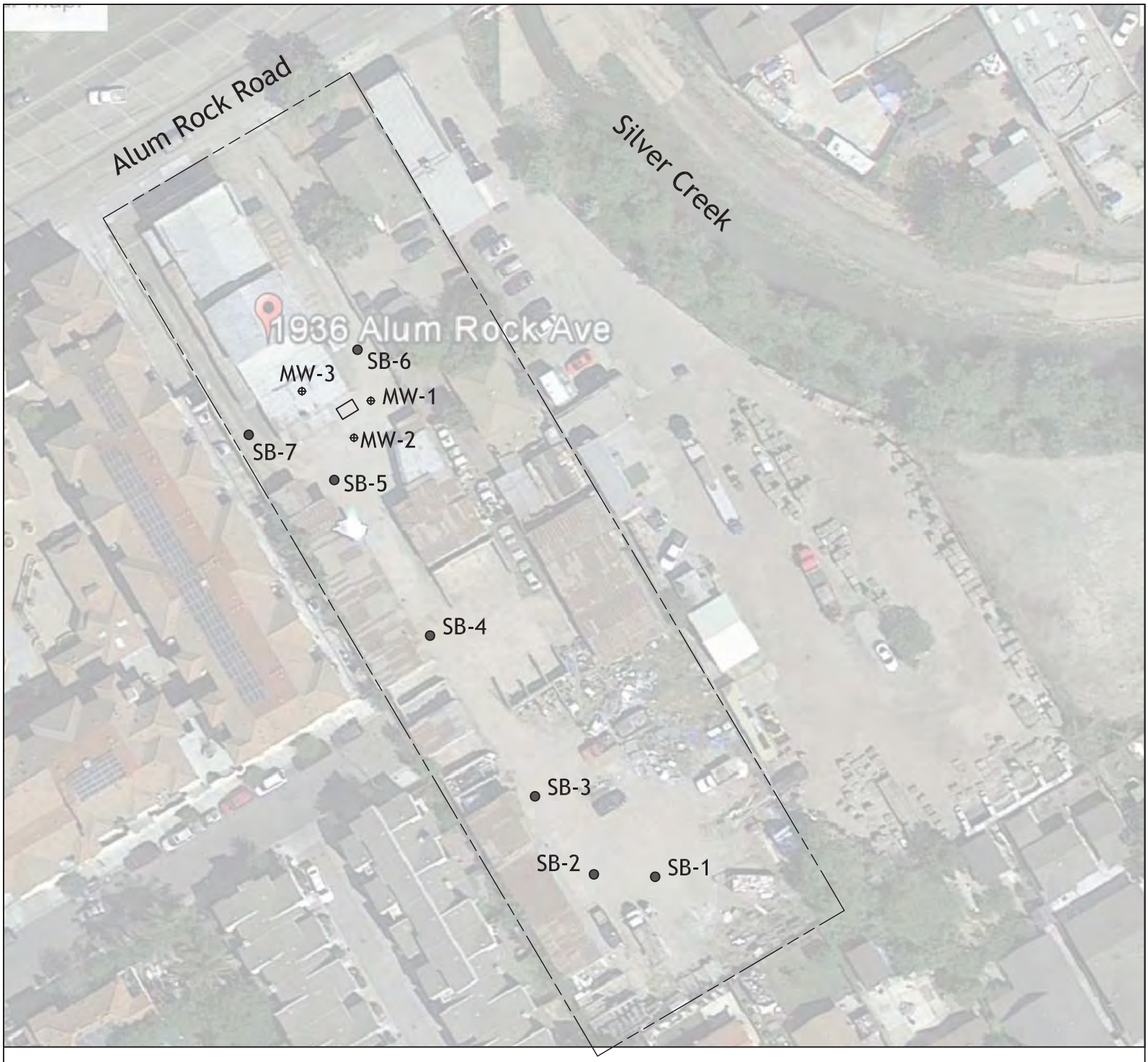
(4) Data from: Georestoration, Inc. August 7, 2007. "Well Installation Report", 50p.

Table 2: Summary Soil Sample Analytical Results, August 2016 Storage and Equipment Yard

Analyte	Units	B1:14-19"	B2:14-19"	B3:14-19"	B4:8-15"	ESL
Acenaphthylene	µg/kg	-	-	-	42.8 J	13000
Benzo(a)pyrene	µg/kg	-	-	-	43.8 J	38
Fluorene	µg/kg	-	-	-	96.1 J	8900
2-Methylnaphthalene	µg/kg	-	-	-	183 J	250
Phenanthrene	µg/kg	-	-	-	37.5 J	11000
C11-C22 Aromatics (Unadj.)	µg/kg	-	-	-	30100	-
C9-C18 Aliphatics	µg/kg	-	-	-	82900	1000000
C19-C36 Aliphatics	µg/kg	-	-	-	29500	3000000
C11-C22 Aromatics	µg/kg	-	-	-	29700	1000000
4,4'-DDE	µg/kg	*< 0.53*	*< 0.53*	*< 0.52*	1.6 J	1.7
Toxaphene	µg/kg	*< 33*	*< 33*	*< 32*	*< 33*	0.00042
TPH_{mo} (>C28-C40)	mg/kg	3.03 J	3.74 J	*< 2.6*	3.10 J	100
Arsenic	mg/kg	9.4	9.4	9.9	65.1	0.39
Barium	mg/kg	218	208	187	203	750
Chromium	mg/kg	67.7	65.7	61.0	64.8	1000
Cobalt	mg/kg	15.9	16.2	14.3	13.8	23
Copper	mg/kg	39.2	38.4	33.2	29.8	230
Lead	mg/kg	9.5	8.9	8.1	86.8	80
Mercury	mg/kg	*<0.040*	*<0.040*	0.043	0.072	6.7
Nickel	mg/kg	100	97.6	99.8	106	150
Vanadium	mg/kg	46.2	45.2	36.4	34.8	200
Zinc	mg/kg	79.0	75.1	67.6	164	600

Notes:

(1) Summary includes only analytes that occur above analytical detection limit in at least one sample.
(2) "<" indicates the analyte was not detected, the associated value is the analytical detection limit.
(3) "J" indicates a concentration above the analytical detection limit but below the reporting limit.
(4) Values which exceed environmental screening levels (ESLs) have been highlighted. ESLs for aliphatic and aromatic hydrocarbons are from MaDEP, 2004. All other ESLs are from SFBay RWQCB, December 2013.



Explanation

SB-1 Soil Boring Location, August 19, 2016

MW-1 Monitoring Well Location (installed 2007)

Former UST Location, circa 1984

N

Scale

0 50 ft

Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 www.RyanGES.com * 530.925.4932	1936 Alum Rock Road San Jose, CA	Figure 1: Site Map

Appendix A: Lithologic Log of Soil Borings

LITHOLOGIC LOG

JOSE & ARTURO

Date: 8/19/16 | Boring ID: B5 | Well ID: | Casing Diam: | Stick-up: | Project: 1936 AR

Time: | Boring Diam: 2" / 3.5 | Sand: | Casing Lngth: | | |

Geologist: RL RYAN | Boring TD: 24' | Bentonite: | Screen Lngth: | | |

Driller: CASCADE | DTW: DRY | Cement: | Screen Type: | | |

Depth (ft)	Thick.	Rec'vry	Grain Size	Color		Description
8"	8"	35/47		BLK		SAND GRAVEL; CLAY; DRY
4'	40"	37/47		DRK GRY		CLAY, DRK GRY; SLIGHTLY MOIST; HARD
17.5'	162"			BRWN		CLAY; MOIST; MALLEABLE; HARD; BRWN;
						SOFTER (SILTY?) @ 6-7'; 14.5-15.5', 16.5-17.5
24'	78"			MED GRY		CLAY; MOIST; MALLEABLE; HARD; MED GRY; POWER
						HARD DRILLING; SOFT @ 24-23.5; 22-22.5;
						DRK GRY AT BASE
						SAMPLES @ 8-12" & 24'
						BACKFILL W/ GROUT; CONCRETE @ SURFACE

LITHOLOGIC LOG

Date: 8/19/16 | Boring ID: B7 | Well ID: | Casing Diam: | Stick-up: | Project: 1936 AR
Time: 0911 | Boring Diam: 3" / 3.3" | Sand: | Casing Lngth: |
Geologist: RLRYAN | Boring TD: 27' | Bentonite: | Screen Lngth: |
Driller: CASCADE | DTW: DRY | Cement: | Screen Type:

Depth (ft)	Thick.	Rec'vry	Grain Size	Color		Description
4'	48"	28"/48"		DRK BWN		DRY TO CLAY SLIGHTLY MOIST; DARK BWN; GRAVEL IN TOP 8"
						HARD
23'	228"	20"/228"		MED BWN		CLAY; SLIGHTLY MOIST; MALLEABLE; HARD; MED BWN;
						SOFT ZONES (SILTY?) @ 5-6, 7-8, 13-15; 22-22.5.
27'	48"	100%		BWN/GRY		CLAY; WITH SAND; SOFT; MOIST; MED BWN & MED GRAY
						MOTTLED
						SAMPLES @ 10-15" & 26'
						CORE BASICALLY IDENTICAL TO B5
						BACKFILL W/ GROUT; CONCRETE @ SURFACE

LITHOLOGIC LOG

Date: 8/19/16 | Boring ID: B6 | Well ID: | Casing Diam: | Stick-up: | Project: 1936 AR

Time: 0935 | Boring Diam: 2" / 3.5" | Sand: | Casing Lngth: |

Geologist: RL RYAN | Boring TD: 24' | Bentonite: | Screen Lngth: |

Driller: CASCADE | DTW: DRY | Cement: | Screen Type: |

Depth (ft)	Thick.	Rec'vry	Grain Size	Color		Description
5'		32/48		BLK/TAN		SAND GRAVEL & CLAY; DRY; LOOSE; TOP 8" & 4 TO 4.5'
						ARE DRK GRAY; TAN CONCRETE @ 4.5'
8'		23/48				CLAY; DRY; HARD;
22'				MED BRN		CLAY; MED BRN; SLIGHTLY MOIST; SOFT (SILT) @ 14-15
						HARD; MALLEABLE; SLIGHT COLOR SHIFT TO GRY DOWNWARD
24'				DK GRY		CLAY; SOFT GR (SILTY); DRK GRAY; SLIGHTLY MOIST;
						SAMPLE @ 10-15'5; 7-7.5'; 24'
						BACKFILL W/ GROUT; CONCRETE @ SURFACE

LITHOLOGIC LOG

Date: 8/19/16 | Boring ID: SEE BELOW | Well ID: | Casing Diam: | Stick-up: | Project: 1936 AR

Time: | Boring Diam: 1.25"/2.25" | Sand: | Casing Lngth: | | |

Geologist: RL RYAN | Boring TD: 5' | Bentonite: | Screen Lngth: | | |

Driller: CASCADE | DTW: | Cement: | Screen Type: | | |

Depth (ft)	Thick.	Rec'vry	Grain Size	Color		Description
	B-1	51/60"				
10"						SAND, GRAVEL; CLAY; DRY; LOOSE; TAN.
60"						CLAY; SLIGHTLY MOIST; DRK GRY; MED BRN @ BOTTOM 1/2
						SOME SILT @ 55": SAMPLE 14-19"
	B-2	100%				
12"						SAME AS B1 SAMPLE 14-19"
60"						" " "
	B-3	100%				
12"						SAME AS B1 SAMPLE 14-19"
60"						" " "
	B-4	100%				SAME AS B1 SAMPLE 8-15"
6"						" " "
60"						
						BACKFILL W/ GROUT

SGS ACCUTEST — CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest NC Job #: C

Client / Reporting Information

Company Name: RNC ENVIRONMENTAL LLC
Address: 3326 M STREET
City: SACRAMENTO State: CA Zip: 95816
Project Contact:
Phone #: 889.495.3330
Samplers's Name: RICH RYAN 530.925.4932

Project Information

Project Name: 1936 AR
Street:
City: State:
Project #:
EMAIL:
Client Purchase Order #:

Requested Analysis

Matrix Codes

WW- Wastewater
GW- Ground Water
SW- Surface Water
SO- Soil
OI-Oil
WP-Wipe
LIQ - Non-aqueous Liquid
AIR
DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection: Date	Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	None	NaHSO4	MEOH	ENCORE	CAM 17 METALS 6010B / 7000	ORGANOCHLORINE PEST 8081A	TPH ext 8015M	TPH ext 8015M	TPH modified 8015M	VOCs 8260	MADEP EPH	HOLD				LAB USE ONLY
	B1: 14-19"	8/19		RLR	SOIL	1					✓				✓	✓			✓							
	B2: 14-19"					1									✓	✓			✓							
	B3: 14-19"					1									✓	✓			✓							
	B4: 8-15"					2									✓	✓			✓		✓					
	B5: 8-12"					1																✓				
	B5: 24'					2											✓	✓		✓						
	B6: 7.5-8.0"					1																✓				
	B6: 24'					2											✓	✓		✓						
	B7: 10-15"					1											[illegible]					✓				
	B7: 26'	↓			↓	2											✓	✓		✓						

Turnaround Time (Business days)

Approved By:/ Date:

- [ ] 10 Day
- [✓] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

EMAIL RESULTS TO
NEIL@RNC-ENVIRO.COM
RICH@RYANGES.COM

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	[signature]	8/19/16 1709	1 [signature]	2		2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N	Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice Y / N; Cooler Temp. ____ oC

CASCADE DRILLING DAILY WORK REPORT

CASCADE DRILLING, L.P.
LEADERS IN SAFETY

Boise, ID (208) 345-0878
Fife, WA (253) 883-5200
Peoria, AZ (623) 935-0124
Upland, CA (562) 929-8176
Las Vegas, NV (702) 643-0023
Portland, OR (503) 775-4118
Reno, NV (530) 682-3068
Richmond, CA (510) 478-0858
Sacramento, CA (916) 638-1169
San Diego, CA (619) 596-0644
Seattle, WA (425) 485-8908

CLIENT	PROJECT NO	DATE	DAY
		9-19-16	Friday

JOB LOCATION	DIG ALERT #	CD-LP#
1736 Alum Rock ave. San Jose CA		1091623438

Well # / Bore #	Depth Drilled	DESCRIPTION OF WORK (Please explain reasons for Down Time and Standby Time and Shop Time)	HOURS Start	HOURS Stop	Total Hrs	Charge Hrs
SB-1	24'	AM Shop Time - Review, load up	5:00	5:30	.50	.50
SB-2	27'	Travel to Site	5:30	7:00	1.50	1.5
SB-3	27'	Safety meeting, Set up	7:00	7:30	.50	.50
SB-4	5'	We start drilling at 35 past locations	7:30			
SB-5	5'	SB-1, SB-2, SB-3 collect soil samples				
SB-6	5'	Next locations push to 5' each use macrocore		11:00	3.5	3.5
SB-7	5'	Finish all locations, patch completion	11:00	12:00		
		load up, clean up	12:00	12:30		
		Lunch	12:30	1:00		
		Travel to Shop	1:00			
		PM Shop Time				
Total Ft. 95'		TOTAL CHARGEABLE RIG HOURS				

RIG ENGINE HOURS: START _____ STOP _____ TOTAL _____

EQUIPMENT				CASING				MATERIALS			
								ITEM	QTY	ITEM	QTY
DRILL RIG #	1712	COMPRESSOR/JACKHAMMER		TYPE ___ SLOT ___	2	4		SAND		WELL COVER 8"	
SUPPORT TRUCK #		SNOW FENCE RENTAL		20' SCREEN				READYMIX		WELL COVER 12"	
SUPPORT TRUCK #		CONTINUOUS SAMPLER		10' SCREEN				QUICKSET	1	MONUMENT CASING	
TRAILER #	285	CONTINUOUS SAMPLER FOOTAGE		5' SCREEN				PORTLAND	7	BOLLARDS	
BOBCAT		# OF CORE CUTS		20' BLANK				ASPHALT		DRUMS	1
AUTO HAMMER		# OF BULLDOG CUTS		10' BLANK				BENTONITE GROUT		HOLE COVER PLATES	
GROUT MIXER		# OF SERVICE RUNS		5' BLANK				BENTONITE CHIPS		PLASTIC SHEETING	
GROUT PUMP		# OF SAW CUTS		5' PP SCREEN				BENTONITE POWDER		TRAFFIC CONTROL	
PERISTALTIC PUMP		PORTABLE RESTROOM		10' PP SCREEN				BENTONITE PELLETS		CORE BOXES	
FORKLIFT/HOPPER				SLIP CAP				BENTONITE GRANULAR		PLYWOOD	
LABOR				THREADED CAPS				SAMPLER TUBES		WATER SAMPLES	
CREW WITH PER DIEM		CHARGEABLE EXTRA LABOR HRS		LOCKING CAPS				SHELBY TUBES		HYDROPUNCH SAMPLES	
NAME	SIGNATURE	SHOP	DRILL	TOTAL HRS	DRIVE SHOE			PROBE POINTS		AUGER PLUGS	
Nikko Sanchez					CENTRALIZERS			GW PROBE POINTS		DRILL OUT BITS	
Jose Contreras					LOCKS			MACRO LINERS 5'	4		
								SAMPLER SHOE			
					UTILITIES FOUND OR HIT			Heating 4'25			

REMARKS

Client Signature _____ Operator Signature Nikko Sanchez

Appendix B: Copies of Laboratory Analytical Report Sheets

e-Hardcopy 2.0
Automated Report

Technical Report for

RNC Environmental

1936 AR

1936 AR

SGS Accutest Job Number: C46897

Sampling Date: 08/19/16

Report to:

RNC Environmental
3326 M Street
Sacramento, CA 95816
neil@rnc-enviro.com; rich@ryanges.com

ATTN: Neil O'Hara

Total number of pages in report: **105**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

Table of Contents

Sections: 1 2 3 4 5 6 7 8 9 10 11 12 13

Sample Summary

RNC Environmental

Job No: C46897

1936 AR
Project No: 1936 AR

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C46897-1	08/19/16	00:00	RLR	08/19/16	SO	Soil	B1:14-19"
C46897-2	08/19/16	00:00	RLR	08/19/16	SO	Soil	B2:14-19"
C46897-3	08/19/16	00:00	RLR	08/19/16	SO	Soil	B3:14-19"
C46897-4	08/19/16	00:00	RLR	08/19/16	SO	Soil	B4:8-15"
C46897-6	08/19/16	00:00	RLR	08/19/16	SO	Soil	B5:24"
C46897-8	08/19/16	00:00	RLR	08/19/16	SO	Soil	B6:24"
C46897-10	08/19/16	00:00	RLR	08/19/16	SO	Soil	B7:26"

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: C46897
Account: RNC Environmental
Project: 1936 AR
Collected: 08/19/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C46897-1	**B1:14-19"**					
TPH (> C28-C40) [a]		3.03 J	4.9	2.5	mg/kg	SW846 8015C
Arsenic [b]		9.4	2.0		mg/kg	SW846 6010C
Barium [b]		218	40		mg/kg	SW846 6010C
Chromium [b]		67.7	2.0		mg/kg	SW846 6010C
Cobalt [b]		15.9	9.9		mg/kg	SW846 6010C
Copper [b]		39.2	5.0		mg/kg	SW846 6010C
Lead [b]		9.5	4.0		mg/kg	SW846 6010C
Nickel [b]		100	7.9		mg/kg	SW846 6010C
Vanadium [b]		46.2	9.9		mg/kg	SW846 6010C
Zinc [b]		79.0	4.0		mg/kg	SW846 6010C
C46897-2	**B2:14-19"**					
TPH (> C28-C40) [a]		3.74 J	5.1	2.5	mg/kg	SW846 8015C
Arsenic [b]		9.4	2.0		mg/kg	SW846 6010C
Barium [b]		208	41		mg/kg	SW846 6010C
Chromium [b]		65.7	2.0		mg/kg	SW846 6010C
Cobalt [b]		16.2	10		mg/kg	SW846 6010C
Copper [b]		38.4	5.1		mg/kg	SW846 6010C
Lead [b]		8.9	4.1		mg/kg	SW846 6010C
Nickel [b]		97.6	8.1		mg/kg	SW846 6010C
Vanadium [b]		45.2	10		mg/kg	SW846 6010C
Zinc [b]		75.1	4.1		mg/kg	SW846 6010C
C46897-3	**B3:14-19"**					
Arsenic [b]		9.9	2.0		mg/kg	SW846 6010C
Barium [b]		187	40		mg/kg	SW846 6010C
Chromium [b]		61.0	2.0		mg/kg	SW846 6010C
Cobalt [b]		14.3	10		mg/kg	SW846 6010C
Copper [b]		33.2	5.0		mg/kg	SW846 6010C
Lead [b]		8.1	4.0		mg/kg	SW846 6010C
Mercury [a]		0.043	0.038		mg/kg	SW846 7471B
Nickel [b]		99.8	8.1		mg/kg	SW846 6010C
Vanadium [b]		36.4	10		mg/kg	SW846 6010C
Zinc [b]		67.6	4.0		mg/kg	SW846 6010C
C46897-4	**B4:8-15"**					
Acenaphthylene [c]		42.8 J	420	17	ug/kg	MADEP EPH REV 1.1
Benzo(a)pyrene [c]		43.8 J	420	13	ug/kg	MADEP EPH REV 1.1
Fluorene [c]		96.1 J	420	18	ug/kg	MADEP EPH REV 1.1
2-Methylnaphthalene [c]		183 J	420	28	ug/kg	MADEP EPH REV 1.1

Summary of Hits

Job Number: C46897
Account: RNC Environmental
Project: 1936 AR
Collected: 08/19/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Phenanthrene [c]		37.5 J	420	19	ug/kg	MADEP EPH REV 1.1
C11-C22 Aromatics (Unadj.) [c]		30100	17000	4000	ug/kg	MADEP EPH REV 1.1
C9-C18 Aliphatics [c]		82900	8400	2500	ug/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics [c]		29500	17000	6800	ug/kg	MADEP EPH REV 1.1
C11-C22 Aromatics [c]		29700	17000	4000	ug/kg	MADEP EPH REV 1.1
TPH (> C28-C40) [a]		3.10 J	5.0	2.5	mg/kg	SW846 8015C
4,4'-DDE [d]		1.6 J	3.3	0.53	ug/kg	SW846 8081B
Arsenic [b]		65.1	2.4		mg/kg	SW846 6010C
Barium [b]		203	48		mg/kg	SW846 6010C
Chromium [b]		64.8	2.4		mg/kg	SW846 6010C
Cobalt [b]		13.8	12		mg/kg	SW846 6010C
Copper [b]		29.8	6.0		mg/kg	SW846 6010C
Lead [b]		86.8	4.8		mg/kg	SW846 6010C
Mercury [a]		0.072	0.040		mg/kg	SW846 7471B
Nickel [b]		106	9.5		mg/kg	SW846 6010C
Vanadium [b]		34.8	12		mg/kg	SW846 6010C
Zinc [b]		164	4.8		mg/kg	SW846 6010C
C46897-6	**B5:24"**					
Methylene Chloride [e]		9.6 JB	10	4.0	ug/kg	SW846 8260B
C46897-8	**B6:24"**					
Acetone [f]		16.2 J	49	10	ug/kg	SW846 8260B
Methylene Chloride [e]		13.9 B	9.8	3.9	ug/kg	SW846 8260B
C46897-10	**B7:26"**					
Methylene Chloride [e]		9.9 B	9.9	4.0	ug/kg	SW846 8260B

(a) Analysis performed at SGS Accutest, Orlando FL.
(b) Sample dilution required due to difficult matrix. Analysis performed at SGS Accutest, Orlando FL.
(c) Analysis performed at SGS Accutest, Marlborough, MA.
(d) All hits confirmed by dual column analysis. Analysis performed at SGS Accutest, Orlando FL.
(e) Sample was received in a bulk container but was not preserved within 48 hours of sampling. Reported results are considered minimum values. Analysis performed at SGS Accutest, Orlando FL. Suspected laboratory contaminant.
(f) Sample was received in a bulk container but was not preserved within 48 hours of sampling. Reported results are considered minimum values. Analysis performed at SGS Accutest, Orlando FL.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	B1:14-19"		
Lab Sample ID:	C46897-1	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8081B SW846 3546	**Percent Solids:**	n/a
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	TT378856.D	1	08/25/16	AFL	08/24/16	F:OP61612	F:GTT1846
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	5.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	1.7	0.50	ug/kg	
319-84-6	alpha-BHC	ND	1.7	0.51	ug/kg	
319-85-7	beta-BHC	ND	1.7	0.51	ug/kg	
319-86-8	delta-BHC	ND	1.7	0.48	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	1.7	0.51	ug/kg	
12789-03-6	Chlordane	ND	17	6.6	ug/kg	
60-57-1	Dieldrin	ND	1.7	0.62	ug/kg	
72-54-8	4,4'-DDD	ND	3.3	0.57	ug/kg	
72-55-9	4,4'-DDE	ND	3.3	0.53	ug/kg	
50-29-3	4,4'-DDT	ND	3.3	0.65	ug/kg	
72-20-8	Endrin	ND	3.3	0.62	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	0.62	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	0.62	ug/kg	
959-98-8	Endosulfan-I	ND	1.7	0.48	ug/kg	
33213-65-9	Endosulfan-II	ND	1.7	0.61	ug/kg	
76-44-8	Heptachlor	ND	1.7	0.56	ug/kg	
1024-57-3	Heptachlor epoxide	ND	1.7	0.58	ug/kg	
72-43-5	Methoxychlor	ND	3.3	0.85	ug/kg	
8001-35-2	Toxaphene	ND	83	33	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		50-122%
2051-24-3	Decachlorobiphenyl	72%		50-133%

(a) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B1:14-19"		
Lab Sample ID:	C46897-1	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C SW846 3546	**Percent Solids:**	n/a
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	YR4660.D	1	08/31/16	AFL	08/24/16	F:OP61615	F:GYR115
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (> C28-C40)	3.03	4.9	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		56-122%

(a) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B1:14-19"
Lab Sample ID: C46897-1
Matrix: SO - Soil
Project: 1936 AR

Date Sampled: 08/19/16
Date Received: 08/19/16
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 4.0	4.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Arsenic [a]	9.4	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Barium [a]	218	40	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Beryllium [a]	< 0.99	0.99	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Cadmium [a]	< 0.79	0.79	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Chromium [a]	67.7	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Cobalt [a]	15.9	9.9	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Copper [a]	39.2	5.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Lead [a]	9.5	4.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Mercury [b]	< 0.040	0.040	mg/kg	1	08/24/16	08/24/16	AFL	SW846 7471B [1]	SW846 7471B [3]
Molybdenum [a]	< 9.9	9.9	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Nickel [a]	100	7.9	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Selenium [a]	< 4.0	4.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Silver [a]	< 2.0	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Thallium [a]	< 2.0	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Vanadium [a]	46.2	9.9	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Zinc [a]	79.0	4.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: F:MA13360
(2) Instrument QC Batch: F:MA13364
(3) Prep QC Batch: F:MP30749
(4) Prep QC Batch: F:MP30752

(a) Sample dilution required due to difficult matrix. Analysis performed at SGS Accutest, Orlando FL.
(b) Analysis performed at SGS Accutest, Orlando FL.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B2:14-19"		
Lab Sample ID:	C46897-2	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8081B SW846 3546	**Percent Solids:**	n/a
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	TT378859.D	1	08/25/16	AFL	08/24/16	F:OP61612	F:GTT1846
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	5.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	1.7	0.50	ug/kg	
319-84-6	alpha-BHC	ND	1.7	0.51	ug/kg	
319-85-7	beta-BHC	ND	1.7	0.51	ug/kg	
319-86-8	delta-BHC	ND	1.7	0.48	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	1.7	0.51	ug/kg	
12789-03-6	Chlordane	ND	17	6.6	ug/kg	
60-57-1	Dieldrin	ND	1.7	0.62	ug/kg	
72-54-8	4,4'-DDD	ND	3.3	0.57	ug/kg	
72-55-9	4,4'-DDE	ND	3.3	0.53	ug/kg	
50-29-3	4,4'-DDT	ND	3.3	0.65	ug/kg	
72-20-8	Endrin	ND	3.3	0.62	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	0.62	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	0.62	ug/kg	
959-98-8	Endosulfan-I	ND	1.7	0.48	ug/kg	
33213-65-9	Endosulfan-II	ND	1.7	0.61	ug/kg	
76-44-8	Heptachlor	ND	1.7	0.56	ug/kg	
1024-57-3	Heptachlor epoxide	ND	1.7	0.58	ug/kg	
72-43-5	Methoxychlor	ND	3.3	0.85	ug/kg	
8001-35-2	Toxaphene	ND	83	33	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		50-122%
2051-24-3	Decachlorobiphenyl	63%		50-133%

(a) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B2:14-19"		
Lab Sample ID:	C46897-2	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C SW846 3546	**Percent Solids:**	n/a
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	YR4661.D	1	08/31/16	AFL	08/24/16	F:OP61615	F:GYR115
Run #2							

	Initial Weight	Final Volume
Run #1	19.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (> C28-C40)	3.74	5.1	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		56-122%

(a) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B2:14-19"
Lab Sample ID: C46897-2
Matrix: SO - Soil
Project: 1936 AR

Date Sampled: 08/19/16
Date Received: 08/19/16
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 4.1	4.1	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Arsenic [a]	9.4	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Barium [a]	208	41	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Beryllium [a]	< 1.0	1.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Cadmium [a]	< 0.81	0.81	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Chromium [a]	65.7	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Cobalt [a]	16.2	10	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Copper [a]	38.4	5.1	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Lead [a]	8.9	4.1	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Mercury [b]	< 0.040	0.040	mg/kg	1	08/24/16	08/24/16	AFL	SW846 7471B [1]	SW846 7471B [3]
Molybdenum [a]	< 10	10	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Nickel [a]	97.6	8.1	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Selenium [a]	< 4.1	4.1	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Silver [a]	< 2.0	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Thallium [a]	< 2.0	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Vanadium [a]	45.2	10	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Zinc [a]	75.1	4.1	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: F:MA13360
(2) Instrument QC Batch: F:MA13364
(3) Prep QC Batch: F:MP30749
(4) Prep QC Batch: F:MP30752

(a) Sample dilution required due to difficult matrix. Analysis performed at SGS Accutest, Orlando FL.
(b) Analysis performed at SGS Accutest, Orlando FL.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B3:14-19"		
Lab Sample ID:	C46897-3	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8081B SW846 3546	**Percent Solids:**	n/a
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	TT378860.D	1	08/25/16	AFL	08/24/16	F:OP61612	F:GTT1846
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	5.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	1.6	0.49	ug/kg	
319-84-6	alpha-BHC	ND	1.6	0.50	ug/kg	
319-85-7	beta-BHC	ND	1.6	0.49	ug/kg	
319-86-8	delta-BHC	ND	1.6	0.47	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	1.6	0.49	ug/kg	
12789-03-6	Chlordane	ND	16	6.5	ug/kg	
60-57-1	Dieldrin	ND	1.6	0.61	ug/kg	
72-54-8	4,4'-DDD	ND	3.2	0.55	ug/kg	
72-55-9	4,4'-DDE	ND	3.2	0.52	ug/kg	
50-29-3	4,4'-DDT	ND	3.2	0.63	ug/kg	
72-20-8	Endrin	ND	3.2	0.60	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.2	0.60	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.2	0.60	ug/kg	
959-98-8	Endosulfan-I	ND	1.6	0.47	ug/kg	
33213-65-9	Endosulfan-II	ND	1.6	0.60	ug/kg	
76-44-8	Heptachlor	ND	1.6	0.55	ug/kg	
1024-57-3	Heptachlor epoxide	ND	1.6	0.56	ug/kg	
72-43-5	Methoxychlor	ND	3.2	0.83	ug/kg	
8001-35-2	Toxaphene	ND	81	32	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		50-122%
2051-24-3	Decachlorobiphenyl	64%		50-133%

(a) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B3:14-19"		
Lab Sample ID:	C46897-3	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C SW846 3546	**Percent Solids:**	n/a
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	YR4662.D	1	08/31/16	AFL	08/24/16	F:OP61615	F:GYR115
Run #2							

	Initial Weight	Final Volume
Run #1	19.6 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (> C28-C40)	ND	5.1	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		56-122%

(a) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B3:14-19"
Lab Sample ID: C46897-3
Matrix: SO - Soil
Project: 1936 AR

Date Sampled: 08/19/16
Date Received: 08/19/16
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 4.0	4.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Arsenic [a]	9.9	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Barium [a]	187	40	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Beryllium [a]	< 1.0	1.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Cadmium [a]	< 0.81	0.81	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Chromium [a]	61.0	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Cobalt [a]	14.3	10	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Copper [a]	33.2	5.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Lead [a]	8.1	4.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Mercury [b]	0.043	0.038	mg/kg	1	08/24/16	08/24/16	AFL	SW846 7471B [1]	SW846 7471B [3]
Molybdenum [a]	< 10	10	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Nickel [a]	99.8	8.1	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Selenium [a]	< 4.0	4.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Silver [a]	< 2.0	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Thallium [a]	< 2.0	2.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Vanadium [a]	36.4	10	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Zinc [a]	67.6	4.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: F:MA13360
(2) Instrument QC Batch: F:MA13364
(3) Prep QC Batch: F:MP30749
(4) Prep QC Batch: F:MP30752

(a) Sample dilution required due to difficult matrix. Analysis performed at SGS Accutest, Orlando FL.
(b) Analysis performed at SGS Accutest, Orlando FL.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B4:8-15"		
Lab Sample ID:	C46897-4	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8081B SW846 3546	**Percent Solids:**	n/a
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	TT378861.D	1	08/25/16	AFL	08/24/16	F:OP61612	F:GTT1846
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	5.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	1.7	0.50	ug/kg	
319-84-6	alpha-BHC	ND	1.7	0.51	ug/kg	
319-85-7	beta-BHC	ND	1.7	0.51	ug/kg	
319-86-8	delta-BHC	ND	1.7	0.48	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	1.7	0.51	ug/kg	
12789-03-6	Chlordane	ND	17	6.6	ug/kg	
60-57-1	Dieldrin	ND	1.7	0.62	ug/kg	
72-54-8	4,4'-DDD	ND	3.3	0.57	ug/kg	
72-55-9	4,4'-DDE	1.6	3.3	0.53	ug/kg	J
50-29-3	4,4'-DDT	ND	3.3	0.65	ug/kg	
72-20-8	Endrin	ND	3.3	0.62	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	0.62	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	0.62	ug/kg	
959-98-8	Endosulfan-I	ND	1.7	0.48	ug/kg	
33213-65-9	Endosulfan-II	ND	1.7	0.61	ug/kg	
76-44-8	Heptachlor	ND	1.7	0.56	ug/kg	
1024-57-3	Heptachlor epoxide	ND	1.7	0.58	ug/kg	
72-43-5	Methoxychlor	ND	3.3	0.85	ug/kg	
8001-35-2	Toxaphene	ND	83	33	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		50-122%
2051-24-3	Decachlorobiphenyl	55%		50-133%

(a) All hits confirmed by dual column analysis. Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B4:8-15"		
Lab Sample ID:	C46897-4	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	n/a
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	DE15342.D	1	08/26/16	AMA	08/23/16	M:OP48512	M:GDE856
Run #2							

	Initial Weight	Final Volume
Run #1	11.9 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	420	29	ug/kg	
208-96-8	Acenaphthylene	42.8	420	17	ug/kg	J
120-12-7	Anthracene	ND	420	23	ug/kg	
56-55-3	Benzo(a)anthracene	ND	420	15	ug/kg	
50-32-8	Benzo(a)pyrene	43.8	420	13	ug/kg	J
205-99-2	Benzo(b)fluoranthene	ND	420	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	420	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	420	17	ug/kg	
218-01-9	Chrysene	ND	420	14	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	420	15	ug/kg	
206-44-0	Fluoranthene	ND	420	18	ug/kg	
86-73-7	Fluorene	96.1	420	18	ug/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	420	17	ug/kg	
91-57-6	2-Methylnaphthalene	183	420	28	ug/kg	J
91-20-3	Naphthalene	ND	420	31	ug/kg	
85-01-8	Phenanthrene	37.5	420	19	ug/kg	J
129-00-0	Pyrene	ND	420	15	ug/kg	
	C11-C22 Aromatics (Unadj.)	30100	17000	4000	ug/kg	
	C9-C18 Aliphatics	82900	8400	2500	ug/kg	
	C19-C36 Aliphatics	29500	17000	6800	ug/kg	
	C11-C22 Aromatics	29700	17000	4000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	73%		40-140%
321-60-8	2-Fluorobiphenyl	71%		40-140%
580-13-2	2-Bromonaphthalene	88%		40-140%
3386-33-2	1-Chlorooctadecane	101%		40-140%

(a) Analysis performed at SGS Accutest, Marlborough, MA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B4:8-15"		
Lab Sample ID:	C46897-4	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C SW846 3546	**Percent Solids:**	n/a
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	YR4663.D	1	08/31/16	AFL	08/24/16	F:OP61615	F:GYR115
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (> C28-C40)	3.10	5.0	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		56-122%

(a) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B4:8-15"
Lab Sample ID: C46897-4
Matrix: SO - Soil
Project: 1936 AR

Date Sampled: 08/19/16
Date Received: 08/19/16
Percent Solids: n/a

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 4.8	4.8	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Arsenic [a]	65.1	2.4	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Barium [a]	203	48	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Beryllium [a]	< 1.2	1.2	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Cadmium [a]	< 0.95	0.95	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Chromium [a]	64.8	2.4	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Cobalt [a]	13.8	12	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Copper [a]	29.8	6.0	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Lead [a]	86.8	4.8	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Mercury [b]	0.072	0.040	mg/kg	1	08/24/16	08/24/16	AFL	SW846 7471B [1]	SW846 7471B [3]
Molybdenum [a]	< 12	12	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Nickel [a]	106	9.5	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Selenium [a]	< 4.8	4.8	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Silver [a]	< 2.4	2.4	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Thallium [a]	< 2.4	2.4	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Vanadium [a]	34.8	12	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]
Zinc [a]	164	4.8	mg/kg	5	08/24/16	08/24/16	AFL	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: F:MA13360
(2) Instrument QC Batch: F:MA13364
(3) Prep QC Batch: F:MP30749
(4) Prep QC Batch: F:MP30752

(a) Sample dilution required due to difficult matrix. Analysis performed at SGS Accutest, Orlando FL.
(b) Analysis performed at SGS Accutest, Orlando FL.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	B5:24"		
Lab Sample ID:	C46897-6	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L50481.D	1	08/19/16	JT	n/a	n/a	VL1516
Run #2							

	Initial Weight
Run #1	5.05 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	40	9.9	ug/kg	
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-86-1	Bromobenzene	ND	5.0	0.50	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.50	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.50	ug/kg	
75-25-2	Bromoform	ND	5.0	0.50	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.50	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.99	ug/kg	
67-66-3	Chloroform	ND	5.0	0.50	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.50	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.50	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	0.50	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	0.50	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.4	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.50	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.50	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.50	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.99	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	0.50	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	0.50	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	0.50	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B5:24"		
Lab Sample ID:	C46897-6	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	0.50	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
591-78-6	2-Hexanone	ND	20	2.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	0.99	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.50	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	20	2.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	0.99	ug/kg	
74-87-3	Methyl chloride	ND	5.0	0.99	ug/kg	
74-95-3	Methylene bromide	ND	5.0	0.50	ug/kg	
75-09-2	Methylene chloride	ND	20	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	20	2.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	0.99	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.99	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/kg	
100-42-5	Styrene	ND	5.0	0.50	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	9.9	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.50	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.50	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.50	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.50	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.99	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.99	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.99	ug/kg	
127-18-4	Tetrachloroethylene [b]	ND	5.0	0.59	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	0.50	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.99	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	0.99	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	0.99	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-140%
2037-26-5	Toluene-D8	102%		87-113%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B5:24"		
Lab Sample ID:	C46897-6	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%		81-115%

(a) All results reported on a wet weight basis.
(b) Associated ICV outside of control limits (biased high); not detected in sample.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B5:24"		
Lab Sample ID:	C46897-6	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	Y30734.D	1	08/24/16	AFL	n/a	n/a	F:VY1236
Run #2							

	Initial Weight	Final Volume
Run #1	5.02 g	5.0 ml
Run #2		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.3	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.1	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	25	9.0	ug/kg	
104-51-8	n-Butylbenzene [c]	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
56-23-5	Carbon Tetrachloride	ND	5.0	1.8	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.2	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.0	ug/kg	
106-43-4	p-Chlorotoluene [c]	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.2	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.5	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.7	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.2	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.6	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.3	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B5:24"		
Lab Sample ID:	C46897-6	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
108-20-3	Di-Isopropyl Ether	ND	5.0	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	1.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.2	ug/kg	
591-78-6	2-Hexanone	ND	25	8.7	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
74-83-9	Methyl Bromide	ND	5.0	2.6	ug/kg	
74-87-3	Methyl Chloride	ND	5.0	2.4	ug/kg	
74-95-3	Methylene Bromide	ND	5.0	1.8	ug/kg	
75-09-2	Methylene Chloride [d]	9.6	10	4.0	ug/kg	JB
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.1	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.2	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.3	ug/kg	
75-65-0	Tert-Butyl Alcohol	ND	50	14	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	2.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.1	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene [c]	ND	5.0	1.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.8	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.9	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl Chloride	ND	5.0	1.7	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		75-124%
17060-07-0	1,2-Dichloroethane-D4	118%		72-135%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B5:24"		
Lab Sample ID:	C46897-6	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	96%		75-126%
460-00-4	4-Bromofluorobenzene	101%		71-133%

(a) All results reported on a wet weight basis.
(b) Sample was received in a bulk container but was not preserved within 48 hours of sampling. Reported results are considered minimum values. Analysis performed at SGS Accutest, Orlando FL.
(c) Associated BS recovery outside control limits.
(d) Suspected laboratory contaminant.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B5:24"		
Lab Sample ID:	C46897-6	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	UV075469.D	1	08/24/16	AFL	n/a	n/a	F:GUV4019
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.99 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%		56-149%
98-08-8	aaa-Trifluorotoluene	100%		66-132%

(a) All results reported on a wet weight basis.
(b) Sample was received in a bulk container but was not preserved within 48 hours of sampling. Reporteed results are considered minimum values. Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B5:24"		
Lab Sample ID:	C46897-6	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C SW846 3546	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	YR4651.D	1	08/31/16	AFL	08/24/16	F:OP61615	F:GYR115
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		56-122%

(a) All results reported on a wet weight basis.
(b) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B6:24"		
Lab Sample ID:	C46897-8	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L50482.D	1	08/19/16	JT	n/a	n/a	VL1516
Run #2							

	Initial Weight
Run #1	5.03 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	40	9.9	ug/kg	
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-86-1	Bromobenzene	ND	5.0	0.50	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.50	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.50	ug/kg	
75-25-2	Bromoform	ND	5.0	0.50	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.50	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.99	ug/kg	
67-66-3	Chloroform	ND	5.0	0.50	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.50	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.50	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	0.50	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	0.50	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.4	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.50	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.50	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.50	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.99	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	0.50	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	0.50	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	0.50	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B6:24"		
Lab Sample ID:	C46897-8	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	0.50	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
591-78-6	2-Hexanone	ND	20	2.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	0.99	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.50	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	20	2.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	0.99	ug/kg	
74-87-3	Methyl chloride	ND	5.0	0.99	ug/kg	
74-95-3	Methylene bromide	ND	5.0	0.50	ug/kg	
75-09-2	Methylene chloride	ND	20	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	20	2.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	0.99	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.99	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/kg	
100-42-5	Styrene	ND	5.0	0.50	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	9.9	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.50	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.50	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.50	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.50	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.99	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.99	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.99	ug/kg	
127-18-4	Tetrachloroethylene [b]	ND	5.0	0.60	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	0.50	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.99	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	0.99	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	0.99	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		72-140%
2037-26-5	Toluene-D8	102%		87-113%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B6:24"		
Lab Sample ID:	C46897-8	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		81-115%

(a) All results reported on a wet weight basis.
(b) Associated ICV outside of control limits (biased high); not detected in sample.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B6:24"		
Lab Sample ID:	C46897-8	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	Y30736.D	1	08/24/16	AFL	n/a	n/a	F:VY1236
Run #2							

	Initial Weight	Final Volume
Run #1	5.12 g	5.0 ml
Run #2		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	16.2	49	10	ug/kg	J
71-43-2	Benzene	ND	4.9	1.2	ug/kg	
108-86-1	Bromobenzene	ND	4.9	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	4.9	1.1	ug/kg	
75-27-4	Bromodichloromethane	ND	4.9	0.98	ug/kg	
75-25-2	Bromoform	ND	4.9	0.98	ug/kg	
78-93-3	2-Butanone (MEK)	ND	24	8.9	ug/kg	
104-51-8	n-Butylbenzene [c]	ND	4.9	0.98	ug/kg	
135-98-8	sec-Butylbenzene	ND	4.9	0.98	ug/kg	
98-06-6	tert-Butylbenzene	ND	4.9	0.98	ug/kg	
56-23-5	Carbon Tetrachloride	ND	4.9	1.7	ug/kg	
108-90-7	Chlorobenzene	ND	4.9	0.98	ug/kg	
75-00-3	Chloroethane	ND	4.9	2.0	ug/kg	
67-66-3	Chloroform	ND	4.9	1.2	ug/kg	
95-49-8	o-Chlorotoluene	ND	4.9	0.98	ug/kg	
106-43-4	p-Chlorotoluene [c]	ND	4.9	0.98	ug/kg	
124-48-1	Dibromochloromethane	ND	4.9	0.98	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.9	2.2	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.9	0.98	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.9	2.4	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	4.9	0.98	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	4.9	0.98	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	4.9	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.9	1.6	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.9	0.98	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.9	0.98	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.9	1.2	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	4.9	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.9	1.6	ug/kg	
142-28-9	1,3-Dichloropropane	ND	4.9	0.98	ug/kg	
594-20-7	2,2-Dichloropropane	ND	4.9	0.98	ug/kg	
563-58-6	1,1-Dichloropropene	ND	4.9	1.3	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B6:24"		
Lab Sample ID:	C46897-8	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	4.9	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.9	0.98	ug/kg	
108-20-3	Di-Isopropyl Ether	ND	4.9	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	1.1	ug/kg	
637-92-3	Ethyl Tert Butyl Ether	ND	4.9	1.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	4.9	2.1	ug/kg	
591-78-6	2-Hexanone	ND	24	8.5	ug/kg	
98-82-8	Isopropylbenzene	ND	4.9	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	4.9	0.98	ug/kg	
74-83-9	Methyl Bromide	ND	4.9	2.5	ug/kg	
74-87-3	Methyl Chloride	ND	4.9	2.3	ug/kg	
74-95-3	Methylene Bromide	ND	4.9	1.8	ug/kg	
75-09-2	Methylene Chloride [d]	13.9	9.8	3.9	ug/kg	B
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	24	10	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	1.1	ug/kg	
91-20-3	Naphthalene	ND	4.9	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	4.9	1.2	ug/kg	
100-42-5	Styrene	ND	4.9	0.98	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	1.3	ug/kg	
75-65-0	Tert-Butyl Alcohol	ND	49	13	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	4.9	1.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.9	2.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	4.9	1.3	ug/kg	
108-88-3	Toluene	ND	4.9	1.1	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.9	1.9	ug/kg	
120-82-1	1,2,4-Trichlorobenzene [c]	ND	4.9	1.4	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.9	0.98	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.9	1.8	ug/kg	
79-01-6	Trichloroethylene	ND	4.9	1.1	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.9	1.8	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	4.9	1.6	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	4.9	0.98	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.9	0.98	ug/kg	
75-01-4	Vinyl Chloride	ND	4.9	1.6	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		75-124%
17060-07-0	1,2-Dichloroethane-D4	113%		72-135%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B6:24"		
Lab Sample ID:	C46897-8	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	100%		75-126%
460-00-4	4-Bromofluorobenzene	106%		71-133%

(a) All results reported on a wet weight basis.
(b) Sample was received in a bulk container but was not preserved within 48 hours of sampling. Reported results are considered minimum values. Analysis performed at SGS Accutest, Orlando FL.
(c) Associated BS recovery outside control limits.
(d) Suspected laboratory contaminant.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B6:24"		
Lab Sample ID:	C46897-8	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	UV075470.D	1	08/24/16	AFL	n/a	n/a	F:GUV4019
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.99 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		56-149%
98-08-8	aaa-Trifluorotoluene	99%		66-132%

(a) All results reported on a wet weight basis.
(b) Sample was received in a bulk container but was not preserved within 48 hours of sampling. Reported resulta are considered minimum values. Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B6:24"		
Lab Sample ID:	C46897-8	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C SW846 3546	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	YR4654.D	1	08/31/16	AFL	08/24/16	F:OP61615	F:GYR115
Run #2							

	Initial Weight	Final Volume
Run #1	19.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	5.1	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	84%		56-122%

(a) All results reported on a wet weight basis.
(b) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B7:26"		
Lab Sample ID:	C46897-10	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L50483.D	1	08/19/16	JT	n/a	n/a	VL1516
Run #2							

	Initial Weight
Run #1	5.19 g
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	ND	39	9.6	ug/kg	
71-43-2	Benzene	ND	4.8	0.48	ug/kg	
108-86-1	Bromobenzene	ND	4.8	0.48	ug/kg	
74-97-5	Bromochloromethane	ND	4.8	0.48	ug/kg	
75-27-4	Bromodichloromethane	ND	4.8	0.48	ug/kg	
75-25-2	Bromoform	ND	4.8	0.48	ug/kg	
104-51-8	n-Butylbenzene	ND	4.8	0.48	ug/kg	
135-98-8	sec-Butylbenzene	ND	4.8	0.48	ug/kg	
98-06-6	tert-Butylbenzene	ND	4.8	0.48	ug/kg	
108-90-7	Chlorobenzene	ND	4.8	0.48	ug/kg	
75-00-3	Chloroethane	ND	4.8	0.96	ug/kg	
67-66-3	Chloroform	ND	4.8	0.48	ug/kg	
95-49-8	o-Chlorotoluene	ND	4.8	0.48	ug/kg	
106-43-4	p-Chlorotoluene	ND	4.8	0.48	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.8	0.48	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.8	0.48	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.8	0.48	ug/kg	
563-58-6	1,1-Dichloropropene	ND	4.8	0.48	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.8	1.3	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.8	0.48	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.8	0.48	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.8	0.48	ug/kg	
142-28-9	1,3-Dichloropropane	ND	4.8	0.48	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.8	0.48	ug/kg	
594-20-7	2,2-Dichloropropane	ND	4.8	0.48	ug/kg	
124-48-1	Dibromochloromethane	ND	4.8	0.48	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.8	0.96	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.8	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.8	0.48	ug/kg	
541-73-1	m-Dichlorobenzene	ND	4.8	0.48	ug/kg	
95-50-1	o-Dichlorobenzene	ND	4.8	0.48	ug/kg	
106-46-7	p-Dichlorobenzene	ND	4.8	0.48	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B7:26"		
Lab Sample ID:	C46897-10	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	4.8	0.48	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.8	0.48	ug/kg	
100-41-4	Ethylbenzene	ND	4.8	0.48	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.8	0.48	ug/kg	
591-78-6	2-Hexanone	ND	19	1.9	ug/kg	
87-68-3	Hexachlorobutadiene	ND	4.8	0.96	ug/kg	
98-82-8	Isopropylbenzene	ND	4.8	0.48	ug/kg	
99-87-6	p-Isopropyltoluene	ND	4.8	0.48	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	19	1.9	ug/kg	
74-83-9	Methyl bromide	ND	4.8	0.96	ug/kg	
74-87-3	Methyl chloride	ND	4.8	0.96	ug/kg	
74-95-3	Methylene bromide	ND	4.8	0.48	ug/kg	
75-09-2	Methylene chloride	ND	19	4.8	ug/kg	
78-93-3	Methyl ethyl ketone	ND	19	1.9	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.8	0.96	ug/kg	
91-20-3	Naphthalene	ND	4.8	0.96	ug/kg	
103-65-1	n-Propylbenzene	ND	4.8	0.48	ug/kg	
100-42-5	Styrene	ND	4.8	0.48	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.8	0.48	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.6	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	4.8	0.48	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.8	0.48	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.8	0.48	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.8	0.48	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.8	0.48	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	4.8	0.96	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.8	0.48	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	4.8	0.96	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.8	0.96	ug/kg	
127-18-4	Tetrachloroethylene [b]	ND	4.8	0.58	ug/kg	
108-88-3	Toluene	ND	4.8	0.48	ug/kg	
79-01-6	Trichloroethylene	ND	4.8	0.48	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.8	0.96	ug/kg	
75-01-4	Vinyl chloride	ND	4.8	0.96	ug/kg	
1330-20-7	Xylene (total)	ND	9.6	0.96	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		72-140%
2037-26-5	Toluene-D8	102%		87-113%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B7:26"		
Lab Sample ID:	C46897-10	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%		81-115%

(a) All results reported on a wet weight basis.
(b) Associated ICV outside of control limits (biased high); not detected in sample.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B7:26"		
Lab Sample ID:	C46897-10	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	Y30737.D	1	08/24/16	AFL	n/a	n/a	F:VY1236
Run #2							

	Initial Weight	Final Volume
Run #1	5.04 g	5.0 ml
Run #2		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.2	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.1	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.99	ug/kg	
75-25-2	Bromoform	ND	5.0	0.99	ug/kg	
78-93-3	2-Butanone (MEK)	ND	25	9.0	ug/kg	
104-51-8	n-Butylbenzene [c]	ND	5.0	0.99	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.99	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	0.99	ug/kg	
56-23-5	Carbon Tetrachloride	ND	5.0	1.8	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.99	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.2	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.99	ug/kg	
106-43-4	p-Chlorotoluene [c]	ND	5.0	0.99	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.99	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.2	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.99	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.5	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	0.99	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.99	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.7	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.99	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	0.99	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.2	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.6	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.99	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.99	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.3	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B7:26"		
Lab Sample ID:	C46897-10	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.99	ug/kg	
108-20-3	Di-Isopropyl Ether	ND	5.0	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	1.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.2	ug/kg	
591-78-6	2-Hexanone	ND	25	8.7	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.99	ug/kg	
74-83-9	Methyl Bromide	ND	5.0	2.6	ug/kg	
74-87-3	Methyl Chloride	ND	5.0	2.4	ug/kg	
74-95-3	Methylene Bromide	ND	5.0	1.8	ug/kg	
75-09-2	Methylene Chloride [d]	9.9	9.9	4.0	ug/kg	B
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.1	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.2	ug/kg	
100-42-5	Styrene	ND	5.0	0.99	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.3	ug/kg	
75-65-0	Tert-Butyl Alcohol	ND	50	13	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	2.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.1	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene [c]	ND	5.0	1.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.99	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.8	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.9	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.99	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.99	ug/kg	
75-01-4	Vinyl Chloride	ND	5.0	1.7	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		75-124%
17060-07-0	1,2-Dichloroethane-D4	118%		72-135%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B7:26"		
Lab Sample ID:	C46897-10	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	1936 AR		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	96%		75-126%
460-00-4	4-Bromofluorobenzene	103%		71-133%

(a) All results reported on a wet weight basis.
(b) Sample was received in a bulk container but was not preserved within 48 hours of sampling. Reported results are considered minimum values. Analysis performed at SGS Accutest, Orlando FL.
(c) Associated BS recovery outside control limits.
(d) Suspected laboratory contaminant.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B7:26"		
Lab Sample ID:	C46897-10	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	UV075471.D	1	08/24/16	AFL	n/a	n/a	F:GUV4019
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.04 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		56-149%
98-08-8	aaa-Trifluorotoluene	99%		66-132%

(a) All results reported on a wet weight basis.
(b) Sample was received in a bulk container but was not preserved within 48 hours of sampling. Reported results are considered minimum values. Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B7:26"		
Lab Sample ID:	C46897-10	**Date Sampled:**	08/19/16
Matrix:	SO - Soil	**Date Received:**	08/19/16
Method:	SW846 8015C SW846 3546	**Percent Solids:**	n/a [a]
Project:	1936 AR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [b]	YR4655.D	1	08/31/16	AFL	08/24/16	F:OP61615	F:GYR115
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	4.9	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		56-122%

(a) All results reported on a wet weight basis.
(b) Analysis performed at SGS Accutest, Orlando FL.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest NC Job #: C46897

Client / Reporting Information

Company Name: RNC ENVIRONMENTAL LLC
Address: 3326 M STREET
City: SACRAMENTO State: CA Zip: 95816
Project Contact:
Phone #: 888.485.3330
Samplers's Name: RICH RYAN 530.925.4932

Project Information

Project Name: 1936 AR
Street:
City: State:
Project #:
EMAIL:
Client Purchase Order #:

Requested Analysis

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	Preserved: ICE	CAM 17 METALS SW846 6000/7000	ORGANOCHLORINE PEST 8081A	TPH GAS 8015M	TPH DIESEL 8015M	TPH MOTOR OIL 8015M	VOCs 8260	MADEP EPH	HOLD	LAB USE ONLY
1	B1: 14-19"	8/19		RLR	SOIL	1	✓	✓	✓			✓				
2	B2: 14-19"	8/19		RLR	SOIL	1	✓	✓	✓			✓				
3	B3: 14-19"	8/19		RLR	SOIL	1	✓	✓	✓			✓				
4	B4: 8-15"	8/19		RLR	SOIL	2	✓	✓	✓			✓		✓		
5	B5: 8-12"	8/19		RLR	SOIL	1	✓								✓	
6	B5: 24'	8/19		RLR	SOIL	2	✓			✓	✓		✓			
7	B6: 7.5-8.0"	8/19		RLR	SOIL	1	✓								✓	
8	B6: 24'	8/19		RLR	SOIL	2	✓			✓	✓		✓			
9	B7: 10-15"	8/19		RLR	SOIL	1	✓			[crossed out]	[crossed out]	[crossed out]	[crossed out]		✓	
10	B7: 26'	8/19		RLR	SOIL	2	✓			✓	✓		✓			

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI- Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

Turnaround Time (Business days) — Approved By / Date:

- [ ] 10 Day
- [x] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commercial "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

EMAIL RESULTS TO:
NEIL@RNC-ENVIRO.COM
RICH@RYANGES.COM

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	8/19/16 1305	1 [signature]	2		2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #: NONE	Appropriate Bottle / Pres. Y/N; Labels match Coc? Y / N	Headspace Y/N; On Ice Y/N; Separate Receiving Check List used: Y / N; Cooler Temp. 15.1 / 14.8

4.1
4

C46897: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: C46897 **Client:** RNC ENVIRONMENTAL LLC **Project:** 1936 AR

Date / Time Received: 8/19/2016 1:05:00 PM **Delivery Method:** Client **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (15.1/14.8);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☐		☑	3. COC Present:	☑		☐
2. Custody Seals Intact:	☐		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Therm ID:	IR1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

C46897: Chain of Custody
Page 2 of 2

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C46897
Account: RNCECAS RNC Environmental
Project: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL1516-MB	L50470.D	1	08/19/16	JT	n/a	n/a	VL1516

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	40	10	ug/kg	
71-43-2	Benzene	ND	5.0	0.50	ug/kg	
108-86-1	Bromobenzene	ND	5.0	0.50	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.50	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.50	ug/kg	
75-25-2	Bromoform	ND	5.0	0.50	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.50	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.0	ug/kg	
67-66-3	Chloroform	ND	5.0	0.50	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.50	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.50	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	0.50	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	0.50	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.4	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.50	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.50	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.50	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.50	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.50	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	0.50	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	0.50	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	0.50	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	0.50	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	

Method Blank Summary

Job Number: C46897
Account: RNCECAS RNC Environmental
Project: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL1516-MB	L50470.D	1	08/19/16	JT	n/a	n/a	VL1516

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	20	2.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.50	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	20	2.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.0	ug/kg	
74-95-3	Methylene bromide	ND	5.0	0.50	ug/kg	
75-09-2	Methylene chloride	ND	20	5.0	ug/kg	
78-93-3	Methyl ethyl ketone	ND	20	2.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/kg	
100-42-5	Styrene	ND	5.0	0.50	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.50	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.50	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.50	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.50	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	0.60	ug/kg	
108-88-3	Toluene	ND	5.0	0.50	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	0.50	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	10	1.0	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	72-140%

Method Blank Summary

Job Number: C46897
Account: RNCECAS RNC Environmental
Project: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL1516-MB	L50470.D	1	08/19/16	JT	n/a	n/a	VL1516

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	99%	87-113%
460-00-4	4-Bromofluorobenzene	98%	81-115%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46897
Account: RNCECAS RNC Environmental
Project: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL1516-BS	L50467.D	1	08/19/16	JT	n/a	n/a	VL1516
VL1516-BSD	L50468.D	1	08/19/16	JT	n/a	n/a	VL1516

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	160	225	141	214	134	5	47-163/30
71-43-2	Benzene	40	47.5	119	46.5	116	2	72-122/18
108-86-1	Bromobenzene	40	47.6	119	46.5	116	2	68-122/19
74-97-5	Bromochloromethane	40	50.3	126	48.1	120	4	71-129/18
75-27-4	Bromodichloromethane	40	45.0	113	43.4	109	4	68-122/18
75-25-2	Bromoform	40	44.0	110	44.8	112	2	69-126/18
104-51-8	n-Butylbenzene	40	48.0	120	47.3	118	1	66-121/20
135-98-8	sec-Butylbenzene	40	48.7	122* [a]	48.0	120* [a]	1	69-118/20
98-06-6	tert-Butylbenzene	40	48.5	121* [a]	47.7	119* [a]	2	69-117/20
108-90-7	Chlorobenzene	40	45.7	114	45.3	113	1	68-117/17
75-00-3	Chloroethane	40	44.2	111	42.8	107	3	66-134/18
67-66-3	Chloroform	40	46.7	117	44.3	111	5	68-124/18
95-49-8	o-Chlorotoluene	40	47.6	119	45.3	113	5	65-120/22
106-43-4	p-Chlorotoluene	40	47.5	119	47.4	119	0	64-123/24
56-23-5	Carbon tetrachloride	40	49.7	124	48.0	120	3	68-130/20
75-34-3	1,1-Dichloroethane	40	48.0	120	45.5	114	5	69-122/19
75-35-4	1,1-Dichloroethylene	40	48.4	121* [a]	46.9	117	3	69-120/20
563-58-6	1,1-Dichloropropene	40	46.3	116	45.2	113	2	69-120/19
96-12-8	1,2-Dibromo-3-chloropropane	40	47.8	120	45.7	114	4	64-132/25
106-93-4	1,2-Dibromoethane	40	46.9	117	45.2	113	4	70-122/17
107-06-2	1,2-Dichloroethane	40	45.9	115	43.6	109	5	69-125/18
78-87-5	1,2-Dichloropropane	40	47.1	118	46.3	116	2	71-122/18
142-28-9	1,3-Dichloropropane	40	46.5	116	46.8	117	1	74-123/17
108-20-3	Di-Isopropyl ether	40	43.1	108	41.3	103	4	69-122/19
594-20-7	2,2-Dichloropropane	40	49.3	123	47.4	119	4	63-132/24
124-48-1	Dibromochloromethane	40	47.3	118	46.9	117	1	68-121/16
75-71-8	Dichlorodifluoromethane	40	40.0	100	38.4	96	4	53-119/22
156-59-2	cis-1,2-Dichloroethylene	40	51.6	129	48.4	121	6	72-130/18
10061-01-5	cis-1,3-Dichloropropene	40	48.7	122	45.4	114	7	71-130/18
541-73-1	m-Dichlorobenzene	40	47.1	118	45.8	115	3	67-119/18
95-50-1	o-Dichlorobenzene	40	47.9	120* [a]	46.2	116	4	68-119/17
106-46-7	p-Dichlorobenzene	40	46.9	117	46.0	115	2	67-119/17
156-60-5	trans-1,2-Dichloroethylene	40	46.4	116* [a]	44.3	111	5	66-113/19
10061-02-6	trans-1,3-Dichloropropene	40	45.9	115	45.4	114	1	70-118/17
100-41-4	Ethylbenzene	40	47.1	118	46.9	117	0	71-118/18
637-92-3	Ethyl tert-Butyl Ether	40	44.3	111	41.9	105	6	69-125/19

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46897
Account: RNCECAS RNC Environmental
Project: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL1516-BS	L50467.D	1	08/19/16	JT	n/a	n/a	VL1516
VL1516-BSD	L50468.D	1	08/19/16	JT	n/a	n/a	VL1516

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	160	176	110	186	116	6	53-153/27
87-68-3	Hexachlorobutadiene	40	45.1	113	46.3	116	3	65-125/22
98-82-8	Isopropylbenzene	40	47.6	119	47.3	118	1	70-119/19
99-87-6	p-Isopropyltoluene	40	48.6	122* [a]	48.4	121* [a]	0	68-120/20
108-10-1	4-Methyl-2-pentanone	160	179	112	184	115	3	60-145/26
74-83-9	Methyl bromide	40	42.7	107	41.3	103	3	66-130/18
74-87-3	Methyl chloride	40	40.6	102	37.9	95	7	50-140/25
74-95-3	Methylene bromide	40	47.9	120	47.2	118	1	72-127/17
75-09-2	Methylene chloride	40	48.3	121	45.1	113	7	69-121/18
78-93-3	Methyl ethyl ketone	160	191	119	192	120	1	59-147/30
1634-04-4	Methyl Tert Butyl Ether	40	43.2	108	40.9	102	5	68-121/19
91-20-3	Naphthalene	40	48.4	121	47.1	118	3	68-129/22
103-65-1	n-Propylbenzene	40	47.3	118* [a]	46.4	116	2	67-116/20
100-42-5	Styrene	40	47.4	119	47.1	118	1	68-120/17
994-05-8	Tert-Amyl Methyl Ether	40	46.2	116	44.1	110	5	70-129/20
75-65-0	Tert Butyl Alcohol	200	223	112	225	113	1	50-163/30
630-20-6	1,1,1,2-Tetrachloroethane	40	50.1	125* [a]	47.6	119	5	70-123/18
71-55-6	1,1,1-Trichloroethane	40	50.0	125	48.4	121	3	71-128/20
79-34-5	1,1,2,2-Tetrachloroethane	40	49.7	124	50.2	126	1	69-126/18
79-00-5	1,1,2-Trichloroethane	40	46.0	115	46.0	115	0	70-120/17
87-61-6	1,2,3-Trichlorobenzene	40	48.3	121	45.7	114	6	65-125/23
96-18-4	1,2,3-Trichloropropane	40	47.8	120	47.2	118	1	69-128/18
120-82-1	1,2,4-Trichlorobenzene	40	48.0	120	45.6	114	5	65-125/22
95-63-6	1,2,4-Trimethylbenzene	40	48.6	122* [a]	47.1	118	3	67-118/19
108-67-8	1,3,5-Trimethylbenzene	40	49.2	123* [a]	47.8	120	3	68-120/20
127-18-4	Tetrachloroethylene	40	49.9	125	48.3	121	3	66-125/18
108-88-3	Toluene	40	47.1	118* [a]	46.4	116	1	72-116/18
79-01-6	Trichloroethylene	40	47.5	119	46.0	115	3	70-126/18
75-69-4	Trichlorofluoromethane	40	42.3	106	40.4	101	5	70-138/19
75-01-4	Vinyl chloride	40	44.1	110	42.0	105	5	55-146/22
1330-20-7	Xylene (total)	120	143	119* [a]	140	117	2	68-118/18

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	102%	99%	72-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46897
Account: RNCECAS RNC Environmental
Project: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL1516-BS	L50467.D	1	08/19/16	JT	n/a	n/a	VL1516
VL1516-BSD	L50468.D	1	08/19/16	JT	n/a	n/a	VL1516

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
2037-26-5	Toluene-D8	102%	99%	87-113%
460-00-4	4-Bromofluorobenzene	94%	98%	81-115%

(a) Outside laboratory control limits (high bias); not detected in associated samples. AZ:L1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: RNCECAS RNC Environmental
Project: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46849-1MS	L50478.D	1	08/19/16	JT	n/a	n/a	VL1516
C46849-1MSD	L50479.D	1	08/19/16	JT	n/a	n/a	VL1516
C46849-1	L50473.D	1	08/19/16	JT	n/a	n/a	VL1516

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	C46849-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		8410	8660	103	8410	9050	108	4	47-163/30
71-43-2	Benzene	ND		2100	2530	120	2100	2380	113	6	72-122/18
108-86-1	Bromobenzene	ND		2100	2440	116	2100	2390	114	2	68-122/19
74-97-5	Bromochloromethane	ND		2100	2480	118	2100	2490	118	0	71-129/18
75-27-4	Bromodichloromethane	ND		2100	2490	118	2100	2260	107	10	68-122/18
75-25-2	Bromoform	ND		2100	2370	113	2100	2270	108	4	69-126/18
104-51-8	n-Butylbenzene	ND		2100	2460	117	2100	2430	116	1	66-121/20
135-98-8	sec-Butylbenzene	ND		2100	2490	118	2100	2470	117	1	69-118/20
98-06-6	tert-Butylbenzene	ND		2100	2460	117	2100	2450	117	0	69-117/20
108-90-7	Chlorobenzene	ND		2100	2490	118* [a]	2100	2300	109	8	68-117/17
75-00-3	Chloroethane	ND		2100	2310	110	2100	2140	102	8	66-134/18
67-66-3	Chloroform	ND		2100	2480	118	2100	2350	112	5	68-124/18
95-49-8	o-Chlorotoluene	ND		2100	2330	111	2100	2320	110	0	65-120/22
106-43-4	p-Chlorotoluene	ND		2100	2490	118	2100	2450	117	2	64-123/24
56-23-5	Carbon tetrachloride	ND		2100	2710	129	2100	2470	117	9	68-130/20
75-34-3	1,1-Dichloroethane	ND		2100	2500	119	2100	2390	114	4	69-122/19
75-35-4	1,1-Dichloroethylene	ND		2100	2440	116	2100	2380	113	2	69-120/20
563-58-6	1,1-Dichloropropene	ND		2100	2530	120	2100	2340	111	8	69-120/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		2100	2430	116	2100	2400	114	1	64-132/25
106-93-4	1,2-Dibromoethane	ND		2100	2530	120	2100	2340	111	8	70-122/17
107-06-2	1,2-Dichloroethane	ND		2100	2570	122	2100	2330	111	10	69-125/18
78-87-5	1,2-Dichloropropane	ND		2100	2530	120	2100	2370	113	7	71-122/18
142-28-9	1,3-Dichloropropane	ND		2100	2580	123	2100	2420	115	6	74-123/17
108-20-3	Di-Isopropyl ether	ND		2100	2220	106	2100	2150	102	3	69-122/19
594-20-7	2,2-Dichloropropane	ND		2100	2440	116	2100	2280	108	7	63-132/24
124-48-1	Dibromochloromethane	ND		2100	2550	121	2100	2370	113	7	68-121/16
75-71-8	Dichlorodifluoromethane	ND		2100	2380	113	2100	2060	98	14	53-119/22
156-59-2	cis-1,2-Dichloroethylene	ND		2100	2560	122	2100	2500	119	2	72-130/18
10061-01-5	cis-1,3-Dichloropropene	ND		2100	2540	121	2100	2370	113	7	71-130/18
541-73-1	m-Dichlorobenzene	ND		2100	2390	114	2100	2340	111	2	67-119/18
95-50-1	o-Dichlorobenzene	ND		2100	2370	113	2100	2360	112	0	68-119/17
106-46-7	p-Dichlorobenzene	ND		2100	2360	112	2100	2360	112	0	67-119/17
156-60-5	trans-1,2-Dichloroethylene	ND		2100	2340	111	2100	2250	107	4	66-113/19
10061-02-6	trans-1,3-Dichloropropene	ND		2100	2590	123* [a]	2100	2380	113	8	70-118/17
100-41-4	Ethylbenzene	ND		2100	2550	121* [a]	2100	2390	114	6	71-118/18
637-92-3	Ethyl tert-Butyl Ether	ND		2100	2280	108	2100	2200	105	4	69-125/19

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: RNCECAS RNC Environmental
Project: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46849-1MS	L50478.D	1	08/19/16	JT	n/a	n/a	VL1516
C46849-1MSD	L50479.D	1	08/19/16	JT	n/a	n/a	VL1516
C46849-1	L50473.D	1	08/19/16	JT	n/a	n/a	VL1516

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	C46849-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		8410	9680	115	8410	9100	108	6	53-153/27
87-68-3	Hexachlorobutadiene	ND		2100	2480	118	2100	2480	118	0	65-125/22
98-82-8	Isopropylbenzene	ND		2100	2570	122* [a]	2100	2410	115	6	70-119/19
99-87-6	p-Isopropyltoluene	ND		2100	2490	118	2100	2450	117	2	68-120/20
108-10-1	4-Methyl-2-pentanone	ND		8410	9550	114	8410	9080	108	5	60-145/26
74-83-9	Methyl bromide	ND		2100	2230	106	2100	2010	96	10	66-130/18
74-87-3	Methyl chloride	ND		2100	2230	106	2100	1960	93	13	50-140/25
74-95-3	Methylene bromide	ND		2100	2610	124	2100	2410	115	8	72-127/17
75-09-2	Methylene chloride	ND		2100	2400	114	2100	2300	109	4	69-121/18
78-93-3	Methyl ethyl ketone	ND		8410	9380	112	8410	9310	111	1	59-147/30
1634-04-4	Methyl Tert Butyl Ether	ND		2100	2220	106	2100	2140	102	4	68-121/19
91-20-3	Naphthalene	ND		2100	2390	114	2100	2410	115	1	68-129/22
103-65-1	n-Propylbenzene	ND		2100	2380	113	2100	2380	113	0	67-116/20
100-42-5	Styrene	ND		2100	2560	122* [a]	2100	2400	114	6	68-120/17
994-05-8	Tert-Amyl Methyl Ether	ND		2100	2350	112	2100	2300	109	2	70-129/20
75-65-0	Tert Butyl Alcohol	ND		10500	10800	103	10500	11900	113	10	50-163/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		2100	2610	124* [b]	2100	2460	117	6	70-123/18
71-55-6	1,1,1-Trichloroethane	ND		2100	2640	126	2100	2510	119	5	71-128/20
79-34-5	1,1,2,2-Tetrachloroethane	ND		2100	2380	113	2100	2390	114	0	69-126/18
79-00-5	1,1,2-Trichloroethane	ND		2100	2510	119	2100	2350	112	7	70-120/17
87-61-6	1,2,3-Trichlorobenzene	ND		2100	2400	114	2100	2340	111	3	65-125/23
96-18-4	1,2,3-Trichloropropane	ND		2100	2570	122	2100	2460	117	4	69-128/18
120-82-1	1,2,4-Trichlorobenzene	ND		2100	2350	112	2100	2300	109	2	65-125/22
95-63-6	1,2,4-Trimethylbenzene	ND		2100	2420	115	2100	2380	113	2	67-118/19
108-67-8	1,3,5-Trimethylbenzene	ND		2100	2470	117	2100	2450	117	1	68-120/20
127-18-4	Tetrachloroethylene	ND		2100	2600	124	2100	2500	119	4	66-125/18
108-88-3	Toluene	ND		2100	2510	119* [b]	2100	2370	113	6	72-116/18
79-01-6	Trichloroethylene	ND		2100	2590	123	2100	2420	115	7	70-126/18
75-69-4	Trichlorofluoromethane	ND		2100	2390	114	2100	2080	99	14	70-138/19
75-01-4	Vinyl chloride	ND		2100	2070	98	2100	2040	97	1	55-146/22
1330-20-7	Xylene (total)	ND		6310	7680	122* [b]	6310	7160	114	7	68-118/18

CAS No.	Surrogate Recoveries	MS	MSD	C46849-1	Limits
1868-53-7	Dibromofluoromethane	98%	97%	94%	72-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: RNCECAS RNC Environmental
Project: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46849-1MS	L50478.D	1	08/19/16	JT	n/a	n/a	VL1516
C46849-1MSD	L50479.D	1	08/19/16	JT	n/a	n/a	VL1516
C46849-1	L50473.D	1	08/19/16	JT	n/a	n/a	VL1516

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Surrogate Recoveries	MS	MSD	C46849-1	Limits
2037-26-5	Toluene-D8	101%	99%	101%	87-113%
460-00-4	4-Bromofluorobenzene	104%	99%	97%	81-115%

(a) Outside laboratory control limits (high bias); not detected in associated samples. AZ:M1
(b) Outside laboratory control limits (high bias); not detected in associated samples. AZ:L1

* = Outside of Control Limits.

Misc. Forms

Custody Documents and Other Forms

(SGS Accutest Southeast)

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

Page 1 of 1

SGS ACCUTEST

2105 Lundy Avenue, San Jose, CA 95131
TEL: 408-588-0200 FAX: 408-588-0201
www.sgs.com

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | Accutest Job #: C46897

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)	Matrix Codes
Company Name: SGS Accutest Laboratories	Project Name: 1936 AR		DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED-Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB-Field Blank EB-Equipment Blank RB- Rinse Blank TB-Trip Blank
Street Address: 2105 Lundy Avenue	Street:	Billing Information (if different from Report to)	
City: San Jose, State: CA Zip: 9513	City: State:	Company Name:	
Project Contact: E-mail: nutan.kale@sgs.com	Project #:	Street Address:	
Phone #: 408-588-0200 Fax #	Client Purchase Order #:	City: State: Zip:	
Sampler(s) Name(s): RLR Phone:	Project Manager:	Attention:	

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	HNO3	H2SO4	NONE	Di Water	MEOH	ENCORE	AG_AS_B6015DRO_BA_BE_CD_CO_CR_CU_HG_MO_NI_P8081PESTPPL_PB_SB_SE_TL_V_ZN	B8015DRO_V8015GRO_V8260BSTD_	LAB USE ONLY
1	B1:14-15"		8/19/16	12:00:00 AM	RLR	SO									X		
2	B2:14-15"		8/19/16	12:00:00 AM	RLR	SO									X		
3	B3:14-15"		8/19/16	12:00:00 AM	RLR	SO									X		
4	B4:8-15"		8/19/16	12:00:00 AM	RLR	SO									X		
6	B5:24"		8/19/16	12:00:00 AM	RLR	SO										X	
8	B6:24"		8/19/16	12:00:00 AM	RLR	SO										X	
10	B7:26"		8/19/16	12:00:00 AM	RLR	SO										X	

Turnaround Time (Business days) | Data Deliverable Information | Comments / Special Instructions

Approved By (SGS Accutest PM) / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 8/26/2016

Emergency & Rush T/A data available VIA Labtink

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULL T1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other COMMB

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Please sub to ALSE for CAM17 (6010B),8260B.

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Ali reighami	8/22/16 15:00	Fedex	Fedex	8-23-16	J. Comp (ALSE) 09.15
2	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3						
4	Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp.
5						36

6.1 6

SGS ACCUTEST - ORLANDO SAMPLE RECEIPT CONFIRMATION

SGS ACCUTEST'S JOB NUMBER: C46897 CLIENT: ALNC PROJECT: 1936 AR

DATE/TIME RECEIVED: 8-22-16 09:15 (MM/DD/YY 24:00) NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER DELIVERY OTHER:

AIRBILL NUMBERS: 7770 5263 0864

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 4.0
- [ ] CORRECTED TEMPS: 3.6 (USED FOR LIMS)

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [X] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [X] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT LOT#_____

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

TEST STRIP LOT#s pH 0-3 230315 pH 10-12 219813A OTHER (specify) _____

SUMMARY OF COMMENTS: RECEIVED SAMPLES C46897 5,7,9 NOT REQUESTED ON COC

TECHNICIAN SIGNATURE/DATE: 8-23-16 REVIEWER SIGNATURE/DATE: 8-23-16

NF 02/16

receipt confirmation 020116.xls

C46897: Chain of Custody
Page 2 of 3

C46897: Chain of Custody
Page 3 of 3

GC/MS Volatiles

QC Data Summaries

(SGS Accutest Southeast)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1236-MB	Y30723.D	1	08/24/16	AD	n/a	n/a	VY1236

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.3	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.2	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.1	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	25	9.1	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
56-23-5	Carbon Tetrachloride	ND	5.0	1.8	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.2	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.0	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.2	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.5	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.7	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.2	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.6	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.3	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.9	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
108-20-3	Di-Isopropyl Ether	ND	5.0	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.1	ug/kg	

Method Blank Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1236-MB	Y30723.D	1	08/24/16	AD	n/a	n/a	VY1236

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Result	RL	MDL	Units	Q
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	1.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	2.2	ug/kg	
591-78-6	2-Hexanone	ND	25	8.7	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.4	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
74-83-9	Methyl Bromide	ND	5.0	2.6	ug/kg	
74-87-3	Methyl Chloride	ND	5.0	2.4	ug/kg	
74-95-3	Methylene Bromide	ND	5.0	1.8	ug/kg	
75-09-2	Methylene Chloride	7.8	10	4.0	ug/kg	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	11	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.1	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.2	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.4	ug/kg	
75-65-0	Tert-Butyl Alcohol	ND	50	14	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	2.2	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.1	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.0	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.8	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.2	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.9	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.6	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
75-01-4	Vinyl Chloride	ND	5.0	1.7	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.9	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	75-124%

Method Blank Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1236-MB	Y30723.D	1	08/24/16	AD	n/a	n/a	VY1236

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	105%	72-135%
2037-26-5	Toluene-D8	98%	75-126%
460-00-4	4-Bromofluorobenzene	98%	71-133%

Blank Spike Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1236-BS	Y30735.D	1	08/24/16	AD	n/a	n/a	VY1236

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	285	114	61-152
71-43-2	Benzene	50	49.5	99	76-126
108-86-1	Bromobenzene	50	44.6	89	76-122
74-97-5	Bromochloromethane	50	55.0	110	77-120
75-27-4	Bromodichloromethane	50	51.4	103	74-130
75-25-2	Bromoform	50	48.4	97	76-127
78-93-3	2-Butanone (MEK)	250	234	94	75-137
104-51-8	n-Butylbenzene	50	34.7	69*	71-128
135-98-8	sec-Butylbenzene	50	42.8	86	79-135
98-06-6	tert-Butylbenzene	50	45.5	91	77-133
56-23-5	Carbon Tetrachloride	50	56.2	112	78-133
108-90-7	Chlorobenzene	50	48.7	97	81-129
75-00-3	Chloroethane	50	48.1	96	68-133
67-66-3	Chloroform	50	52.5	105	72-123
95-49-8	o-Chlorotoluene	50	41.4	83	77-129
106-43-4	p-Chlorotoluene	50	39.1	78*	80-134
124-48-1	Dibromochloromethane	50	50.6	101	76-127
96-12-8	1,2-Dibromo-3-chloropropane	50	44.5	89	70-137
106-93-4	1,2-Dibromoethane	50	49.4	99	77-126
75-71-8	Dichlorodifluoromethane	50	44.2	88	68-168
95-50-1	1,2-Dichlorobenzene	50	43.3	87	80-129
541-73-1	1,3-Dichlorobenzene	50	40.5	81	81-129
106-46-7	1,4-Dichlorobenzene	50	40.5	81	76-130
75-34-3	1,1-Dichloroethane	50	50.7	101	73-125
107-06-2	1,2-Dichloroethane	50	52.0	104	74-128
75-35-4	1,1-Dichloroethylene	50	46.6	93	81-136
156-59-2	cis-1,2-Dichloroethylene	50	50.3	101	74-126
156-60-5	trans-1,2-Dichloroethylene	50	47.6	95	70-127
78-87-5	1,2-Dichloropropane	50	49.0	98	74-125
142-28-9	1,3-Dichloropropane	50	48.5	97	76-122
594-20-7	2,2-Dichloropropane	50	59.0	118	77-133
563-58-6	1,1-Dichloropropene	50	47.9	96	75-130
10061-01-5	cis-1,3-Dichloropropene	50	50.0	100	80-123
10061-02-6	trans-1,3-Dichloropropene	50	49.1	98	75-131
108-20-3	Di-Isopropyl Ether	50	48.7	97	75-122
100-41-4	Ethylbenzene	50	44.6	89	77-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1236-BS	Y30735.D	1	08/24/16	AD	n/a	n/a	VY1236

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
637-92-3	Ethyl Tert Butyl Ether	50	51.4	103	75-117
87-68-3	Hexachlorobutadiene	50	40.6	81	74-136
591-78-6	2-Hexanone	250	238	95	72-133
98-82-8	Isopropylbenzene	50	46.1	92	80-136
99-87-6	p-Isopropyltoluene	50	40.1	80	77-131
74-83-9	Methyl Bromide	50	49.8	100	65-139
74-87-3	Methyl Chloride	50	43.9	88	71-144
74-95-3	Methylene Bromide	50	50.4	101	74-124
75-09-2	Methylene Chloride	50	52.8	106	74-137
108-10-1	4-Methyl-2-pentanone (MIBK)	250	236	94	76-132
1634-04-4	Methyl Tert Butyl Ether	50	54.4	109	77-120
91-20-3	Naphthalene	50	44.0	88	79-129
103-65-1	n-Propylbenzene	50	39.9	80	80-135
100-42-5	Styrene	50	47.0	94	78-125
994-05-8	Tert-Amyl Methyl Ether	50	51.9	104	69-130
75-65-0	Tert-Butyl Alcohol	500	540	108	58-136
630-20-6	1,1,1,2-Tetrachloroethane	50	51.4	103	78-126
79-34-5	1,1,2,2-Tetrachloroethane	50	44.5	89	71-126
127-18-4	Tetrachloroethylene	50	45.7	91	79-130
108-88-3	Toluene	50	48.1	96	76-124
87-61-6	1,2,3-Trichlorobenzene	50	43.6	87	77-128
120-82-1	1,2,4-Trichlorobenzene	50	35.4	71*	78-130
71-55-6	1,1,1-Trichloroethane	50	53.9	108	70-129
79-00-5	1,1,2-Trichloroethane	50	48.1	96	74-124
79-01-6	Trichloroethylene	50	48.9	98	75-128
75-69-4	Trichlorofluoromethane	50	51.1	102	73-145
96-18-4	1,2,3-Trichloropropane	50	46.3	93	74-127
95-63-6	1,2,4-Trimethylbenzene	50	41.6	83	74-123
108-67-8	1,3,5-Trimethylbenzene	50	41.6	83	73-122
75-01-4	Vinyl Chloride	50	46.0	92	76-141
1330-20-7	Xylene (total)	150	133	89	80-129

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	108%	75-124%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1236-BS	Y30735.D	1	08/24/16	AD	n/a	n/a	VY1236

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	103%	72-135%
2037-26-5	Toluene-D8	97%	75-126%
460-00-4	4-Bromofluorobenzene	92%	71-133%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA36316-4MS	Y30725.D	1	08/24/16	AD	n/a	n/a	VY1236
FA36316-4MSD	Y30726.D	1	08/24/16	AD	n/a	n/a	VY1236
FA36316-4	Y30724.D	1	08/24/16	AD	n/a	n/a	VY1236

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	FA36316-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		2310000	2190000	95	2310000	2060000	89	6	61-152/27
71-43-2	Benzene	ND		462000	432000	94	462000	427000	92	1	76-126/26
108-86-1	Bromobenzene	ND		462000	446000	97	462000	451000	98	1	76-122/32
74-97-5	Bromochloromethane	ND		462000	492000	106	462000	491000	106	0	77-120/24
75-27-4	Bromodichloromethane	ND		462000	461000	100	462000	468000	101	2	74-130/25
75-25-2	Bromoform	ND		462000	443000	96	462000	450000	97	2	76-127/26
78-93-3	2-Butanone (MEK)	ND		2310000	1990000	86	2310000	1820000	79	9	75-137/25
104-51-8	n-Butylbenzene	ND		462000	428000	93	462000	421000	91	2	71-128/35
135-98-8	sec-Butylbenzene	ND		462000	420000	91	462000	426000	92	1	79-135/34
98-06-6	tert-Butylbenzene	ND		462000	423000	92	462000	426000	92	1	77-133/34
56-23-5	Carbon Tetrachloride	ND		462000	442000	96	462000	448000	97	1	78-133/29
108-90-7	Chlorobenzene	ND		462000	456000	99	462000	460000	100	1	81-129/29
75-00-3	Chloroethane	ND		462000	380000	82	462000	384000	83	1	68-133/29
67-66-3	Chloroform	ND		462000	462000	100	462000	433000	94	6	72-123/26
95-49-8	o-Chlorotoluene	ND		462000	415000	90	462000	424000	92	2	77-129/33
106-43-4	p-Chlorotoluene	ND		462000	443000	96	462000	432000	94	3	80-134/33
124-48-1	Dibromochloromethane	ND		462000	456000	99	462000	465000	101	2	76-127/27
96-12-8	1,2-Dibromo-3-chloropropane	ND		462000	393000	85	462000	416000	90	6	70-137/29
106-93-4	1,2-Dibromoethane	ND		462000	444000	96	462000	453000	98	2	77-126/26
75-71-8	Dichlorodifluoromethane	ND		462000	310000	67*	462000	304000	66*	2	68-168/29
95-50-1	1,2-Dichlorobenzene	ND		462000	460000	100	462000	451000	98	2	80-129/32
541-73-1	1,3-Dichlorobenzene	ND		462000	465000	101	462000	461000	100	1	81-129/33
106-46-7	1,4-Dichlorobenzene	ND		462000	476000	103	462000	472000	102	1	76-130/32
75-34-3	1,1-Dichloroethane	ND		462000	448000	97	462000	441000	95	2	73-125/27
107-06-2	1,2-Dichloroethane	ND		462000	485000	105	462000	466000	101	4	74-128/23
75-35-4	1,1-Dichloroethylene	ND		462000	390000	84	462000	398000	86	2	81-136/28
156-59-2	cis-1,2-Dichloroethylene	ND		462000	435000	94	462000	429000	93	1	74-126/26
156-60-5	trans-1,2-Dichloroethylene	ND		462000	444000	96	462000	441000	95	1	70-127/27
78-87-5	1,2-Dichloropropane	ND		462000	425000	92	462000	430000	93	1	74-125/25
142-28-9	1,3-Dichloropropane	ND		462000	425000	92	462000	424000	92	0	76-122/26
594-20-7	2,2-Dichloropropane	ND		462000	474000	103	462000	462000	100	3	77-133/28
563-58-6	1,1-Dichloropropene	ND		462000	413000	89	462000	411000	89	0	75-130/28
10061-01-5	cis-1,3-Dichloropropene	ND		462000	460000	100	462000	456000	99	1	80-123/26
10061-02-6	trans-1,3-Dichloropropene	ND		462000	459000	99	462000	466000	101	2	75-131/28
108-20-3	Di-Isopropyl Ether	ND		462000	413000	89	462000	422000	91	2	75-122/25
100-41-4	Ethylbenzene	ND		462000	414000	90	462000	410000	89	1	77-123/31

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA36316-4MS	Y30725.D	1	08/24/16	AD	n/a	n/a	VY1236
FA36316-4MSD	Y30726.D	1	08/24/16	AD	n/a	n/a	VY1236
FA36316-4	Y30724.D	1	08/24/16	AD	n/a	n/a	VY1236

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Compound	FA36316-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
637-92-3	Ethyl Tert Butyl Ether	ND		462000	456000	99	462000	453000	98	1	75-117/24
87-68-3	Hexachlorobutadiene	ND		462000	476000	103	462000	482000	104	1	74-136/38
591-78-6	2-Hexanone	ND		2310000	2000000	87	2310000	1970000	85	2	72-133/26
98-82-8	Isopropylbenzene	ND		462000	421000	91	462000	415000	90	1	80-136/32
99-87-6	p-Isopropyltoluene	ND		462000	437000	95	462000	433000	94	1	77-131/34
74-83-9	Methyl Bromide	ND		462000	405000	88	462000	406000	88	0	65-139/31
74-87-3	Methyl Chloride	ND		462000	347000	75	462000	357000	77	3	71-144/27
74-95-3	Methylene Bromide	ND		462000	480000	104	462000	479000	104	0	74-124/24
75-09-2	Methylene Chloride	145000	B	462000	611000	101	462000	587000	96	4	74-137/28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		2310000	2010000	87	2310000	1950000	84	3	76-132/26
1634-04-4	Methyl Tert Butyl Ether	ND		462000	483000	105	462000	478000	103	1	77-120/24
91-20-3	Naphthalene	ND		462000	460000	100	462000	482000	104	5	79-129/33
103-65-1	n-Propylbenzene	ND		462000	428000	93	462000	422000	91	1	80-135/33
100-42-5	Styrene	ND		462000	465000	101	462000	450000	97	3	78-125/30
994-05-8	Tert-Amyl Methyl Ether	ND		462000	447000	97	462000	448000	97	0	69-130/23
75-65-0	Tert-Butyl Alcohol	ND		4620000	4190000	91	4620000	4280000	93	2	74-126/32
630-20-6	1,1,1,2-Tetrachloroethane	ND		462000	457000	99	462000	450000	97	2	78-126/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		462000	413000	89	462000	415000	90	0	71-126/30
127-18-4	Tetrachloroethylene	ND		462000	461000	100	462000	468000	101	2	79-130/31
108-88-3	Toluene	ND		462000	433000	94	462000	429000	93	1	76-124/30
87-61-6	1,2,3-Trichlorobenzene	ND		462000	503000	109	462000	512000	111	2	77-128/35
120-82-1	1,2,4-Trichlorobenzene	ND		462000	512000	111	462000	515000	111	1	78-130/34
71-55-6	1,1,1-Trichloroethane	ND		462000	439000	95	462000	431000	93	2	70-129/27
79-00-5	1,1,2-Trichloroethane	ND		462000	450000	97	462000	439000	95	2	74-124/28
79-01-6	Trichloroethylene	287000		462000	718000	93	462000	741000	98	3	75-128/27
75-69-4	Trichlorofluoromethane	ND		462000	384000	83	462000	385000	83	0	73-145/31
96-18-4	1,2,3-Trichloropropane	ND		462000	415000	90	462000	425000	92	2	74-127/27
95-63-6	1,2,4-Trimethylbenzene	ND		462000	434000	94	462000	434000	94	0	74-123/34
108-67-8	1,3,5-Trimethylbenzene	ND		462000	423000	92	462000	419000	91	1	73-122/33
75-01-4	Vinyl Chloride	ND		462000	336000	73*	462000	346000	75*	3	76-141/27
1330-20-7	Xylene (total)	ND		1390000	1290000	93	1390000	1250000	90	3	80-129/30

CAS No.	Surrogate Recoveries	MS	MSD	FA36316-4	Limits
1868-53-7	Dibromofluoromethane	107%	108%	111%	75-124%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA36316-4MS	Y30725.D	1	08/24/16	AD	n/a	n/a	VY1236
FA36316-4MSD	Y30726.D	1	08/24/16	AD	n/a	n/a	VY1236
FA36316-4	Y30724.D	1	08/24/16	AD	n/a	n/a	VY1236

The QC reported here applies to the following samples: **Method:** SW846 8260B

C46897-6, C46897-8, C46897-10

CAS No.	Surrogate Recoveries	MS	MSD	FA36316-4	Limits
17060-07-0	1,2-Dichloroethane-D4	105%	103%	105%	72-135%
2037-26-5	Toluene-D8	97%	96%	96%	75-126%
460-00-4	4-Bromofluorobenzene	97%	101%	95%	71-133%

* = Outside of Control Limits.

GC Volatiles

QC Data Summaries

(SGS Accutest Southeast)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV4019-MB	UV075452.D	1	08/23/16	CG	n/a	n/a	GUV4019

The QC reported here applies to the following samples: **Method:** SW846 8015C

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	100%	56-149%
98-08-8	aaa-Trifluorotoluene	98%	66-132%

Blank Spike Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GUV4019-BS	UV075451.D	1	08/23/16	CG	n/a	n/a	GUV4019

The QC reported here applies to the following samples: **Method:** SW846 8015C

C46897-6, C46897-8, C46897-10

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	20	17.3	87	74-128

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	105%	56-149%
98-08-8	aaa-Trifluorotoluene	102%	66-132%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA36318-10MS	UV075466.D	1	08/24/16	CG	n/a	n/a	GUV4019
FA36318-10MSD	UV075467.D	1	08/24/16	CG	n/a	n/a	GUV4019
FA36318-10	UV075465.D	1	08/24/16	CG	n/a	n/a	GUV4019

The QC reported here applies to the following samples: **Method:** SW846 8015C

C46897-6, C46897-8, C46897-10

CAS No.	Compound	FA36318-10 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		32.7	26.2	80	32.7	25.7	79	2	74-128/17

CAS No.	Surrogate Recoveries	MS	MSD	FA36318-10	Limits
460-00-4	4-Bromofluorobenzene	105%	105%	102%	56-149%
98-08-8	aaa-Trifluorotoluene	102%	101%	99%	66-132%

* = Outside of Control Limits.

Misc. Forms

Custody Documents and Other Forms

(SGS Accutest New England)

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

Page 1 of 1

SGS ACCUTEST

2105 Lundy Avenue, San Jose, CA 95131
TEL: 408-588-0200 FAX: 408-588-0201
www.sgs.com

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | Accutest Job #: C46897

Client / Reporting Information

Company Name: SGS Accutest Laboratories
Street Address: 2105 Lundy Avenue
City: San Jose, State: CA, Zip: 9513
Project Contact: nuten.kabir@sgs.com, E-mail:
Phone #: 408-588-0200, Fax #:
Sampler(s) Name(s): RLR, Phone:

Project Information

Project Name: 1936 AR
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	BMAEPH	LAB USE ONLY
4	B4:8-15"		8/19/16	12:00:00 AM	RLR	SO										X	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 8/26/2016

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

RUSH!

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULL T1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other COMMB

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Please sub to ALNE for MA EPH.
INITIAL ASESSMENT
LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		8/23/16 15:00		2	8/24/16	2
3			3	4		4
5			5			

Custody Seal #: ☐ Intact ☐ Not Intact | Preserved where applicable ☐ | On Ice ☐ | Cooler Temp. 3.2c

9.1

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C46897: Chain of Custody
Page 1 of 2
SGS Accutest New England

SGS Accutest Sample Receipt Summary

Job Number: C46897 **Client:** CA **Project:** 1936 AR

Date / Time Received: 8/24/2016 9:30:00 AM **Delivery Method:** FedEx **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (3.2/3.2);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	IRGUN1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

9.1

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C46897: Chain of Custody
Page 2 of 2

GC Semi-volatiles

QC Data Summaries

(SGS Accutest New England)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48512-MB	DE15306.D	1	08/24/16	TA	08/23/16	OP48512	GDE854

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

C46897-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	420	28	ug/kg	
208-96-8	Acenaphthylene	ND	420	17	ug/kg	
120-12-7	Anthracene	ND	420	23	ug/kg	
56-55-3	Benzo(a)anthracene	ND	420	15	ug/kg	
50-32-8	Benzo(a)pyrene	ND	420	13	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	420	17	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	420	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	420	16	ug/kg	
218-01-9	Chrysene	ND	420	14	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	420	15	ug/kg	
206-44-0	Fluoranthene	ND	420	18	ug/kg	
86-73-7	Fluorene	ND	420	17	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	420	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	420	28	ug/kg	
91-20-3	Naphthalene	ND	420	31	ug/kg	
85-01-8	Phenanthrene	ND	420	18	ug/kg	
129-00-0	Pyrene	ND	420	15	ug/kg	
	C11-C22 Aromatics (Unadj.)	ND	17000	3900	ug/kg	
	C9-C18 Aliphatics	ND	8300	2500	ug/kg	
	C19-C36 Aliphatics	ND	17000	6800	ug/kg	
	C11-C22 Aromatics	ND	17000	3900	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	86%	40-140%
321-60-8	2-Fluorobiphenyl	91%	40-140%
580-13-2	2-Bromonaphthalene	100%	40-140%
3386-33-2	1-Chlorooctadecane	95%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48512-BS	DE15304.D	1	08/24/16	TA	08/23/16	OP48512	GDE854
OP48512-BSD	DE15305.D	1	08/24/16	TA	08/23/16	OP48512	GDE854

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

C46897-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	4480	2790	62	2950	65	6	40-140/25
208-96-8	Acenaphthylene	4480	2550	57	2710	60	6	40-140/25
120-12-7	Anthracene	4480	2670	60	2810	62	5	40-140/25
56-55-3	Benzo(a)anthracene	4480	3310	74	3400	75	3	40-140/25
50-32-8	Benzo(a)pyrene	4480	3250	73	3290	73	1	40-140/25
205-99-2	Benzo(b)fluoranthene	4480	3340	75	3430	76	3	40-140/25
191-24-2	Benzo(g,h,i)perylene	4480	3650	82	3610	80	1	40-140/25
207-08-9	Benzo(k)fluoranthene	4480	3290	73	3180	70	3	40-140/25
218-01-9	Chrysene	4480	3200	71	3240	72	1	40-140/25
53-70-3	Dibenz(a,h)anthracene	4480	3530	79	3520	78	0	40-140/25
206-44-0	Fluoranthene	4480	3180	71	3290	73	3	40-140/25
86-73-7	Fluorene	4480	2730	61	2850	63	4	40-140/25
193-39-5	Indeno(1,2,3-cd)pyrene	4480	3380	76	3330	74	1	40-140/25
91-57-6	2-Methylnaphthalene	4480	2820	63	2970	66	5	40-140/25
91-20-3	Naphthalene	4480	2370	53	2600	58	9	40-140/25
85-01-8	Phenanthrene	4480	2940	66	3000	66	2	40-140/25
129-00-0	Pyrene	4480	3150	70	3230	72	3	40-140/25
	C11-C22 Aromatics (Unadj.)	71600	57700	81	58800	81	2	40-140/25
	C9-C18 Aliphatics	26900	17000	63	18500	68	8	40-140/25
	C19-C36 Aliphatics	35800	30400	85	31400	87	3	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	74%	75%	40-140%
321-60-8	2-Fluorobiphenyl	73%	78%	40-140%
580-13-2	2-Bromonaphthalene	75%	81%	40-140%
3386-33-2	1-Chlorooctadecane	82%	78%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP48512-BS	2-Methylnaphthalene	2820	ND	0.0%	5.0
OP48512-BS	Naphthalene	2370	ND	0.0%	5.0
OP48512-BSD	2-Methylnaphthalene	2970	ND	0.0%	5.0
OP48512-BSD	Naphthalene	2600	ND	0.0%	5.0

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48512-MS	DE15346.D	1	08/26/16	TA	08/23/16	OP48512	GDE856
OP48512-MSD	DE15347.D	1	08/26/16	TA	08/23/16	OP48512	GDE856
C46897-4	DE15342.D	1	08/26/16	TA	08/23/16	OP48512	GDE856

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

C46897-4

CAS No.	Compound	C46897-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		4340	2160	50	4370	1890	43	13	40-140/25
208-96-8	Acenaphthylene	42.8	J	4340	2060	46	4370	1730	39* a	17	40-140/25
120-12-7	Anthracene	ND		4340	2250	52	4370	1870	43	18	40-140/25
56-55-3	Benzo(a)anthracene	ND		4340	2930	68	4370	2370	54	21	40-140/25
50-32-8	Benzo(a)pyrene	43.8	J	4340	3020	69	4370	2480	56	20	40-140/25
205-99-2	Benzo(b)fluoranthene	ND		4340	2960	68	4370	2640	60	11	40-140/25
191-24-2	Benzo(g,h,i)perylene	ND		4340	3320	76	4370	2750	63	19	40-140/25
207-08-9	Benzo(k)fluoranthene	ND		4340	2980	69	4370	2390	55	22	40-140/25
218-01-9	Chrysene	ND		4340	2830	65	4370	2240	51	23	40-140/25
53-70-3	Dibenz(a,h)anthracene	ND		4340	3260	75	4370	2610	60	22	40-140/25
206-44-0	Fluoranthene	ND		4340	2740	63	4370	2260	52	19	40-140/25
86-73-7	Fluorene	96.1	J	4340	2240	49	4370	1890	41	17	40-140/25
193-39-5	Indeno(1,2,3-cd)pyrene	ND		4340	3100	71	4370	2570	59	19	40-140/25
91-57-6	2-Methylnaphthalene	183	J	4340	2090	44	4370	1710	35* a	20	40-140/25
91-20-3	Naphthalene	ND		4340	1680	39* a	4370	1360	31* a	21	40-140/25
85-01-8	Phenanthrene	37.5	J	4340	2430	55	4370	2030	46	18	40-140/25
129-00-0	Pyrene	ND		4340	2690	62	4370	2230	51	19	40-140/25
	C11-C22 Aromatics (Unadj.)	30100		69400	51800	31* a	69900	43300	19* a	18	40-140/25
	C9-C18 Aliphatics	82900		26000	18100	-249* b	26200	15700	-256* b	14	40-140/25
	C19-C36 Aliphatics	29500		34700	32500	9* a	35000	26800	-8* a	19	40-140/25

CAS No.	Surrogate Recoveries	MS	MSD	C46897-4	Limits
84-15-1	o-Terphenyl	67%	55%	73%	40-140%
321-60-8	2-Fluorobiphenyl	73%	70%	71%	40-140%
580-13-2	2-Bromonaphthalene	73%	71%	88%	40-140%
3386-33-2	1-Chlorooctadecane	91%	71%	101%	40-140%

(a) Outside control limits due to possible matrix interference.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Misc. Forms

Custody Documents and Other Forms

(SGS Accutest Southeast)

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

Page 1 of 1

SGS ACCUTEST

2105 Lundy Avenue, San Jose, CA 95131
TEL: 408-588-0200 FAX: 408-588-0201
www.sgs.com

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | Accutest Job #: C46897

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)	Matrix Codes
Company Name: SGS Accutest Laboratories	Project Name: 1936 AR		DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED-Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB-Field Blank EB-Equipment Blank RB- Rinse Blank TB-Trip Blank
Street Address: 2105 Lundy Avenue	Street:	Billing Information (if different from Report to)	
City: San Jose, State: CA Zip: 9513	City: State:	Company Name:	
Project Contact: nutan.kale@sgs.com E-mail:	Project #:	Street Address:	
Phone #: 408-588-0200 Fax #:	Client Purchase Order #:	City: State: Zip:	
Sampler(s) Name(s): RLR Phone:	Project Manager:	Attention:	

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	HNO3	H2SO4	NONE	Di Water	MEOH	ENCORE	AG_AS_BE015ORD_BA_BE_CD_CO_CR_CU_HG_MO_NI_P8081PESTPPL_PB_SB_SE_TL_V_ZN	S8015DRO_V8015GRO_V8260BSTD_	LAB USE ONLY
1	B1:14-15"		8/19/16	12:00:00 AM	RLR	SO									X		
2	B2:14-15"		8/19/16	12:00:00 AM	RLR	SO									X		
3	B3:14-15"		8/19/16	12:00:00 AM	RLR	SO									X		
4	B4:8-15"		8/19/16	12:00:00 AM	RLR	SO									X		
6	B5:24"		8/19/16	12:00:00 AM	RLR	SO										X	
8	B6:24"		8/19/16	12:00:00 AM	RLR	SO										X	
10	B7:26"		8/19/16	12:00:00 AM	RLR	SO										X	

Turnaround Time (Business days) | Data Deliverable Information | Comments / Special Instructions

Approved By (SGS Accutest PM) / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 8/26/2016

Emergency & Rush T/A data available VIA Labtink

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULL T1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other COMMB

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Please sub to ALSE for CAM17 (6010B),8260B.

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Ali reighami	8/22/16 15:00	Fedex	Fedex	8-23-16	J. Comp (ALSE) 09.15
2	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3						
4	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp.
5				Intact / Not Intact		36

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C46897: Chain of Custody
Page 1 of 3
SGS Accutest Southeast

SGS ACCUTEST - ORLANDO SAMPLE RECEIPT CONFIRMATION

SGS ACCUTEST'S JOB NUMBER: C46897 CLIENT: ALNC PROJECT: 1936 AR

DATE/TIME RECEIVED: 8-23-16 09:15 (MM/DD/YY 24:00) NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER DELIVERY OTHER:

AIRBILL NUMBERS: 7770 5263 0864

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM 5-GRAM

NUMBER OF 5035 FIELD KITS ?

NUMBER OF LAB FILTERED METALS ?

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.4
- [ ] OBSERVED TEMPS: 4.0
- [ ] CORRECTED TEMPS: 3.6 (USED FOR LIMS)

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [X] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [X] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT LOT#

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

TEST STRIP LOT#s pH 0-3 230315 pH 10-12 219813A OTHER (specify)

SUMMARY OF COMMENTS: RECEIVED SAMPLES C46897 5,7,9 NOT REQUESTED ON COC

TECHNICIAN SIGNATURE/DATE: 8-23-16 REVIEWER SIGNATURE/DATE: 8-23-16

NF 02/16

receipt confirmation 020116.xls

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C46897: Chain of Custody
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C46897: Chain of Custody
Page 3 of 3

GC Semi-volatiles

QC Data Summaries

(SGS Accutest Southeast)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP61612-MB	TT378855.D	1	08/25/16	NG	08/24/16	OP61612	GTT1846

The QC reported here applies to the following samples: **Method:** SW846 8081B

C46897-1, C46897-2, C46897-3, C46897-4

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	1.7	0.51	ug/kg	
319-84-6	alpha-BHC	ND	1.7	0.51	ug/kg	
319-85-7	beta-BHC	ND	1.7	0.51	ug/kg	
319-86-8	delta-BHC	ND	1.7	0.49	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	1.7	0.51	ug/kg	
12789-03-6	Chlordane	ND	17	6.7	ug/kg	
60-57-1	Dieldrin	ND	1.7	0.63	ug/kg	
72-54-8	4,4'-DDD	ND	3.3	0.57	ug/kg	
72-55-9	4,4'-DDE	ND	3.3	0.54	ug/kg	
50-29-3	4,4'-DDT	ND	3.3	0.65	ug/kg	
72-20-8	Endrin	ND	3.3	0.62	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	0.62	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	0.62	ug/kg	
959-98-8	Endosulfan-I	ND	1.7	0.49	ug/kg	
33213-65-9	Endosulfan-II	ND	1.7	0.62	ug/kg	
76-44-8	Heptachlor	ND	1.7	0.57	ug/kg	
1024-57-3	Heptachlor epoxide	ND	1.7	0.58	ug/kg	
72-43-5	Methoxychlor	ND	3.3	0.86	ug/kg	
8001-35-2	Toxaphene	ND	83	33	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	87%	50-122%
2051-24-3	Decachlorobiphenyl	86%	50-133%

Method Blank Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP61615-MB	YR4650.D	1	08/31/16	FEA	08/24/16	OP61615	GYR115

The QC reported here applies to the following samples: **Method:** SW846 8015C

C46897-1, C46897-2, C46897-3, C46897-4, C46897-6, C46897-8, C46897-10

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	5.0	2.5	mg/kg	
	TPH (> C28-C40)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	87%	56-122%

Blank Spike Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP61612-BS	TT378853.D	1	08/25/16	NG	08/24/16	OP61612	GTT1846

The QC reported here applies to the following samples: **Method:** SW846 8081B

C46897-1, C46897-2, C46897-3, C46897-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
309-00-2	Aldrin	16.7	16.1	97	57-120
319-84-6	alpha-BHC	16.7	16.0	96	60-117
319-85-7	beta-BHC	16.7	16.6	100	57-125
319-86-8	delta-BHC	16.7	16.8	101	42-126
58-89-9	gamma-BHC (Lindane)	16.7	16.7	100	60-123
60-57-1	Dieldrin	16.7	15.4	92	63-125
72-54-8	4,4'-DDD	16.7	14.5	87	55-135
72-55-9	4,4'-DDE	16.7	15.9	95	61-129
50-29-3	4,4'-DDT	16.7	15.2	91	60-136
72-20-8	Endrin	16.7	15.9	95	67-138
1031-07-8	Endosulfan sulfate	16.7	15.6	94	59-119
7421-93-4	Endrin aldehyde	16.7	15.2	91	37-110
959-98-8	Endosulfan-I	16.7	14.8	89	62-122
33213-65-9	Endosulfan-II	16.7	15.1	91	62-122
76-44-8	Heptachlor	16.7	16.0	96	58-123
1024-57-3	Heptachlor epoxide	16.7	15.6	94	60-122
72-43-5	Methoxychlor	16.7	16.0	96	57-133

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	89%	50-122%
2051-24-3	Decachlorobiphenyl	84%	50-133%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP61612-BS2	TT378854.D	1	08/25/16	NG	08/24/16	OP61612	GTT1846

The QC reported here applies to the following samples: **Method:** SW846 8081B

C46897-1, C46897-2, C46897-3, C46897-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12789-03-6	Chlordane	83.3	80.1	96	52-146
8001-35-2	Toxaphene	167	161	97	48-155

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	93%	50-122%
2051-24-3	Decachlorobiphenyl	87%	50-133%

12.2.2
12

* = Outside of Control Limits.

Blank Spike Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP61615-BS	YR4649.D	1	08/31/16	FEA	08/24/16	OP61615	GYR115

The QC reported here applies to the following samples: **Method:** SW846 8015C

C46897-1, C46897-2, C46897-3, C46897-4, C46897-6, C46897-8, C46897-10

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C28)	50	39.6	79	62-116
	TPH (> C28-C40)	50	40.6	81	47-138

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	84%	56-122%

12.2.3
12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP61612-MS	TT378857.D	1	08/25/16	NG	08/24/16	OP61612	GTT1846
OP61612-MSD	TT378858.D	1	08/25/16	NG	08/24/16	OP61612	GTT1846
C46897-1	TT378856.D	1	08/25/16	NG	08/24/16	OP61612	GTT1846

The QC reported here applies to the following samples: **Method:** SW846 8081B

C46897-1, C46897-2, C46897-3, C46897-4

CAS No.	Compound	C46897-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND		16.7	15.2	91	16.9	17.3	102	13	57-120/28
319-84-6	alpha-BHC	ND		16.7	15.8	95	16.9	18.0	107	13	60-117/24
319-85-7	beta-BHC	ND		16.7	16.4	98	16.9	18.9	112	14	57-125/26
319-86-8	delta-BHC	ND		16.7	16.5	99	16.9	19.2	114	15	42-126/24
58-89-9	gamma-BHC (Lindane)	ND		16.7	16.1	97	16.9	18.6	110	14	60-123/29
60-57-1	Dieldrin	ND		16.7	14.5	87	16.9	16.4	97	12	63-125/29
72-54-8	4,4'-DDD	ND		16.7	14.6	88	16.9	16.9	100	15	55-135/31
72-55-9	4,4'-DDE	ND		16.7	15.3	92	16.9	17.3	102	12	61-129/31
50-29-3	4,4'-DDT	ND		16.7	14.9	89	16.9	16.9	100	13	60-136/39
72-20-8	Endrin	ND		16.7	15.0	90	16.9	17.1	101	13	67-138/28
1031-07-8	Endosulfan sulfate	ND		16.7	14.3	86	16.9	16.1	95	12	59-119/28
7421-93-4	Endrin aldehyde	ND		16.7	12.8	77	16.9	14.5	86	12	37-110/25
959-98-8	Endosulfan-I	ND		16.7	14.0	84	16.9	15.8	94	12	62-122/29
33213-65-9	Endosulfan-II	ND		16.7	14.0	84	16.9	15.7	93	11	62-122/31
76-44-8	Heptachlor	ND		16.7	15.2	91	16.9	17.5	104	14	58-123/30
1024-57-3	Heptachlor epoxide	ND		16.7	14.8	89	16.9	16.8	99	13	60-122/33
72-43-5	Methoxychlor	ND		16.7	14.5	87	16.9	16.3	96	12	57-133/31

CAS No.	Surrogate Recoveries	MS	MSD	C46897-1	Limits
877-09-8	Tetrachloro-m-xylene	89%	99%	92%	50-122%
2051-24-3	Decachlorobiphenyl	68%	74%	72%	50-133%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46897
Account: ALNCA SGS Accutest Northern California
Project: RNCECAS: 1936 AR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP61615-MS	YR4652.D	1	08/31/16	FEA	08/24/16	OP61615	GYR115
OP61615-MSD	YR4653.D	1	08/31/16	FEA	08/24/16	OP61615	GYR115
C46897-6	YR4651.D	1	08/31/16	FEA	08/24/16	OP61615	GYR115

The QC reported here applies to the following samples: **Method:** SW846 8015C

C46897-1, C46897-2, C46897-3, C46897-4, C46897-6, C46897-8, C46897-10

CAS No.	Compound	C46897-6 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	ND		48.8	42.7	88	48.8	38.1	78	11	62-116/35
	TPH (> C28-C40)	ND		48.8	43.8	90	48.8	39.7	81	10	47-138/29

CAS No.	Surrogate Recoveries	MS	MSD	C46897-6	Limits
84-15-1	o-Terphenyl	90%	79%	95%	56-122%

12.3.2
12

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

(SGS Accutest Southeast)

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30749 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 08/24/16

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	0.00068	<0.042

Associated samples MP30749: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30749
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 08/24/16 08/24/16

Metal	FA36141-1R Original	DUP	RPD	QC Limits	FA36141-1R Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.075	0.056	29.0 (a)	0-20	0.075	0.28	0.243	84.3	80-120

Associated samples MP30749: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30749
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 08/24/16

Metal	FA36141-1R Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.075	0.29	0.247	87.1	3.5	20

Associated samples MP30749: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30749
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 08/24/16

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.26	0.25	104.0	80-120

Associated samples MP30749: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30749
Matrix Type: SOLID

Methods: SW846 7471B
Units: ug/l

Prep Date: 08/24/16

Metal	FA36141-1R Original	SDL 1:5	%DIF	QC Limits
Mercury	0.949	0.790	16.8 (a)	0-10

Associated samples MP30749: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30752
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 08/24/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	1.8		
Antimony	1.0	.05	.065	0.030	<1.0
Arsenic	0.50	.065	.1	-0.080	<0.50
Barium	10	.05	.05	0.015	<10
Beryllium	0.25	.01	.025	0.0050	<0.25
Cadmium	0.20	.01	.025	-0.0050	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.055	<0.50
Cobalt	2.5	.01	.025	-0.0050	<2.5
Copper	1.3	.05	.05	0.0050	<1.3
Iron	15	.85	.85		
Lead	1.0	.05	.05	0.0	<1.0
Magnesium	250	1.8	1.8		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.015	.025	0.015	<2.5
Nickel	2.0	.02	.025	0.0	<2.0
Potassium	500	10	10		
Selenium	1.0	.12	.12	0.010	<1.0
Silver	0.50	.035	.041	-0.010	<0.50
Sodium	500	25	25		
Strontium	0.50	.025	.025		
Thallium	0.50	.055	.055	-0.075	<0.50
Tin	2.5	.045	.045		
Titanium	0.50	.025	.025		
Vanadium	2.5	.025	.025	0.015	<2.5
Zinc	1.0	.15	.15	0.090	<1.0

Associated samples MP30752: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30752
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date:			08/24/16					08/24/16	
Metal	FA36308-4 Original	DUP	RPD	QC Limits	FA36308-4 Original	MS	Spikelot MPFLICP2 % Rec		QC Limits
Aluminum									
Antimony	0.0	0.0	NC	0-20	0.0	13.7	22.3	61.4N(c)	80-120
Arsenic	0.37	0.40	7.8	0-20	0.37	82.3	89.3	91.8	80-120
Barium	3.3	3.5	5.9	0-20	3.3	96.0	89.3	103.8	80-120
Beryllium	0.032	0.027	16.9	0-20	0.032	2.3	2.23	101.6	80-120
Cadmium	0.046	0.058	23.1 (a)	0-20	0.046	2.2	2.23	96.5	80-120
Calcium									
Chromium	2.8	2.5	11.3	0-20	2.8	11.1	8.93	93.0	80-120
Cobalt	0.10	0.094	6.2	0-20	0.10	20.4	22.3	91.0	80-120
Copper	4.9	2.5	64.9*(b)	0-20	4.9	14.3	11.2	84.2	80-120
Iron									
Lead	2.8	2.0	33.3 (a)	0-20	2.8	24.3	22.3	96.3	80-120
Magnesium									
Manganese									
Molybdenum	0.15	0.11	30.8 (a)	0-20	0.15	20.7	22.3	92.1	80-120
Nickel	0.43	0.40	7.2	0-20	0.43	20.4	22.3	89.5	80-120
Potassium									
Selenium	0.35	0.35	0.0	0-20	0.35	83.5	89.3	93.1	80-120
Silver	0.0	0.0	NC	0-20	0.0	2.1	2.23	94.1	80-120
Sodium									
Strontium									
Thallium	0.0	0.0	NC	0-20	0.0	85.9	89.3	96.2	80-120
Tin									
Titanium									
Vanadium	2.0	1.7	16.2	0-20	2.0	22.9	22.3	93.7	80-120
Zinc	5.2	2.1	84.9*(b)	0-20	5.2	23.0	22.3	79.8N(c)	80-120

Associated samples MP30752: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.
(b) High RPD due to possible sample non-homogeneity.
(c) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30752
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 08/24/16

Metal	FA36308-4 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	14.7	24.1	61.0N(a)	7.0	20
Arsenic	0.37	87.7	96.5	90.5	6.4	20
Barium	3.3	101	96.5	101.3	5.1	20
Beryllium	0.032	2.4	2.41	98.2	4.3	20
Cadmium	0.046	2.2	2.41	89.3	0.0	20
Calcium						
Chromium	2.8	11.6	9.65	91.2	4.4	20
Cobalt	0.10	21.5	24.1	88.7	5.3	20
Copper	4.9	14.4	12.1	78.8N(a)	0.7	20
Iron						
Lead	2.8	24.8	24.1	91.2	2.0	20
Magnesium						
Manganese						
Molybdenum	0.15	21.9	24.1	90.2	5.6	20
Nickel	0.43	21.5	24.1	87.4	5.3	20
Potassium						
Selenium	0.35	89.3	96.5	92.2	6.7	20
Silver	0.0	2.3	2.41	95.4	9.1	20
Sodium						
Strontium						
Thallium	0.0	89.9	96.5	93.2	4.6	20
Tin						
Titanium						
Vanadium	2.0	24.1	24.1	91.6	5.1	20
Zinc	5.2	23.8	24.1	77.1N(a)	3.4	20

Associated samples MP30752: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30752
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 08/24/16

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	23.8	25	95.2	80-120
Arsenic	93.9	100	93.9	80-120
Barium	107	100	107.0	80-120
Beryllium	2.6	2.5	104.0	80-120
Cadmium	2.5	2.5	100.0	80-120
Calcium				
Chromium	10.4	10	104.0	80-120
Cobalt	25.0	25	100.0	80-120
Copper	13.1	12.5	104.8	80-120
Iron				
Lead	23.6	25	94.4	80-120
Magnesium				
Manganese				
Molybdenum	25.3	25	101.2	80-120
Nickel	24.6	25	98.4	80-120
Potassium				
Selenium	95.9	100	95.9	80-120
Silver	2.3	2.5	92.0	80-120
Sodium				
Strontium				
Thallium	94.8	100	94.8	80-120
Tin				
Titanium				
Vanadium	25.4	25	101.6	80-120
Zinc	25.4	25	101.6	80-120

Associated samples MP30752: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30752
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/24/16

Metal	FA36308-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	8.10	6.50	19.8 (a)	0-10
Barium	72.3	78.2	8.2	0-10
Beryllium	0.700	1.10	57.1 (a)	0-10
Cadmium	1.00	1.10	10.0	0-10
Calcium				
Chromium	60.9	69.4	14.0*(b)	0-10
Cobalt	2.20	2.50	13.6 (a)	0-10
Copper	107	115	7.7	0-10
Iron				
Lead	60.8	62.6	3.0	0-10
Magnesium				
Manganese				
Molybdenum	3.20	3.10	3.1	0-10
Nickel	9.50	11.4	20.0 (a)	0-10
Potassium				
Selenium	7.60	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Vanadium	44.3	48.7	9.9	0-10
Zinc	114	164	44.0 (a)	0-10

Associated samples MP30752: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: C46897
Account: ALNCA - SGS Accutest Northern California
Project: RNCECAS: 1936 AR

QC Batch ID: MP30752
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/24/16

Metal	Sample ml	Final ml	FA36308-4 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10			100	0.2	5	100	100.0	80-120
Arsenic	9.8	10	8.1	7.938	105.7	0.2	5	100	97.8	80-120
Barium	9.8	10	72.3	70.854	336.7	0.2	12.5	250	106.3	80-120
Beryllium	9.8	10	.7	.686	49.1	0.2	2.5	50	96.8	80-120
Cadmium	9.8	10	1	.98	48	0.2	2.5	50	94.0	80-120
Calcium										
Chromium	9.8	10	60.9	59.682	109.1	0.2	2.5	50	98.8	80-120
Cobalt	9.8	10	2.2	2.156	49.9	0.2	2.5	50	95.5	80-120
Copper	9.8	10	106.5	104.37	208.7	0.2	5	100	104.3	80-120
Iron										
Lead	9.8	10	60.8	59.584	108.6	0.2	2.5	50	98.0	80-120
Magnesium										
Manganese										
Molybdenum	9.8	10	3.2	3.136	101.2	0.2	5	100	98.1	80-120
Nickel	9.8	10	9.5	9.31	101.1	0.2	5	100	91.8	80-120
Potassium										
Selenium	9.8	10	7.6	7.448	101.5	0.2	5	100	94.1	80-120
Silver	9.8	10			47.5	0.2	2.5	50	95.0	80-120
Sodium										
Strontium										
Thallium	9.8	10			94.9	0.2	5	100	94.9	80-120
Tin										
Titanium										
Vanadium	9.8	10	44.3	43.414	92.7	0.2	2.5	50	98.6	80-120
Zinc	9.8	10	113.7	111.426	356.7	0.2	12.5	250	98.1	80-120

Associated samples MP30752: C46897-1, C46897-2, C46897-3, C46897-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

REVIEW SUMMARY REPORT – CONCUR
PRELIMINARY REVIEW – AUGUST 2016

Agency Information

Agency Name: Santa Clara County Environmental Health Department (County)	Address: 1555 Berger Drive, Suite 300 San Jose, CA 95112
Agency Caseworker: Aaron Costa	Case No.: 07S1E03F03f

Case Information

Cleanup Fund (Fund) Claim No.: 19660	GeoTracker Global ID: T10000001657
Site Name: Farmers Supply	Site Address: 1936 Alum Rock Avenue San Jose, CA 95116
Responsible Party: Farmers Supply, Inc. Attn: David Mijares	Address: PO Box 7865 San Jose, CA 95150
Fund Expenditures to Date: $43,575	Number of Years Case Open: 10
Fund Budget Category: Verification Monitoring	

To view all public documents for this case available on GeoTracker use the following URL:
http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000001657

Summary

The Low-Threat Underground Storage Tank (UST) Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Policy. This case does not meet all of the required criteria of the Policy. Highlights of the case follow:

This case consists of a retail building and several sheds. One gasoline UST was removed in April 1985. An unauthorized release was reported in March 2006 following a site investigation. Dual phase extraction pilot tests were conducted in October 2010 and June 2015 which indicated dual phase extraction would not be an effective remedial technology for this Site. Approximately 20 cubic yards of impacted soil were over-excavated to a depth of 14 feet below ground surface (bgs) and disposed offsite in January 2016. No other active remediation has been conducted at the Site. Since 2007, four groundwater monitoring wells have been installed and monitored. According to groundwater data, water quality objectives have not been achieved.

The petroleum release is limited to the soil and shallow groundwater. According to data available in GeoTracker, there are no public water supply wells within 1,000 feet of the Site. No other water supply wells have been identified within 1,000 feet of the Site in files reviewed. Silver Creek lies approximately 150 feet east of the Site. According to GeoTracker there are no nearby or impacted wells. The unauthorized release is located within the service area of a public water system, as defined in the Policy. The affected shallow groundwater is not currently being used as a source of drinking water, and it is highly unlikely that the affected shallow groundwater will be used as a source of drinking water in the foreseeable future. Other designated beneficial uses of impacted

groundwater are not threatened, and it is highly unlikely that they will be, considering these factors in the context of the site setting

Rationale for Closure under the Policy

- General Criteria: The case meets seven of eight Policy general criteria. The status of free product removal is unknown.
- Groundwater Specific Criteria: The case does not meet Policy criteria because the contaminant plume that exceeds water quality objectives is not defined, the nearest surface water body is less than 250 feet from the Site, while the maximum dissolved concentration of benzene is greater than 3,000 micrograms per liter (µg/L).
- Vapor Intrusion to Indoor Air: The case does not meet Policy criteria because the maximum benzene concentration in groundwater is greater than 1,000 µg/L, while the minimum depth to groundwater is less than 30 feet. Soil vapor samples collected in February and August 2013 contained high helium concentrations; suggesting soil vapor samples were invalid.
- Direct Contact and Outdoor Air Exposure: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Policy Table 1 for Commercial/Industrial use, and the concentration limits for a Utility Worker are not exceeded. There are no soil samples results in the case record for naphthalene. However, the relative concentration of naphthalene in soil can be conservatively estimated using the published relative concentrations of naphthalene and benzene in gasoline. Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2 percent benzene and 0.25 percent naphthalene. Therefore, benzene concentrations can be used as a surrogate for naphthalene concentrations with a safety factor of eight. Benzene concentrations from the Site are below the naphthalene thresholds in Table 1 of the Policy. Therefore, estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact with a safety factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

Outcome of Conference Call

Based on a conference call conducted on August 30, 2016, State Water Board staff concur with County staff that the Responsible Party should:

- Conduct regular groundwater monitoring to assess current groundwater quality and to calculate groundwater trends,
- Define the extent of groundwater contamination to the northwest, southwest, and east, and
- Collect an additional round of soil vapor samples to assess vapor intrusion with recognition that tight soil conditions may increase cross contamination with atmospheric air.

8/30/16

Kirk Larson, P.G. Date
Engineering Geologist
Technical Review Unit
(916) 341-5663

8/6/16

Pat G. Cullen, P.G. Date
Senior Engineering Geologist
Chief, Technical Review Unit
(916) 341-5684

H. Remediation and Monitoring Reports

Remedial Action Status Report #1
Monitoring Well Destruction and ISCO Events 1 and 2
1936 Alum Rock Avenue; San Jose, CA 95116

December 18, 2018

Prepared for
Santa Clara County Department of Environmental Health
Hazardous Materials Compliance Division – Site Mitigation Program
1555 Berger Drive #300
San Jose, CA 95112

On Behalf of
Pacific West Communities, Inc
430 East State Street, Suite 100
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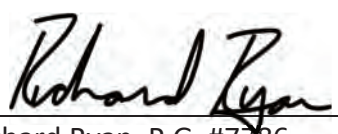

Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

Neil O'Hara
RNC Environmental, LLC

Statement of Accuracy

I am the primary author of this document and have either performed all field activities documented herein or been present as a field supervised while the activities were performed. I declare under penalty of perjury that the information, interpretations, and recommendations contained in this document are true and correct to the best of my knowledge and my professional experience.

Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

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Acronyms

AMSL	Above mean sea level
BGL	Below ground level
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CaDWR	California Department of Water Resources
Cond	Conductivity
DTW	Depth to water
ECD	Electron capture detector
FID	Flame ionization detector
ISCO	In-Situ Chemical Oxidation
MiHPT	Membrane interface probe and hydraulic profiling tool
mg/L	Milligrams per Liter
µg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per cubic meter
MTBE	Methyl-tert-butyl-ether
ORP	Oxygen/reduction Potential
OSWCR	Online System for Well Completion Reports
SCCDEH	Santa Clara County Dept. of Environmental Heath
SCVWD	Santa Clara Valley Water District
SFBay RWQCB	San Francisco Bay Regional Water Quality Control Board
TDS	Total dissolved solids
TPH_{gas}	Total petroleum hydrocarbons in the gasoline rage
UST	Underground storage tank
VOCs	Volatile organic compounds

1.0 Introduction

During an August 10, 2018 meeting with SCCDEH, in-situ chemical oxidation was selected as the best remedial option to address gasoline remaining in the subsurface given the limited time available prior to redevelopment of the site. PersulfOx™ was selected as the preferred oxidizing reagent based on recommendations from Regenesis, a leading manufacturer of in-situ chemical amendments. Regenesis provided a remedial design, and assuming the design and chemistry is correct, then achieving favorable results should largely be a function of the correct placement of PersulfOx solution into the subsurface using pressure injection methods.

Correspondence from SCCDEH dated September 11, 2018, required submittal of technical reports documenting completion of certain activities. The purpose of this report is to document recent site activities as follows:

- destruction of five monitoring wells (MW1 through MW5),
- first pressure injection event with PersulfOx solution, Oct. 29th through Oct 31st,
- second pressure injection event with PersulfOx solution, Nov. 19th through Nov. 20th.
- results of soil gas and groundwater monitoring for Nov. 20th,

2.0 Monitoring Well Destruction

Groundwater monitoring wells existing in the target injection zone could be expected to create unfavorable conditions during pressure injection activities. Consequently, the five groundwater monitoring wells located in the target area were destroyed prior to the first pressure injection event. The monitoring wells were destroyed under permit with SCVWD. Copies of monitoring well destruction permits and CaDWR 188 forms for the five wells are included as **Appendix A**. Construction details for all former and current groundwater monitoring wells at the site are listed in **Table 1**, and a site map showing all former and current groundwater monitoring well locations, along with other features of interest at the site, is shown in **Figure 1**.

Monitoring wells MW1 through MW5 were destroyed by over-drilling each well to its total depth and backfilling the borings with cement grout. Well destruction was performed by Cascade Drilling on October 16th using an auger drilling rig, 8-inch diameter augers, and a “stinger” on the base of the lead auger. The stinger functioned to keep the drill bit centered on the monitoring well PVC pipe during over-drilling. As a first step, all five wells were over-drilled, and the augers were left in the ground. Destruction of each well was then completed by knocking the stinger out of the bottom of auger string, filling the augers with cement grout, removing the augers, and then filling the remainder of the boring with grout. That process was repeated at each well. Water had accumulated in one boring (MW2) sufficiently that a tremie pipe was used to initially fill the augers with grout. Drill cuttings were accumulated in a total of six 55-gallon drums for subsequent disposal at a permitted facility. A total of 54@ 47-lbs bags of cement were used to grout the 140 total feet of borings. Each bag was mixed with

approximately 5 gallons of water. An inspector from SCVWD (Mr. Tim Ripp) was on site during the second half of the day to observe the grouting process at each well. A CaDWR 188 form documenting well destruction was completed for each well using CaDWR's new OSWCR online submittal system. Those forms were deemed to be complete by CaDWR on December 17, 2018.

3.0 Pressure Injection Event #1

The first pressure injection event occurred over a four-day period (Oct. 29th – Nov. 1st). Gregg Drilling performed mixing, drilling, and injection services, and the trailer operator maintained a record of sustained pump pressure and flow for each injection interval. Additionally, a digital pressure and flow monitoring device was used to create a detailed record of downhole pressure and flow relationships. A total of 3195.8 lbs PersulfOx (58 bags) and 2678 gallons of potable water were consumed during the event (24% of total project design), and a total of 2848 gallons of PersulfOx solution was distributed between 15.0 and 37.2 feet BGL via 10 soil borings. Remaining PersulfOx (1873.5 lbs / 34 bags) was securely stored in a placarded and ventilated conex container at the site. **Appendix B** contains a detailed listing of injection depth intervals, pressures, flow rates, and volumes. **Table 2** is a summary listing of the injection locations, depths, and volumes.

An injection tool with 30 holes evenly distributed over a 14-inch depth interval was selected for use. Before initial injection was started in each boring, the top of the injection tool was advanced to either 15 or 17.3 feet BGL, depending on boring proximity to the former source area. After injecting a prescribed amount of solution, the injection tool was advanced 28 inches deeper and another prescribed amount of solution was injected at that deeper interval. That procedure was repeated until injection had been completed at the maximum depth of 36 to 37.2 feet BGL. Injection pipe remained in the boring until replaced with a tremie pipe that was used to fill each boring with cement grout. **Figure 2** shows the injection depth intervals used during the first event in relation to a cross-section of the petroleum mass in the subsurface.

When possible, 356 gallons of solution (401 lbs of PersulfOx) was evenly distributed between the target depths of 15 (or 17.3) and 37.2 ft BGL in each boring. That goal was necessarily abandoned when surfacing problems began to occur during injection at the seventh boring (B7). After surfacing problems began, injection depth intervals and injected volumes were varied in repeated attempts to continue injection without additional solution surfacing. Injection activities were eventually curtailed due to continued surfacing problems with one of the eleven planned borings (B9) completely omitted from the first event.

The Regenesis remedial design specified injecting 3918 gallons of solution (4,408 lbs of PersulfOx) between 18 and 35 ft BGL via 11 borings during each of three events (total 13224 lbs of PersulfOx in 11754 gallons of solution). That equates to 356 gallons of solution and 401 lbs (7.3 bags) of PersulfOx

in each boring. The total volume of PersulfOx solution placed into the subsurface prior to solution surfacing problems was 18% of the total project design volume. Solution surfacing problems continued off and on until 24% of the total project design volume had been injected at the end of the first event. Based on results of the first injection event, the maximum amount of solution that can be forced into the subsurface target area without creating surfacing problems is 2136 gallons of solution (2406 lbs of PersulfOx) via 6 injection borings at 356 gallons per boring (18% of the total project design volume).

3.1 Digital Pressure and Flow Monitoring

Gregg Drilling provided a digital monitoring device to document subsurface pressure and flow relationships during injection. The device was functional for 7 of 10 borings completed during the first event. **Figure 3** shows typical subsurface pressure and flow relationships during injection.

Figure 4 shows the pressure and flow relationships recorded during creation of vertically oriented fractures and solution surfacing problems. During injection at B7: 26.7-27.9 feet BGL, a vertical crack was observed at the surface extending between B7 and B4. Injected solution was surfacing along that crack. Based on review of digital pressure flow curves, vertical fracturing actually began during injection at B7: 17.3–18.5 feet BGL, earlier than recognized by solution surfacing alone.

3.2 Miscellaneous Testing and Monitoring

Monitoring wells MW6, MW7, and MW8 were repeatedly gauged for depth to water during the second day of injection activities. **Figure 5** graphically shows results of well gauging for depth to water and indicates that water levels in MW6 fluctuated up and down almost immediately in response to pressure injection activities in the target area. Water levels in MW7 and MW8 appeared relatively unaffected by pressure injection in the target area.

On the first day of event 1, prior to any application of PersulfOx, a test boring was drilled outside of the target area and potable water was pressure injected at two depth intervals to determine the rate of flow that could be sustained. **Figure 6** is a graph showing the pressure and flow relationship recorded during those tests. Flow rates between 6.9 gpm (50 psi) to 21 gpm (115 psi) were achieved when using an injection tool with 30 holes evenly distributed over a 14-inch depth interval. Pressures recorded during the test were pump pressures measured at the mixing trailer.

4.0 Pressure Injection Event #2

The second pressure injection event occurred over a two-day period (Nov. 19th – Nov. 20th). Gregg Drilling performed mixing, drilling, and injection services, and the trailer operator maintained a record

of initial and sustained pump pressure and flow for each injection interval. The digital pressure and flow monitoring device was not available during the second event. A total of 2136 gallons of PersulfOx solution was distributed in the target area between 16.2 and 36.0 feet BGL via 6 borings. A total of 2424 lbs of PersulfOx (44 bags) and 2016 gallons of potable water were consumed during the event. A cumulative project total of 5620 lbs of PersulfOx has been placed underground during two pressure injection events (42% of total project design mass). Remaining PersulfOx (2424.4 lbs / 44 bags) was securely stored in a placarded and ventilated conex container at the site after receiving a second shipment of 2975.4 lbs / 54 bags on Nov. 19th. The injection depth intervals used during the second event are shown in relation to the petroleum mass in the subsurface in **Figure 2**. **Appendix B** contains a detailed listing of injection depth intervals, pressures, flow rates, and volumes. **Table 2** is a summary listing of the injection locations, depths, and volumes.

The scope of injection activities during the second event was purposely reduced to 2016 gallons and 6 borings in order to avoid solution surfacing problems encountered during the first event. However, solution surfacing was observed from boring B3 during injection at B14A: 23.2-24.4 ft. Surfacing reoccurred at B3 after B14A was deepened to 27.8-29.0 ft BGL and injection restarted. The surfacing was attributed to the proximity between B14A to B3 and a poor grout seal in B3. Injection activities were stopped for the day, and B3 was re-drilled and re-sealed with grout using drill rods as a tremie pipe. The next day, boring B14B was drilled further from B3 and the remaining solution was injected at that location without any solution surfacing problems.

5.0 Soil Gas and Groundwater Monitoring Results

A soil gas sample and 3 of 4 planned groundwater samples were collected at the beginning of the second injection event. Three attempts (3 borings) to collect a grab groundwater sample from near the center of the target area (near former MW3) all failed due to dry borings. Failure to obtain a grab groundwater sample from the middle of the target area requires that a different sampling approach be used during future attempts (see **Summary and Conclusions**). Copies of all laboratory analytical report sheets are included as **Appendix C**.

5.1 Groundwater Sampling and Results

Before injection began on the 19th, attempts to collect a grab groundwater sample from near the center of the target area (former MW3) failed due to no water after two separate borings were drilled to 28 ft BGL. A decision was made to install a third boring at the end of the day and let it stand overnight. The third boring was also found to be dry on the following morning. Consequently, only groundwater samples from MW6, MW7, and MW8 were collected.

Wells were gauged for depth to water just prior to groundwater sampling, and that data was used to calculate the indicated direction of groundwater flow. **Figure 7** is a map showing the indicated direction of groundwater flow on November 19th is toward the northeast under a hydraulic gradient of 0.008 ft/ft. That direction is consistent with that observed during previous sampling events. **Table 3** is a comparison of well gauging data from November 19th in relation to previous gauging data, and **Table 4** is a comparison of groundwater potentiometric data for November 19th in relation to previous potentiometric data.

Groundwater samples were collected using the Hydra-sleeve™ no purge sampling method. Samplers were installed in MW6, MW7, and MW8 on November 13th, and were recovered on November 19th. Previous Hydra-sleeve groundwater sampling at the site has demonstrated that they produce accurate results, as do field test evaluations by others[1,2].

Groundwater samples were analyzed for sulfate by EPA-NERL 300 and for 65 VOCs by SW-846 8260. **Table 5** is a summary of those laboratory analytical results and shows that a total of 9 VOCs were detected in groundwater on November 19, 2018. Concentrations of all detected VOCs were below applicable ESLs for "Nuisance Levels in Drinking Water". Concentrations of sulfate were within the range of anticipated background levels for sulfate[3]. **Table 6** shows a comparison of the November 19th groundwater analytical results to historic analytical results. Note that low concentrations of gasoline constituents have been observed in groundwater from MW-6 and MW-8 on previous occasions.

Groundwater samples were also analyzed in the field for indicator parameters (ORP, TDS, pH, conductivity, and temperature) using a hand-held multimeter (see **Table 5**). **Table 7** shows a comparison of the November 19th groundwater indicator parameters to historic indicator parameter results. The groundwater indicator parameters measured on November 19th appear consistent with those measured during previous groundwater sampling events.

5.2 Soil Gas Sampling and Results

A single soil gas sample was collected from well SG-20 on November 20th using passive soil gas sampling techniques. A Waterloo Membrane Sampler (WMS) supplied by Eurofins Air Toxics was installed at the base of SG-20 on November 13th and recovered on November 20th. The sample, and an accompanying

[1] Parsons, October 2005. "Results Report for the Demonstration of No-Purge Groundwater Sampling Devices at Former McClellan Air Force Base, California", 79p.

[2] Savoie, J.G. and LaBlanc, D.R., 2012. "Comparison of No-Purge and Pumped Sampling Methods for Monitoring Concentrations of Ordnance-Related Compounds in Groundwater, Camp Edwards, Massachusetts Military Reservation, Cape Cod, Massachusetts, 2009–2010", USGS Scientific Investigations Report 2012–5084, 36p.

[3] RyanGES, Inc. and RNC Environmental, LLC, Dec. 6, 2017. "Site Characterization and Remedial Evaluation", 299p, https://geotracker.waterboards.ca.gov/regulators/deliverable_documents/5169499278/1606E%2ESiteCharRem%20AR1936%2Epdf.

field blank, were then shipped via overnight delivery to Eurofins Air Toxics for analysis. Those samples were analyzed for six VOCs using modified method TO-17. The November 20th event was the first-time passive soil gas sampling has been used at the site.

Table 8 shows a summary of the November 20th soil gas sampling results. Six of six constituents analyzed were detected in the soil gas sample, but only three of the constituents exceeds sub-slab ESLs and/or 1000 times the Indoor Air ESL. The concentration of benzene, ethylbenzene, and naphthalene in soil gas are indicated to exceed ESLs.

6.0 Disscussion

Groundwater sampling detected MTBE, naphthalene, and 1,2-dichloroethane for the first time in MW-6, but at low concentrations. Also, a direct hydraulic connection between the target injection area and MW-6 was observed based on groundwater fluctuations during injection. These events suggest forcing solution into the target area may have resulted in flushing some of the contaminant plume outward toward MW-6.

It is suggested that horizontally oriented fractures were developed in the subsurface as evidenced by the relatively high flow rates observed during pressure injection. Creation of horizontally oriented fractures during pressure injection is a desirable condition which aids in the proper placement of PersulfOx horizontally outward from the injection boring. Horizontally oriented fracture are reasonably expected to occur given the shallow depths of injection, the sediment types and their layering, and injection pressures exceeding overburden pressures.

The observed crack in the ground surface extending between B7 and B4 during injection at B7: 26.7-27.9 feet BGL is a direct observation of vertical fracturing and mounding caused by mounding created by injecting too large a volume of fluid into the subsurface. Vertical fracturing is an undesirable condition which hinders proper placement of PersulfOx and causes injected solution to surface. A second observed cause of solution surfacing was vertical flow upward though a previous soil boring (B3), but that problem may have been addressed by re-drilling and re-grouting B3 during the second event. All subsequent pressure injection events will be limited in volume to no more than 2136 gallons of solution using 6 injection borings in order to avoid mounding, vertical fracturing, and surfacing of solution during pressure injection.

Using less volume of PersulfOx solution during each pressure injection event means that more events than originally planned will be necessary to place the design mass of PersulfOx into the ground. A total of 5620 lbs of PersulfOx (42% of total project design mass) have been placed in the ground after 2 pressure injection events. Using a maximum of 2424 lbs of PersulfOx (2136 gallons of solution) during each of 3 additional events (3rd, 4th, and 5th) will result in a total of 12892 lbs persulfOx in place (97% of

total project design mass). Two additional injection events (3rd and 4th events) have been scheduled, and it is unclear if the schedule for re-development will allow for a 5th event. The need for a 5th event might best be determined by soil gas and groundwater sampling results collected at the beginning of the 3rd and 4th injection events.

The primary by-product of the reaction between PersulfOx and gasoline is sodium bisulfate. In commercial uses, sodium bisulfate is used as a food and feed additive to lower pH without adding bitterness[4]. The stoichiometric description of the reaction between PersulfOx and gasoline is as follows:

$$1\ C_7H_8\ (\text{toluene}) + 18\ Na_2S_2O_8\ (\text{PersulfOx}) + 14\ H_2O \Rightarrow 7\ CO_2 + 36\ NaHSO_4\ (\text{sodium bisulfate})$$

Three attempts (3 borings) to collect a grab groundwater sample from near the center of the target area (near former MW3) all failed due to dry borings. It may be that a by-product of the reaction between PersulfOx and gasoline (e.g., sulfates) has precipitated and plugged much of the porosity and/or permeability in the target zone. A dual wall macro-core drill string will be used during future grab groundwater sampling at the beginning of each pressure injection event. That tool will allow for soil samples to be collected and visually inspected while also creating the best possible chance to obtain a grab groundwater sample.

7.0 Summary and Conclusions

Problems encountered during the first two pressure injection events require three changes be made to the original remediation plan. First, an upper limit on the amount of solution injected during any one event has been establish at 2136 gallons using 6 borings (401 lbs PersulfOx per boring and 2406 lbs PersulfOx per event). This upper limit is considered necessary to prevent surfacing of PersulfOx solution as it is being injected.

Second, a total of five injection events will be needed in order to make up for a lower than planned volume of solution to be injected during each event. A third pressure injection event has been scheduled for December 26th, and a fourth injection event scheduled for January 21st. The fifth event will be scheduled time permitting and if soil gas monitoring and/or groundwater monitoring results indicate the need for continued work. To date, 5,620 lbs of PersulfOx have been placed in the subsurface and the original design specified 13,224 lbs of PersulfOx total for the project.

Third, a dual wall macro-core soil boring will be used, rather than a hydro-punch boring, to collect a grab groundwater sample at the beginning of each event. The first attempt to collect a grab

[4] https://en.wikipedia.org/wiki/Sodium_bisulfate

groundwater sample failed due to dryness. Collecting a grab groundwater sample is important to evaluate the effectiveness of PersulfOx.

Groundwater samples from MW6 and MW7 and fluctuating groundwater elevations in MW6 suggest that pressure injection activities have pushed dissolved phase groundwater plume away from the target area and towards MW6 and MW7. However, the concentration of petroleum constituents remains low in those wells, and there is no indication of PersulfOx solution at those locations. It may be prudent to terminate all PersulfOx injection activities if petroleum concentrations in MW6 and MW7 continue to rise.

A passive soil gas sample collected from near the center of the target area indicate the concentration of benzene, ethylbenzene, and naphthalene in soil gas are in excess of ESLs. Elevated soil gas concentrations and the potential for vapor intrusion are the primary factors driving the need for remediation.

TABLES

TABLE 1: Summary of Monitoring Well Construction

Well ID	Status	TOC Elev (ft AMSL)	Casing Diameter (in)	Screen Length (ft)	Top Scrn (ft)	Bot. Scrn (ft)	Boring TD (ft)
MW-1	Removed	95.46	2	15.0	15.0	30.0	30.0
MW-2	Removed	95.19	2	10.0	20.0	30.0	30.0
MW-3	Removed	95.45	2	10.0	19.5	29.5	29.5
MW-4	Removed	95.45	2	10.0	18.0	28.0	28.0
MW-5	Removed	95.38	2	15.0	12.0	17.0	17.0
MW-6	Active	95.73	2	10.0	20.0	30.0	30.0
MW-7	Active	94.97	2	10.0	18.0	28.0	28.0
MW-8	Active	95.02	2	10.0	18.0	28.0	28.0
SG-20	Active	--	0.75	0.5	4.5	5.0	5.0

TABLE 2: Summary of Pressure Injection Locations, Depths, and Volumes

BORING	DATE	NaS_2O_8 USED (lbs/gal)	COMMENTS
Test	10/29	0/0	2 intervals (18-19.2 & 25-26.2) @ 40 gallons potable water each interval.
B1	10/30	401/356	9 intervals between 17.3-36.0 ft BGL @ 39.6 gallons each interval.
B2	10/30	401/356	9 intervals between 17.3-36.0 ft BGL @ 39.6 gallons each interval.
B3	10/30	401/356	10 intervals between 15.0-36.0 ft BGL @ 33.6 gallons each interval.
B4	10/30	401/356	9 intervals between 17.3-36.0 ft BGL @ 39.6 gallons each interval.
B5	10/30	401/356	9 intervals between 17.3-36.0 ft BGL @ 39.6 gallons each interval.
B6	10/31	401/356	10 intervals between 15.0-36.0 ft BGL @ 33.6 gallons each interval.
B7	10/31	228/202	5 intervals between 17.3-17.9 ft BGL @ 39.6 gallons each interval; 1 interval 29.0-30.2 ft BGL @ 11.5 gallons; Terminate due crack between B7 and B4 observed at surface.
B8	10/31	194/172	4 intervals between 22.0-31.3 ft BGL @ 37.0 gallons each interval.
B11	11/01	229/203	5 intervals between 15.0-25.5 ft BGL @ 35.6 gallons per interval before solution surfacing at B3; 1 interval 26.7-27.9 ft BG @ 20.0 gallons; Terminated after continued surfacing at B3.
B10	11/01	177/157	4 intervals between 19.7-27.9 ft BGL @ 39.2 gallons each interval.
B9	11/01	0/0	Omitted due to solution surfacing problems
B12	11/19	401/356	8 intervals between 18.5-36.0 ft BGL @ 44.5 gal each interval.
B13	11/19	401/356	8 intervals between 18.5-36.0 ft BGL @ 44.5 gal each interval.
B14A	11/19	191/170	5 intervals between 16.2-28.9 ft BGL @ 21.0 to 39.6 gal each interval.
B14B	11/20	210/186	4 intervals between 25.5-36.0 ft BGL @ 46.6 gal each interval.
B15	11/20	401/356	8 intervals between 18.5-36.0 ft BGL @ 44.5 gallons each interval.
B16	11/20	401/356	8 intervals between 18.5-36.0 ft BGL @ 44.5 gallons each interval.
B17	11/20	401/356	8 intervals between 18.5-36.0 ft BGL @ 44.5 gallons each interval.

TABLE 3: Historic Depth to Water Data for MW6, MW7, and MW8

DATE	MW-6	MW-7	MW-8
05/04/17	8.67	6.99	7.38
05/10/17	8.72	7.30	7.65
05/17/17	8.91	7.46	7.77
06/08/17	9.23	7.81	8.09
06/13/17	9.14	7.82	8.03
06/21/17	9.15	7.83	8.00
07/07/17	9.50	8.19	8.35
07/19/17	9.83	8.42	8.61
08/31/17	10.24	8.89	9.00
09/07/17	10.36	9.08	9.19
12/21/17	9.93	8.94	8.99
01/10/18	9.04	4.31	5.32
04/11/18	8.07	5.11	6.48
11/13/18	10.73	9.01	9.35
11/19/18	10.58	8.87	9.22
12/03/18	9.06	6.42	7.89

NOTES:

(1) All values are in units of feet below top of well casing.

(2) Only values collected since May 2017 are shown.

TABLE 4: Historic Groundwater Potentiometric Elevations for MW6, MW7, and MW8

Ref. Elev.	**95.73**	**94.97**	**95.02**
Date	**MW-6**	**MW-7**	**MW-8**
05/04/17	87.06	87.98	87.64
05/10/17	87.01	87.67	87.37
05/17/17	86.82	87.51	87.25
06/08/17	86.50	87.16	86.93
06/13/17	86.59	87.15	86.99
06/21/17	86.58	87.14	87.02
07/07/17	86.23	86.78	86.67
07/19/17	85.90	86.55	86.41
08/31/17	85.49	86.08	86.02
09/07/17	85.37	85.89	85.83
12/21/17	85.80	86.03	86.03
01/10/18	86.69	90.66	89.70
04/11/18	87.66	89.86	88.54
11/13/18	85.00	85.96	85.67
11/19/18	85.15	86.10	85.80
12/03/18	86.67	88.55	87.13

NOTES:

(1) All values are in units of feet above mean sea level.

(2) Only values collected since May 2017 are shown.

TABLE 5: Summary of Groundwater Analytical Results for Nov. 19, 2018

Nov. 19, 2018	MW-6	MW-7	MW-8	Direct Exposure MCL RES	Direct Exposure HH RES	Nuisance DW	Nuisance non-DW	Tier 1 ESLs
MTBE	**0.66**	<0.5	<0.5	5	13	5	180	5
Naphthalene	**2.6**	<2	<2	0.165	0.165	21	210	0.165
Sulfate	**270000**	**280000**	**98000**	--	--	--	--	--
1,2-Dichloroethane	**0.65**	<0.5	<0.5	0.5	0.171	7000	200000	0.5
1,2,3-Trichlorobenzene	<2	**6.2**	<2	--	--	--	--	--
1,2,4-Trichlorobenzene	<2	**3.4**	<2	5	1.13	3000	30000	5
1,2,4-Trimethylbenzene	<0.5	**1.3**	<0.5	--	--	--	--	--
1,3,5-Trimethylbenzene	<0.5	**1.5**	<0.5	--	--	--	--	--
n-Butylbenzene	<0.5	**2.2**	<0.5	--	--	--	--	--
sec-Butyl Benzene	<0.5	**1.1**	<0.5	--	--	--	--	--
pH	**7.19**	**7.75**	**8.29**	--	--	--	--	--
ORP (mV)	**-19**	**-169**	**162**	--	--	--	--	--
TDS (ppm)	**1718**	**1522**	**1136**	--	--	--	--	--
Conductivity (µS)	**2275**	**2027**	**1521**	--	--	--	--	--

NOTES:

(1) All values are in units of µg/L.
(2) "<" indicates the constituent was not detected, the associated value is the reporting limit.
(3) Samples analyzed for 65 VOCs by SW-846 8260 and for sulfate by EPA-NERL 300.0.
(4) pH, ORP, TDS, and conductivity were measured in the field using a handheld multimeter.
(5) Samples were collected using Hydra-sleeve™ no-purge method of sampling.
(6) Background concentrations for sulfate are expected to be 200,000 to 370,000 µg/L.
(7) Environmental Screening Levels (right side of table) are from SF Bay RWQCB, February 22, 2016, and the ESL's for "Nuisance DW" or "Nuisance non-DW" are probably most applicable at the site. None of the detected constituents in groundwater exceeded the nuisance ESLs.

TABLE 6: Historic (Past Year) Groundwater Analytical Results for MW6, MW7, and MW8

Date	Sample ID	Benzene	Toluene	Ethyl Benzene	o-Xylene	m,p-Xylene	MTBE	Naphthalene	Sulfate (mg/L)	n-Butylbenzene	1,2-Dichloroethane	p-Isopropyltoluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	sec-Butyl Benzene	Bromoform
09/07/2017	MW-6	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	**0.55**	<0.5	<0.5	<2	<2	<0.5	<0.5	<0.5	<0.5
01/10/2018	MW-6	**2.6**	**9.6**	**0.96**	**1.4**	**1.3**	<0.5	<2	--	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5	<0.5	<0.5
04/11/2018	MW-6	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5	<0.5	<0.5
11/19/2018	MW-6	<0.5	<0.5	<0.5	<0.5	<1	**0.66**	**2.6**	**270**	<0.5	**0.65**	<0.5	<2	<2	<0.5	<0.5	<0.5	<0.5
09/07/2017	MW-7	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5	<0.5	<0.5
01/10/2018	MW-7	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5	<0.5	<0.5
04/11/2018	MW-7	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5	**1.5**	<2	<2	<0.5	<0.5	<0.5	<0.5
11/19/2018	MW-7	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**280**	**2.2**	<0.5	<0.5	**6.2**	**3.4**	**1.3**	**1.5**	**1.1**	<0.5
09/07/2017	MW-8	<0.5	<0.5	**0.61**	**0.7**	**2.3**	<0.5	<2	--	0.57	<0.5	<0.5	<2	<2	<0.5	<0.5	<0.5	<0.5
01/10/2018	MW-8	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5	<0.5	0.89
04/11/2018	MW-8	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5	<0.5	<0.5
11/19/2018	MW-8	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**98**	<0.5	<0.5	<0.5	<2	<2	<0.5	<0.5	<0.5	<0.5

NOTES:

(1) All values are in units of µg/L, except for sulfate which is in units of mg/L.

(2) "<" – indicates the constituent was not detected, the associated value is the quantitation limit.

Table 7: Historic (Past Year) Groundwater Indicator Parameters for MW6, MW7, and MW8

Date	Well	DTW (ft)	Cond. (µS)	TDS (ppm)	ORP	pH	Temp. (°F)
09/07/17	MW-6	10.36	2234	1650	-77	7.44	66.92
01/10/18	MW-6	9.04	2273	1722	-22	7.28	65.84
04/11/18	MW-6	8.07	2256	1704	-3	7.35	67.46
11/19/18	MW-6	10.58	2275	1718	-19	7.19	65.66
09/07/17	MW-7	9.08	2157	1590	-22	7.57	66.74
01/10/18	MW-7	4.31	2351	1787	163	7.41	65.12
04/11/18	MW-7	5.11	2147	1615	185	7.57	66.56
11/19/18	MW-7	8.87	2021	1522	-169	7.75	69.08
09/07/17	MW-8	9.19	1628	1177	158	8.25	66.56
01/10/18	MW-8	5.32	1378	1014	177	8.02	63.86
04/11/18	MW-8	6.48	1341	976.3	143	8.16	66.38
11/19/18	MW-8	9.22	1521	1136	162	8.29	64.58

NOTES:

(1) Indicator parameters were measured with a handheld multimeter in the field during sample collection.

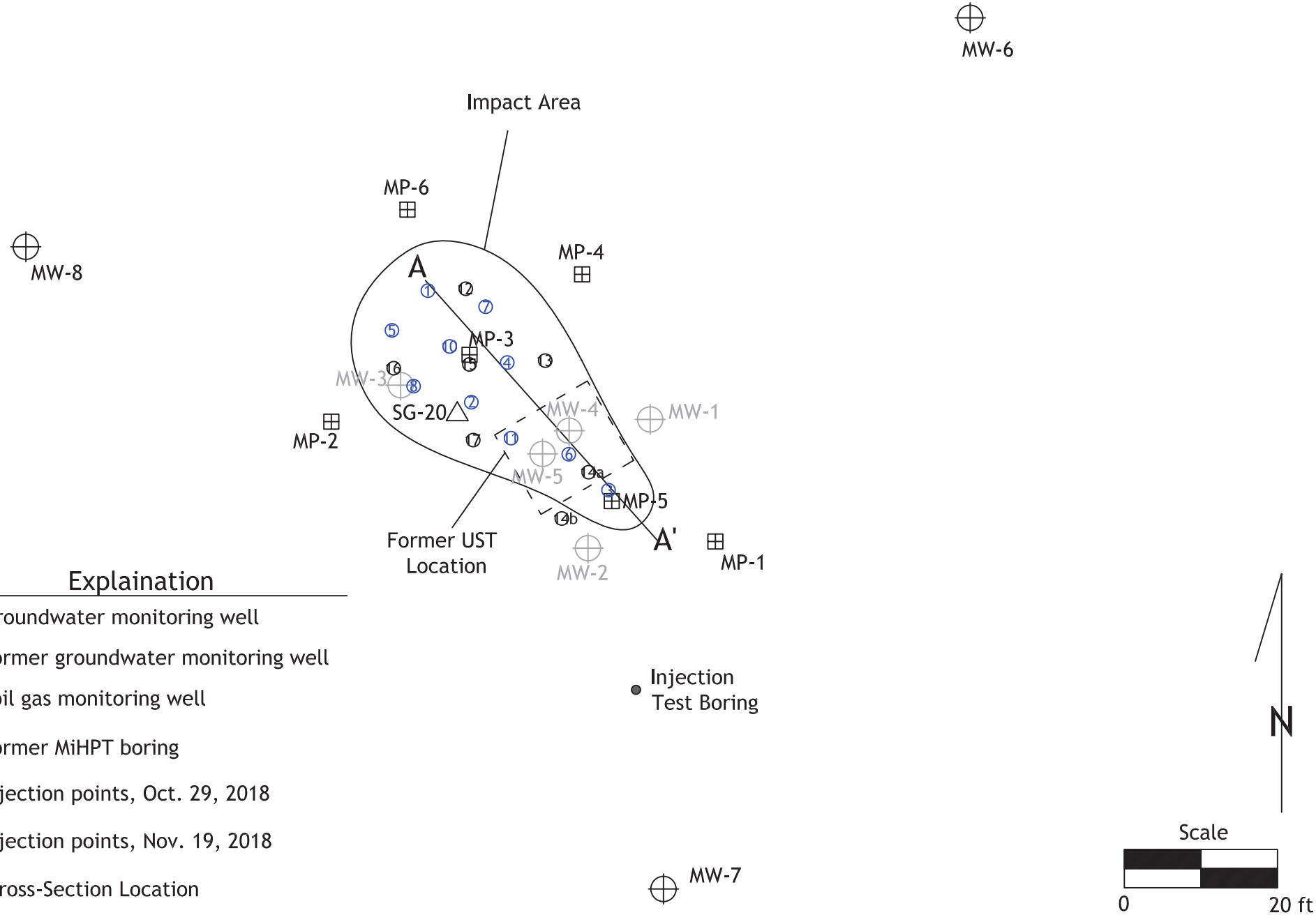
TABLE 8: Summary of Laboratory Analytical Results for Soil Gas Samples

Date	Benzene	Toluene	Ethylbenzene	m-,p-Xylene	o-Xylene	Naphthalene
11/20/18	**590**	2400 B	**4600**	8400	4300	**170**
Sub-Slab ESL:	48	160000	560	52000*	52000*	41
Indoor Air ESL:	0.097	310	1.1	100*	100*	0.083
Indoor Air ESL/0.001:	97	310000	1100	100000*	100000*	83

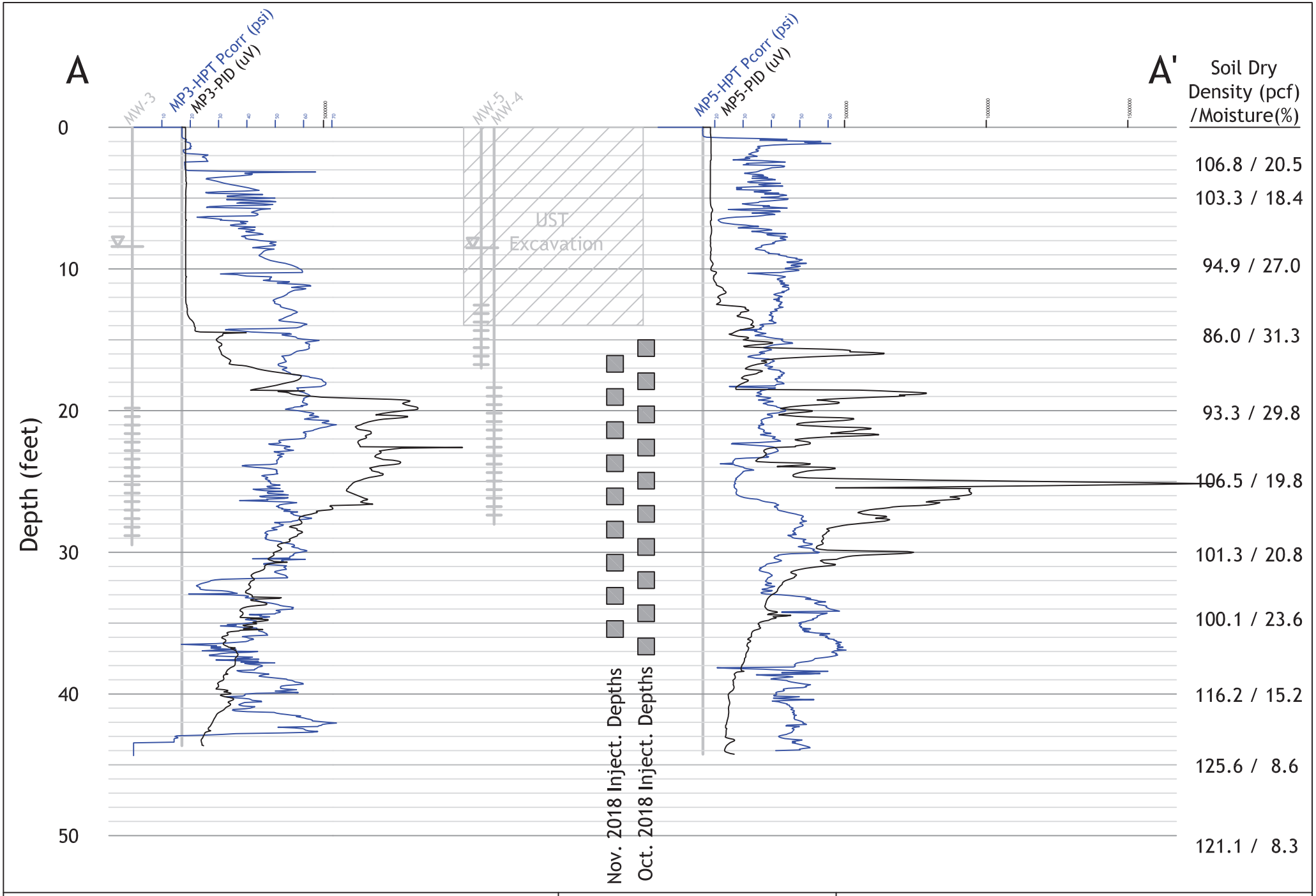
NOTES:

(1) All values are in units of $\mu g/m^3$.
(2) Samples were collected using passive samplers set on Nov. 13th at 1655 hours and collected on Nov. 20th at 0736 hrs.
(3) Samples were analyzed for 6 constituents by modified method TO-17.
(4) "B" – indicates analyte was detected but at a concentration below the practical quantitation limit.
(5) Results exceeding ESLs for sub-slab soil gas (SF Bay RWQCB, February 22, 2016, Rev.3) are highlighted in bold.
(6) "*" – indicates ESL value is for total xylenes.

FIGURES



Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 1: Site Map



Ryan Geologic & Environmental Services, Inc.
PO Box 525; McCloud, California 96057
530.925.4932

1936 Alum Rock Ave
San Jose, CA

Figure 2:
Cross-Section thorough Impact Area
and ISCO Injection Intervals

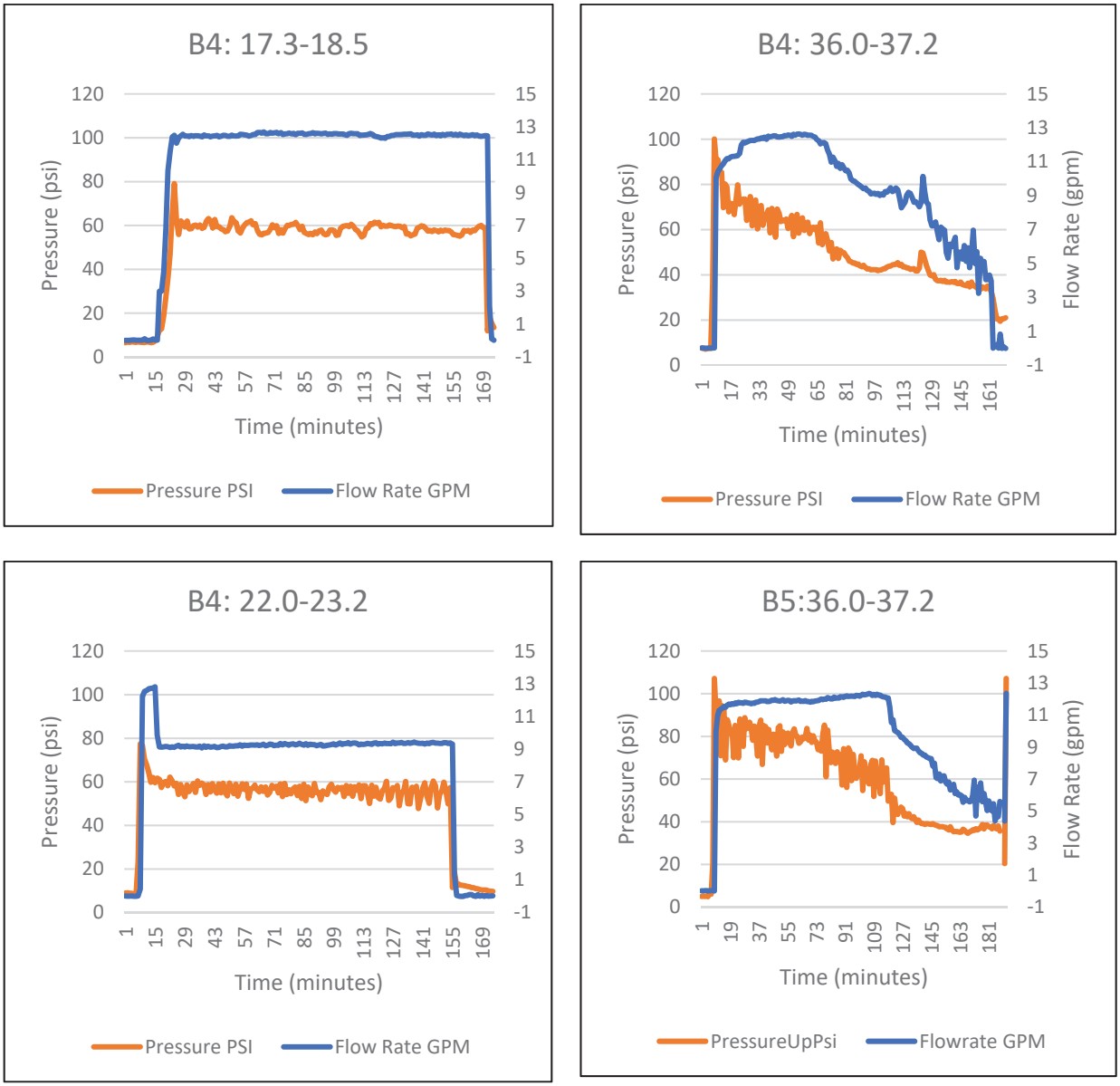


Figure 3: Typical pressure/flow relationships observed during first injection event are shown. The PersulfOx solution required for an entire boring was mixed in a single batch holding tank. When liquid levels in the tank became low at the end of each boring (graphs on right), the effects on injection pressure and flow were noticeable.

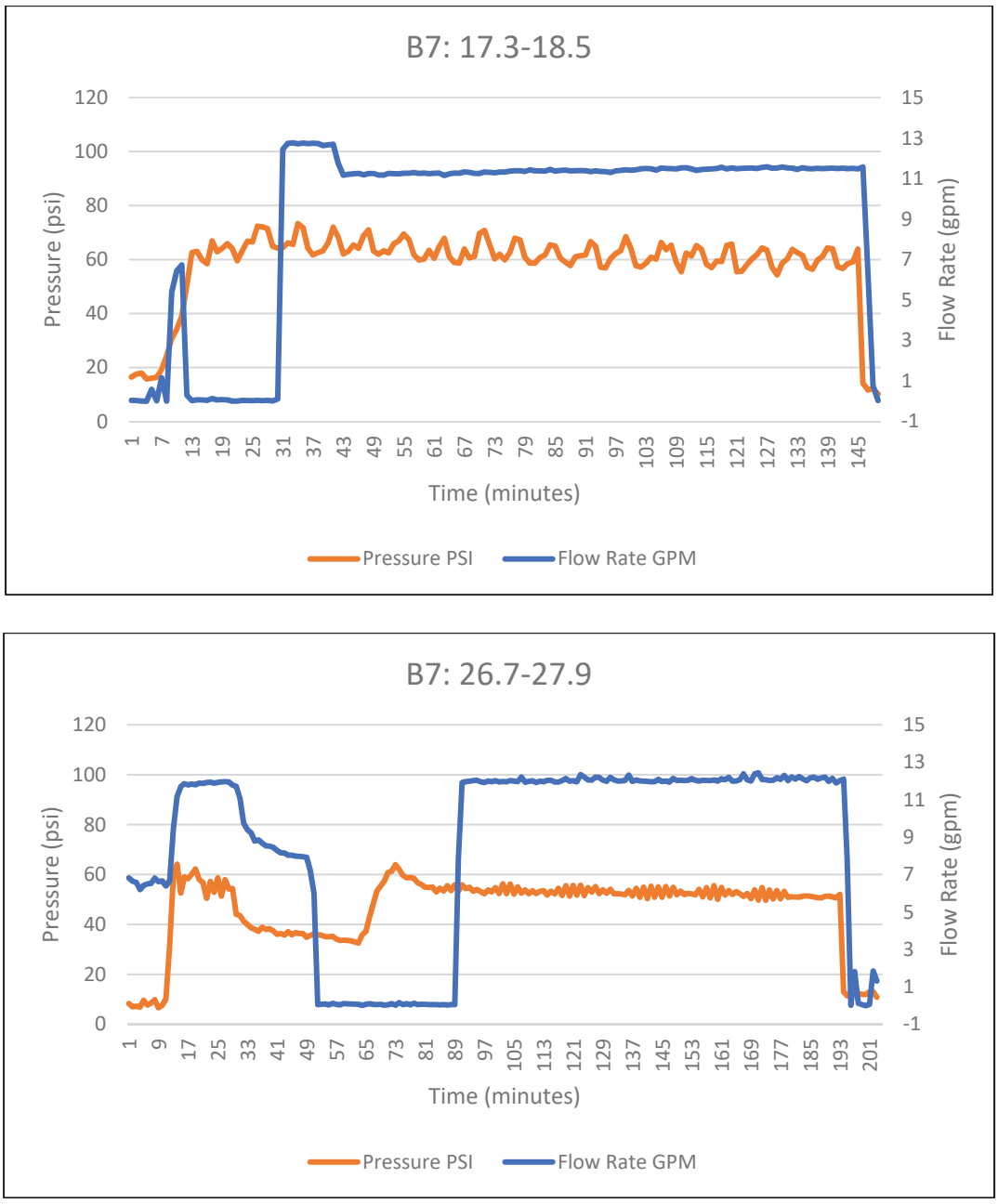


Figure 4: Subsurface pressure and flow relationships during creation of vertical fractures are shown. PersulfOx was observed flowing onto the ground surface through a crack in the ground extending between B7 and B4 during injection at B7: 26.7-27.9 ft BGL. Vertical fracturing of subsurface sediments is undesirable, and results when too much fluid volume has been added to the subsurface.

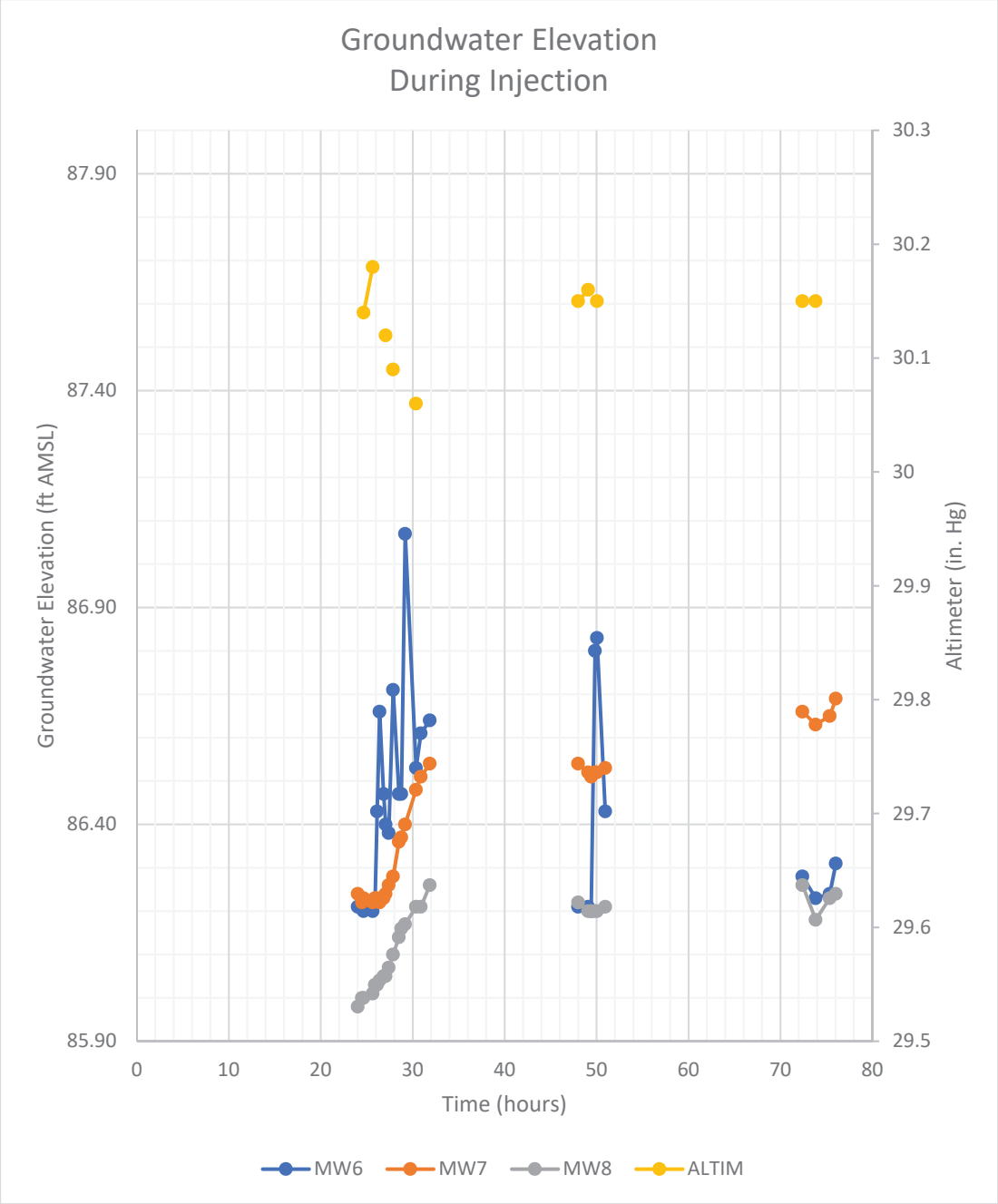


Figure 5: Groundwater elevation monitoring results collected during the first injection event are shown. An almost identical groundwater elevation increase occurs in all three wells (MW6, MW7, and MW8) between 24 to 32 hours and is at least in part attributed to decreasing barometric pressure. However, MW6 also shows a pulsing up and down by 0.25 to 0.5 feet between 28 to 30 hours. Injection at B2 through B5 was occurring between 28 and 30 hours.

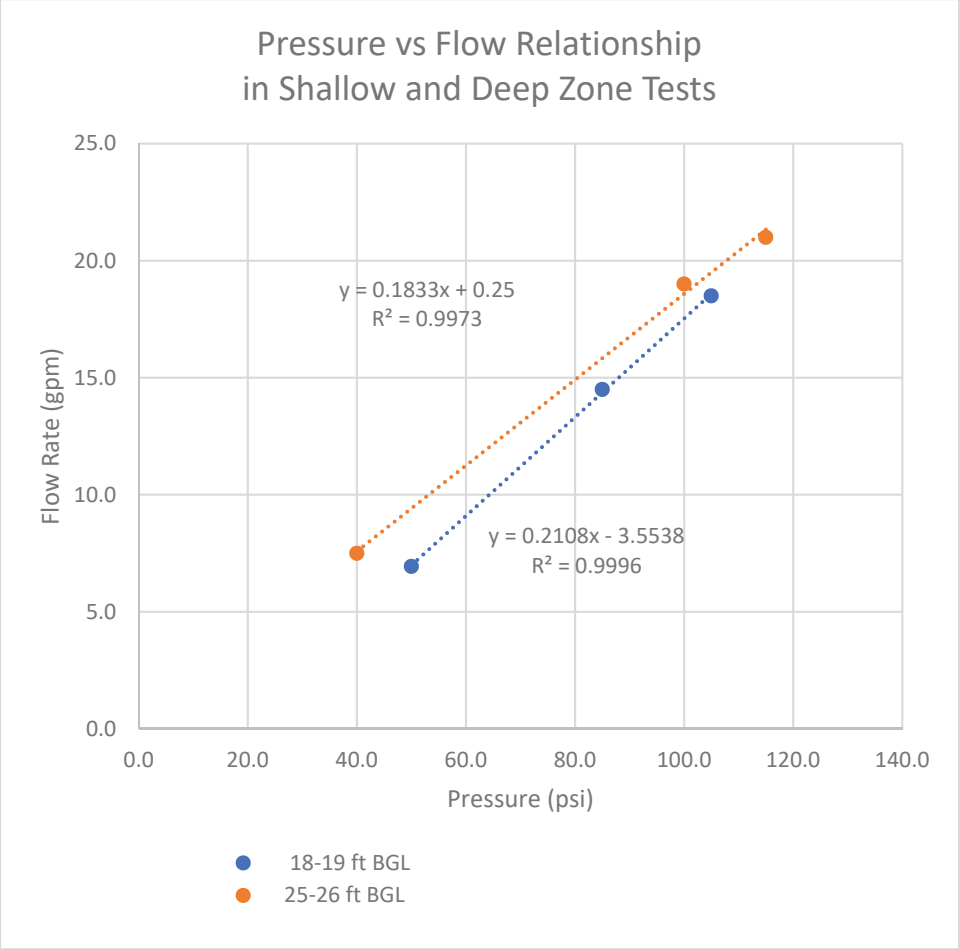
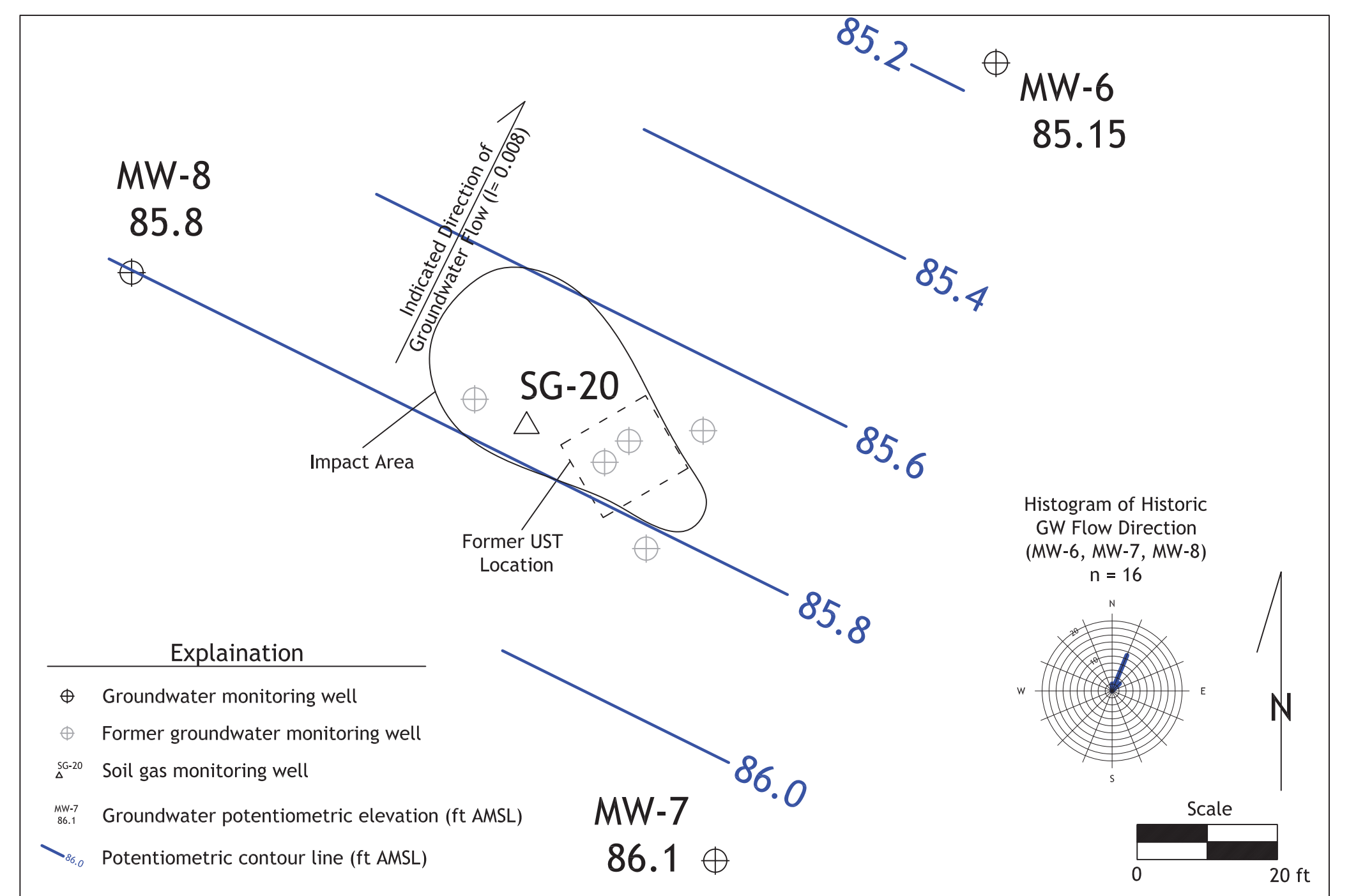


Figure 6: Results of two injection tests are shown. A test boring was drilled half way between MW7 and the B3 location, and injection tests were performed at two different depths. Potable water was injected at each depth under 3 different pressures. The 25-26 ft BGL depth is known to have the highest permeability at the site, and the 18-19 ft BGL depth should be characteristic of the lowest permeability at the site.



Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 7: Direction of Groundwater Flow November 19, 2018

APPENDIX A: Monitoring Well Destruction Permits and DWR 188 Forms

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2018D918005

Well Owner: 1936 Alum Rock Avenue LLC	Property Owner: 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	Address of Well Site: 1936 Alum Rock Avenue City, State, Zip: San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of Well Site: Book 481 Page 19 Parcel 003

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip: McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip: Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F008	Owner/Consultant Well No.: MW-1	Original Well Construction Permit No.: 07W00280
Well Casing Depth: 30 FT BGL	Total Boring Depth: 30 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:			
1.	Outer conductor casing?	☐ Yes	☐ No
2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: HSA

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

RECEIVED
SEP 13 2018
S.C.V.W.D.
WELLS

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

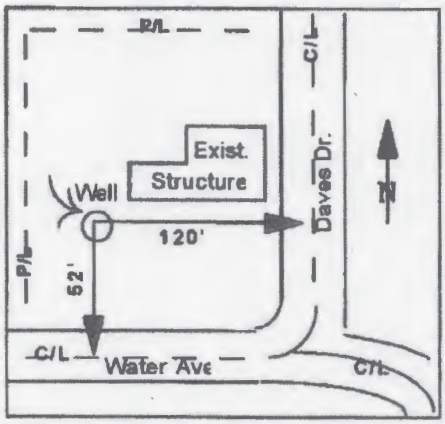
WELL DESTRUCTION APPLICATION

SITE PLAN

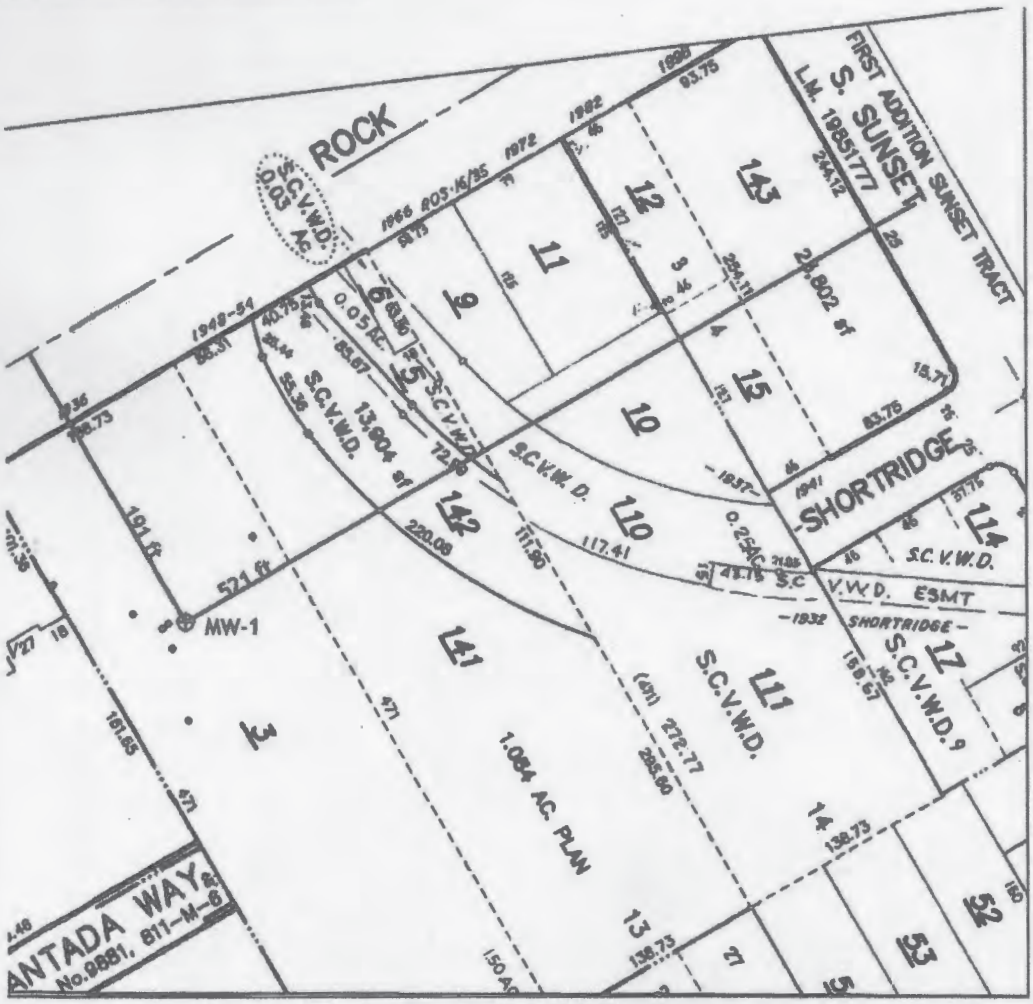
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California
Well Completion Report

Refer to Instruction Pamphlet
No. e053455

Page 1 of 2
Owner's Well Number MW1
Date Work Began 6/21/07 Date Work Ended 6/21/07
Local Permit Agency SCVWD
Permit Number 07W0280 Permit Date 4-23-07

DWR Use Only – Do Not Fill In
State Well Number/Site Number: 07S01F03F008
Latitude / Longitude
APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify
Drilling Method Hollow Stem Auger Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		SEE ATTACHED LOG

Total Depth of Boring 30' Feet
Total Depth of Completed Well 30' Feet

Well Owner

Name NORTHPOINT DEVELOPMENT
Mailing Address 160 W. SANTA CLARA ST. STE 200
City SAN JOSE State CA Zip 95113

Well Location

Address 1936 ALUM ROCK AVE.
City SAN JOSE County SANTA CLARA
Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W
Datum Decimal Lat. Decimal Long.
APN Book 481 Page 19 Parcel 003
Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 19.0 (Feet below surface)
Depth to Static Water Level 9.17 (Feet) Date Measured 7/5/07
Estimated Yield * (GPM) Test Type
Test Length (Hours) Total Drawdown (Feet)
*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size If Any (Inches)
0	15	8	PVC	SCH. 40		2	NA	NA
15	30	8	PVC	SCH. 40		2	MILLED	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	11	NEAT CEMENT	
11	14	BENTONITE	
14	30	SAND	#3/12

Attachments

☒ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other
Attach additional information, if it exists

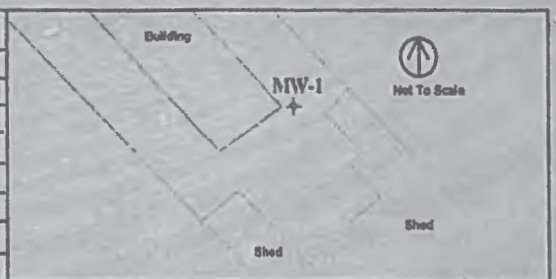
Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
Name EXPLORATION GEO SERVICES, INC. (EGI)
Person, Firm or Corporation
1535 INDUSTRIAL AVE Address SAN JOSE City CA State 95112 Zip
Signed [signature] (FOR EGI) 7/25/07 Date Signed
C-57 Licensed Water Well Contractor
484288 C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well Name	MW-1
Client	Northpoint
Location	1936 Alum Rock Ave., San Jose, CA
Date	06/21/07
Drilling Co.	Exploration Geoservices, Inc. (C-57# 484288)
Drilling Method	Hollow-Stem Augers (8")
Sampling Method	2" Split Spoon Sampler
Well Casing	2" Sch 40 PVC / 0.010 casing
Logged By	Forrest Cook PG # 8201



Sample ID	Sample Depth (feet)	Blows per 6 in.	Moisture Content	PID Reading	Depth in Feet	Graphic Log	Soil Description	Well Const.
					0		Asphalt (surface)	
					2		Silty Clay (CL), black, moist, soft, estimated low plasticity.	
MW-1d5.0	3.5-5.0	1 1 2	MOIST	NA	4			
					6			
					8		Silty Clay (CL/CH), light gray, moist, stiff, estimated medium to high plasticity. ▼ Stabalized water at 9.17 feet bgs (07/05/07)	
MW-1d10.0	8.5-10.0	4 5 8	MOIST	NA	10			
					12			
MW-1d15.0	13.5-15.0	5 6 8	MOIST	NA	14		Strong petroleum odor and discoloration.	
					16			
					18		▽ Initial Water at approximately 19.0 feet bgs.	
MW-1d20.0	18.5-20.0	5 7 10	MOIST to WET	NA	20		Silty Clay (CL), light gray with turquois mottling, wet, stiff to very stiff, estimated low plasticity, with root holes and trace gravels.	
					22			
MW-1d25.0	23.5-25.0	4 5 5	WET	NA	24		Strong petroleum odor and discoloration.	
					26			
					28			
MW-1d30.0	28.5-30.0	5 5 8	WET	NA	30		Total Depth Explored 30 feet bgs	
					32			
					34			
					36			
					38			
					40			

Bentonite
Neat Cement
0.010 Slot
#2/12 Sand

GEORESTORATION, INC.

WELL LOG [MW-1]
Page 1 of 1

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

WELL DESTRUCTION APPLICATION

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.9 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any):	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 30 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by:			Date: 9-17-18
District Permit No.: D2018D918D05	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

VACANT

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

D20180918005

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/17/2018

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	C20160927001-1	07S01E03F010	A
2	MW-5	C20160927002-1	07S01E03F011	A
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW-1	07W00280	07S01E03F008	A
7	MW-3	07W00279	07S01E03F007	A
8	MW-2	07W00281	07S01E03F009	A

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2018D918004

Well Owner: 1936 Alum Rock Avenue LLC	**Property Owner:** 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip: San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 003

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip: McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip: Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F009	Owner/Consultant Well No.: MW-2	Original Well Construction Permit No.: 07W00281
Well Casing Depth: 30 FT BGL	Total Boring Depth: 30 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:				
	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: HSA

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

RECEIVED
SEP 13 2018
S.C.V.W.D.
WELLS

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

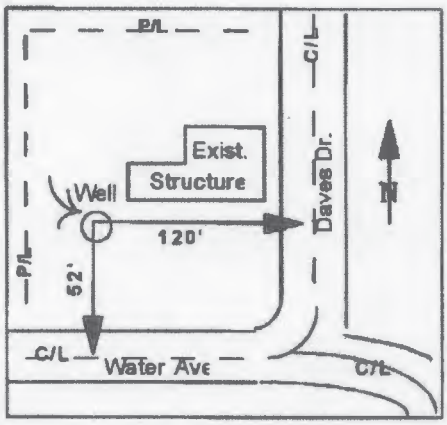
WELL DESTRUCTION APPLICATION

SITE PLAN

Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:

Please allow 10 working days to process this application.

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FCE 158A (07-12-04)

Inspector: Thiemann			Date of Inspection: 6/21/07		Permit: 07W00281
Well Owner: Northpoint Development		Owner Well No.: MW-2	Well Registration No.: 07S01E03F009		
Address of Well Site: 1936 Alum Rock Av				City or County: SJ	
Drilling Company: Exp Geo		Consultant: GeoRestoration			
Cond. Bore: / Conductor Depth:		Conductor Diameter & Material:	TD: 30	Boring Diameter: 8"	BOC: 30
Casing Diameter & Material: 2" PVC	Slot Size: 010	Screen Interval(s): 30 - 20			
Filter Pack Material: 2/12	Filter Pack Interval(s): 30 - 19		Bent: 19-16		Seal Depth: 19

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vedose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 195 ft.N / (S) Alum Rock Av | 533 ft.E / (W) Sunset Av

GPS Coordinates - Lat: 37 21 17.308 N Long: 121 51 00.721 W

Comments:

GPS plots off

Distribution: ORIGINAL-Permit File; YELLOW-City/County; PINK-Well File; GOLDENROD-Permittee

Tip: Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

Page 1 of 2

State of California
Well Completion Report

Refer to Instruction Pamphlet

No. 0053456

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F0019

Latitude / Longitude

APN/TRS/Other

Owner's Well Number MW2

Date Work Began 6/21/07 Date Work Ended 6/21/07

Local Permit Agency SCVWD

Permit Number 07W0281 Permit Date 4-23-07

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Hollow Stem Auger Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		SEE ATTACHED LOG

Total Depth of Boring 30 Feet

Total Depth of Completed Well 30 Feet

Well Owner

Name NORTHPOINT DEVELOPMENT

Mailing Address 1600 W. SANTA CLARA St., STE 200

City SAN JOSE State CA Zip 95113

Well Location

Address 1936 ALMA ROCK AVE

City SAN JOSE County SANTA CLARA

Latitude ___ ___ ___ N Longitude ___ ___ ___ W (Deg. Min. Sec.)

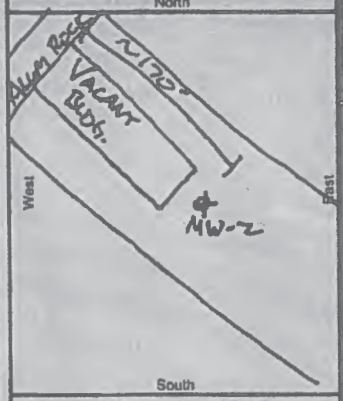
Datum ___ Decimal Lat. ___ Decimal Long. ___

APN Book 481 Page 19 Parcel 003

Township ___ Range ___ Section ___

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply ☐ Domestic ☐ Public ☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 21.0 (Feet below surface)

Depth to Static Water Level 8.68 (Feet) Date Measured 7/5/07

Estimated Yield * ___ (GPM) Test Type ___

Test Length ___ (Hours) Total Drawdown ___ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size If Any (Inches)
0	20	8	PVC	SCH. 40		2	NA	NA
20	30	8	PVC	SCH. 40		2	MILLED	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	16	NEAT CEMENT	
16	19	BENTONITE	
19	30	SAND	#2/12

Attachments

☒ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

Attach 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 EXPLORATION GEO SERVICES, INC. (EGI)
Person, Firm or Corporation

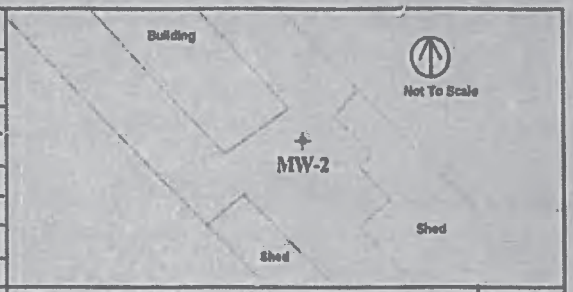
1535 INDUSTRIAL AVE SAN JOSE CA 95112
Address City State Zip

Signed [signature] (FOR EGI) 7/5/07 484288
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

* * * IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well Name	MW-2
Client	Northpoint
Location	1936 Alum Rock Ave., San Jose, CA
Date	06/21/07
Drilling Co.	Exploration Geoservices, Inc. (C-57# 484288)
Drilling Method	Hollow-Stem Augers (8")
Sampling Method	2" Split Spoon Sampler
Well Casing	2" Sch 40 PVC / 0.010 casing
Logged By	Forrest Cook PG # 8201



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MW-2d20.0	18.5-20.0	7 10 9	MOIST	NA
MW-2d25.0	23.5-25.0	5 5 6	WET	NA
MW-2d30.0	28.5-30.0	8 10 12	DAMP	NA

Depth in Feet: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40

Graphic Log

Soil Description

Asphalt (surface)

Silty Clay (CL), black, moist, very stiff, estimated low plasticity.

Silty Clay (CL/CH), light gray, moist, stiff to very stiff, estimated medium to high plasticity.

▼ Stabalized water at 8.68 feet bgs (07/05/07)

Strong petroleum odor starting at 19.0 feet bgs.

— Initial Water at approximately 21.0 feet bgs.

Silty Clay (CL), light gray with turquois mottling, wet, stiff, estimated low to medium plasticity, with root holes and trace gravels.

Strong petroleum odor and discoloration.

Clay (CH), light gray, damp, very stiff, estimated high plasticity.

Total Depth Explored 30 feet bgs

Well Const.

GEORESTORATION, INC.

WELL LOG [MW-2]
Page 1 of 1

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

WELL DESTRUCTION APPLICATION

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.9 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

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Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any):	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

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☐ Other: _____

Permit Approved by:			Date: 9-17-18
District Permit No.: D20180918004	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

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9/17/2018

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Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2018D918003

Well Owner:	**Property Owner:**	Name of Business/Residence at Site:
1936 Alum Rock Avenue LLC	1936 Alum Rock Avenue LLC	VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 003

☐ Well on District property/easement (See General Condition E.)

Consultant:	Drilling Company:	
Ryan Geologic & Environmental Services, Inc.	Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.:	Owner/Consultant Well No.:	Original Well Construction Permit No.:
07S01E25D033	MW-3	07W00279
Well Casing Depth: 29.5 FT BGL	**Total Boring Depth:** 29.5 FT BGL	**Well Casing Diameter:** 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.:	Caseworker Name:
Farmer's Supp SCVWDID No. 07S1E03F03f	Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:				
	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: HSA

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

RECEIVED
SEP 3
S.C.V.W.D.
WELLS

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

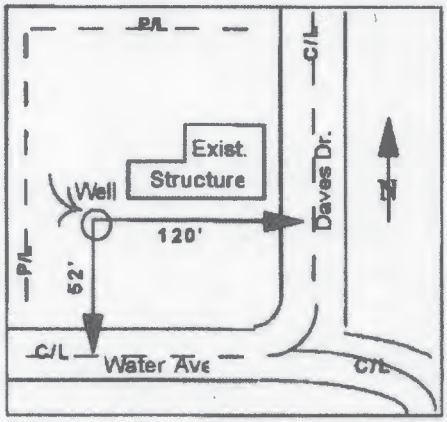
WELL DESTRUCTION APPLICATION

SITE PLAN

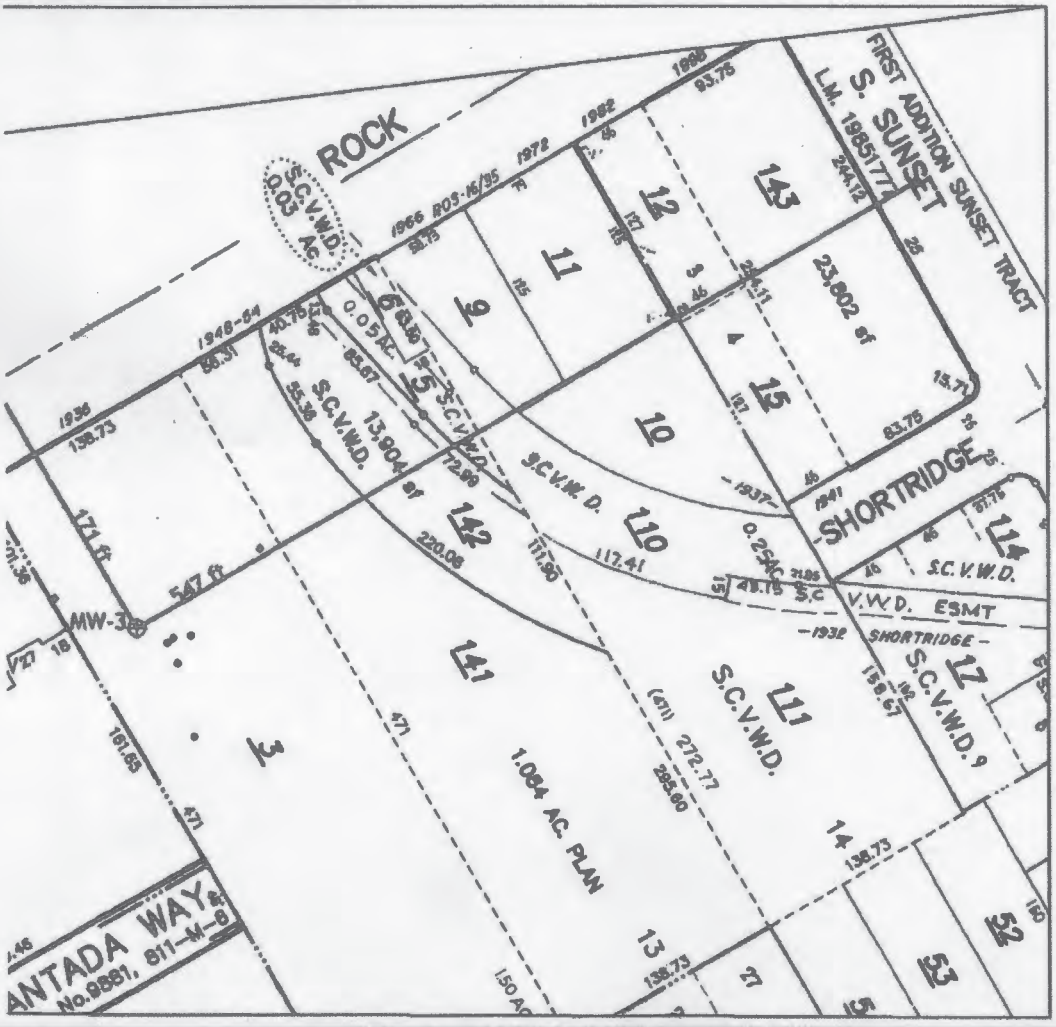
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

Santa Clara Valley Water District

RE

WELL CONSTRUCTION COMPLETION NOTICE

FCE 158A (07-12-04)

Inspector: Thiemann	Date of Inspection: 5/3/07	Permit: 07W00289	
Well Owner: LFSA Gasoline Corp	Owner Well No.: SP13AB	Well Registration No.: 07S01E25D033	
Address of Well Site: 1091 E Capitol Exp		City or County: SJ	
Drilling Company: Cascade	Consultant: TRC		

Cond. Bore:	Conductor Depth:	Conductor Diameter & Material:	TD: 88	Boring Diameter: 8"	BOC: 68
Casing Diameter & Material: 3/4" Steel	Slot Size: N/A	Screen Interval(s): 68 - 66			
Filter Pack Material: #60	Filter Pack Interval(s): 69.5 - 64.5	Bent: 64.5 - 62.5	Seal Depth: 64.5		

Sealing Material: ☒ Neet Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☐ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☒ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 128 ft. (N) S: E Capitol Exp 218 ft. E / (W) McLaughlin

GPS Coordinates - Lat: 37 18 01.059 N Long: 121 49 18.089 W

Comments:

Sparge; Nested w/ 07W00290

Distribution: ORIGINAL-Permit File; YELLOW-City/County; PINK-Well File; GOLDENROD-Permittee

Reconstruction of 06W00104

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

Page _____ of _____

Owner's Well Number SP-13

Date Work Began 05/03/2007 Date Work Ended 5/3/2007

Local Permit Agency SCVWD

Permit Number 07W00289 Permit Date 4/26/07

State of California
Well Completion Report
Refer to Instruction Pamphlet

No. e057868

DWR Use Only – Do Not Fill In

07S01E25D013

State Well Number/Site Number

N W

Latitude Longitude

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify _____

Drilling Method Hollow Stem Auger Drilling Fluid _____

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		SEE ATTACHED

Total Depth of Boring _____ Feet

Total Depth of Completed Well _____ Feet

Well Owner

Name USA Gasoline Corp.

Mailing Address 905 Rancho Conejo Blvd

City Newbury Park State CA Zip 91320

Well Location

Address 1091 East Capitol Expresswayu

City San Jose County Santa Clara

Latitude ___ Deg. ___ Min. ___ Sec. N Longitude ___ Deg. ___ Min. ___ Sec. W

Datum _____ Decimal Lat. _____ Decimal Long. _____

APN Book _____ Page _____ Parcel _____

Township _____ Range _____ Section _____

Location Sketch

(Sketch must be drawn by hand after form is printed.)

North

West East

South

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete

Activity

○ New Well
○ Modification/Repair
○ Deepen
○ Other _____
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other _____

Water Level and Yield of Completed Well

Depth to first water _____ (Feet below surface)

Depth to Static Water Level _____ (Feet) Date Measured _____

Estimated Yield * _____ (GPM) Test Type _____

Test Length _____ (Hours) Total Drawdown _____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (inches)	Type	Material	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if Any (inches)

Annular Material

Depth from Surface Feet	to Feet	Fill	Description

Attachments

☑ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map

Attach 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 Cascade Drilling, Inc
Person, Firm or Corporation

3632 Orrec Circle Rancho Cordova CA 95742
Address City State Zip

Signed _____ 7/12/07 717510
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

157

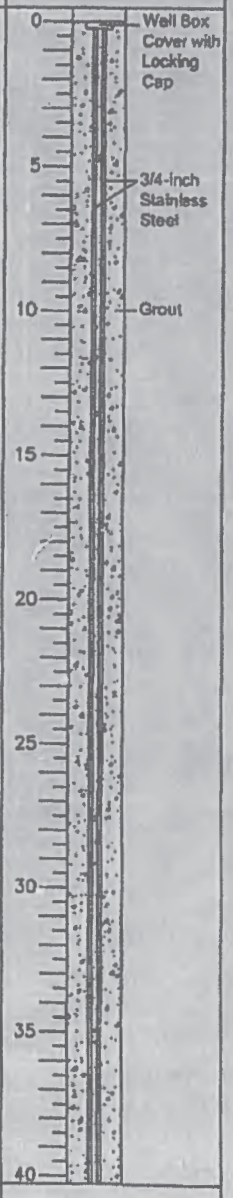
07S01E25D033

PROJECT NO.: 41-0551-01	DATE DRILLED: 5/3/07	NORTHING: NOT SURVEYED
LOCATION: USA Service Station #103	LOGGED BY: M. Sellwood	EASTING: NOT SURVEYED
1091 East Capitol Expwy	APPROVED BY: D. Padgett, PG	TOP OF CASING ELEVATION: NOT SURVEYED
San Jose, California	DRILLING CO.: Cascade Drilling	

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: Boring - 88.0 ft.; Sparge Points - 66.0 and 85.0 ft.
DEPTH TO WATER: 49.0 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0	Hand auger to 5'.		
				5	Drill directly to 40'.		
				10			
				15			
				20			
				25			
				30			
				35			
				40			

SPARGE POINT CONSTRUCTION DETAIL



TRC

SPARGE POINT INSTALLATION LOG

SP-13
PAGE 1 OF 3

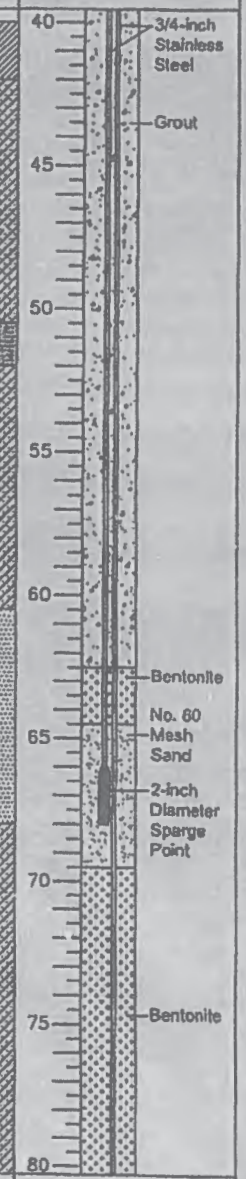
07S01E25D033

PROJECT NO.: 41-0551-01	DATE DRILLED: 5/3/07	NORTHING: NOT SURVEYED
LOCATION: USA Service Station #103	LOGGED BY: M. Sellwood	EASTING: NOT SURVEYED
1091 East Capitol Expwy	APPROVED BY: D. Padgett, PG	TOP OF CASING ELEVATION: NOT SURVEYED
San Jose, California	DRILLING CO.: Cascade Drilling	

DRILLING METHOD: 8-Inch Hollow-Stem Auger
SAMPLER TYPE: 2-Inch Split Spoon
TOTAL DEPTH: Boring - 88.0 ft.; Sparge Points - 66.0 and 85.0 ft.
DEPTH TO WATER: 49.0 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
0.1	37 48 55	1.5/1.5		40	CLAY (CH): Yellowish brown (10YR 5/6), 95% fines, 5% fine-grained sand, high plasticity, stiff, dry.	CH	
0.3	34 43	1.5/1.5					
0.8	31 42 50	1.5/1.5			CLAYEY SAND (SC): Dark yellowish brown (10YR 4/4), 30% fines, 70% fine-grained sand, high plasticity, dense, dry.		
0.0	30 48 48	1.5/1.5		45			
0.0	38 37 28	1.5/1.5			- @ 46': moist.	SC	
0.1	15 18 22	1.5/1.5					
0.4	21 18 10	1.5/1.5			- @ 49': wet.		
0.9	18 16 24	1.5/1.5		50	SAND (SP): Dark brown (10YR 3/3), 5% fines, 95% fine- grained sand, dense, dry.	SP	
0.5	18 14 12	1.5/1.5			CLAYEY SAND (SC): Brown (10YR 4/3), 25% fines, 75% fine-grained sand, high plasticity, loose, wet.		
11.1	42 42 48	1.5/1.5					
9.8	45 56 56	1.5/1.5		55	- @ 55': dense, dry.		
1.7	44 42 39	1.5/1.5			- @ 56.5': moist.	SC	
1.0	56 52 48	1.5/1.5			- @ 58': dense, dry.		
3.5	28 20 18	1.5/1.5		60			
241.5	15 12 8	1.5/1.5			SAND (SW): Very dark grayish brown (10YR 3/2), 5% fines, 95% fine- to medium-grained sand, loose, wet, slight odor.		
56	5 5 7	1.5/1.5			- @ 61': strong hydrocarbon odor.		
30.2	11 15 22	1.5/1.5			- @ 62.5': slight hydrocarbon odor.		
28.5	12 8 5	1.5/1.5		65	- @ 64': strong hydrocarbon odor, wet.	SW	
41.1	13 48 51	1.5/1.5					
14.9	15 7 43	1.5/1.5			CLAYEY SAND (SC): Yellowish brown (10YR 5/4), 30% fines, 70% fine-grained sand, high plasticity, dense, dry.		
19.3	5 5 28	1.5/1.5		70	- @ 68.5': loose, wet, slight hydrocarbon odor.		
18.2	24 28 32	1.5/1.5			- @ 71': dense, dry.		
18.5	18 22 46	1.5/1.5			- @ 73': moist.		
4.9	18 14 26	1.5/1.5		75		SC	
151	11 52 43	1.5/1.5			- @ 76': 30% fines, 70% fine- to medium-grained sand, medium plasticity, loose, wet.		
118.3	14 15 28	1.5/1.5			- @ 76.5': high plasticity, moist.		
785	15 16	1.5/1.5			- @ 77.5': medium plasticity, wet, slight hydrocarbon odor.		
				80	- @ 78': slightly dense, strong hydrocarbon odor.		

SPARGE POINT CONSTRUCTION DETAIL



TRC

SPARGE POINT INSTALLATION LOG

SP-13
PAGE 2 OF 3

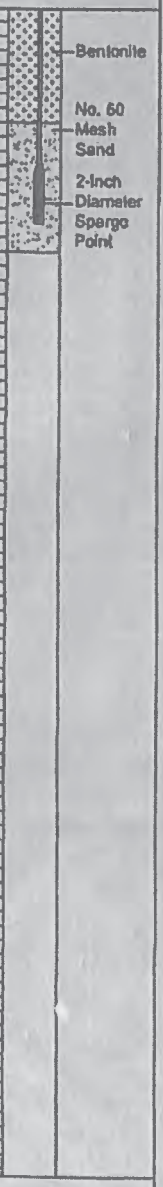
07S01E25D033

PROJECT NO.: 41-0551-01	DATE DRILLED: 5/3/07	NORTHING: NOT SURVEYED
LOCATION: USA Service Station #103	LOGGED BY: M. Selhwood	EASTING: NOT SURVEYED
1091 East Capitol Expwy	APPROVED BY: D. Padgett, PG	TOP OF CASING ELEVATION: NOT SURVEYED
San Jose, California	DRILLING CO.: Cascade Drilling	

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: Boring - 88.0 ft.; Sparge Points - 66.0 and 85.0 ft.
DEPTH TO WATER: 49.0 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
	20			80	CLAYEY SAND (SC) (continued).		
1218	31 16 12	1.5/ 1.5			- @ 80'; loose.	SC	
851	13 24	1.0/ 1.5					
1004	18 12 13	1.5/ 1.5					
1056	20 16 24	1.5/ 1.5		85	SAND (SW): Dark grayish brown (10YR 4/2), 5% fines, 95% fine- to medium-grained sand, loose, wet, strong hydrocarbon odor.	SW	
986	15 20 30	1.5/ 1.5			CLAYEY SAND (SC): Yellowish brown (10YR 5/4), 30% fines, 70% fine-grained sand, medium plasticity, stiff, dry.	SC	
45				90			
				95			
				100			
				105			
				110			
				115			
				120			

SPARGE POINT CONSTRUCTION DETAIL



TRC

SPARGE POINT INSTALLATION LOG

SP-13
PAGE 3 OF 3

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.8 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 30 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by: B			Date: 9-17-18
District Permit No.: D20180918003	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

VACANT

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

D2018090018003

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/17/2018

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	C20160927001-1	07S01E03F010	A
2	MW-5	C20160927002-1	07S01E03F011	A
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW-1	07W00280	07S01E03F008	A
7	MW-3	07W00279	07S01E03F007	A
8	MW-2	07W00281	07S01E03F009	A

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2018D918002

Well Owner: 1936 Alum Rock Avenue LLC	**Property Owner:** 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F010	Owner/Consultant Well No.: MW-4	Original Well Construction Permit No.: C20160927001
Well Casing Depth: 28 FT BGL	Total Boring Depth: 28 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE

☐ Water Production	☒ Monitoring	☐ Remediation	☐ Dewatering	☐ Heat Exchange	☐ Injection	☐ Cathodic Protection	☐ Other
☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

RECEIVED
SEP 13 2018

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

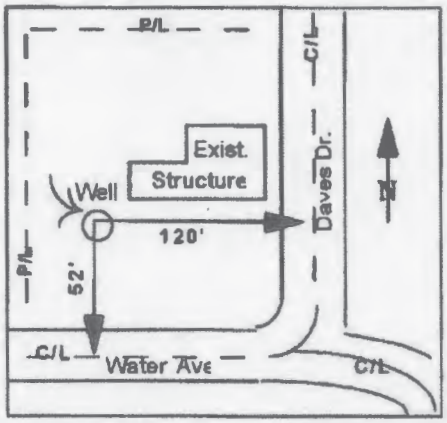
WELL DESTRUCTION APPLICATION

SITE PLAN

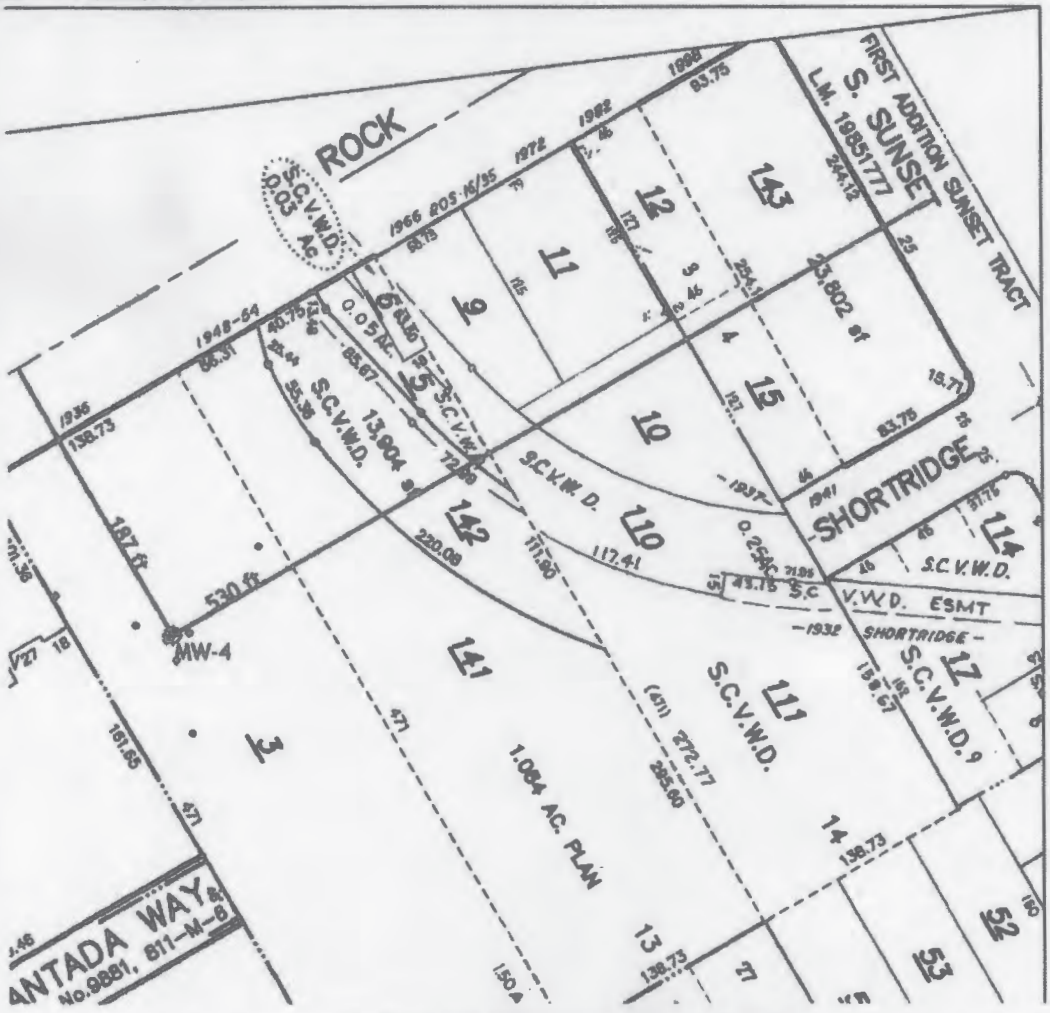
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328524

DWR Use Only – Do Not Fill In		
0 7 S 0 1 E 0 3 F 0 1 0		
State Well Number/Site Number		
N		W
Latitude		Longitude
APN/TRS/Other		

Page 1 of 3

Owner's Well Number MW-4

Date Work Began 10/01/2016 Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927001 Permit Date 9/27/16

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify ______

Drilling Method ______ Drilling Fluid ______

Depth from Surface Feet	to Feet	Description (Describe material, grain size, color, etc)
		See Attached Well Log

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Total Depth of Boring 28 Feet

Total Depth of Completed Well 28 Feet

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude ____ ____ ____ N (Deg. Min. Sec.) Longitude ____ ____ ____ W (Deg. Min. Sec.)

Datum NAD83 Dec. Lat. 37.3546412 Dec. Long. -121.8503941

APN Book 481 Page 19 Parcel 003

Township ______ Range ______ Section ______

Location Sketch

(Sketch must be drawn by hand after form is printed.)

North

West / East

South

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other ______
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other ______

Water Level and Yield of Completed Well

Depth to first water 20 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type ______

Test Length ______ (Hours) Total Drawdown ______ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	18	8	Blank	Sch 40 PVC	0.154	2.375		
18	28	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	15.5	Cement	Neat Cement
15.5	17.5	Bentonite	Hydrated Bentonite
17.5	28.0	Filter Pack	#2/12 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc. (Person, Firm or Corporation)

PO Box 8548 (Address) San Jose (City) CA (State) 95155 (Zip)

Signed [signature] for Exploration Geoservices (C-57 Licensed Water Well Contractor) 11/10/16 (Date Signed) 484288 (C-57 License Number)

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

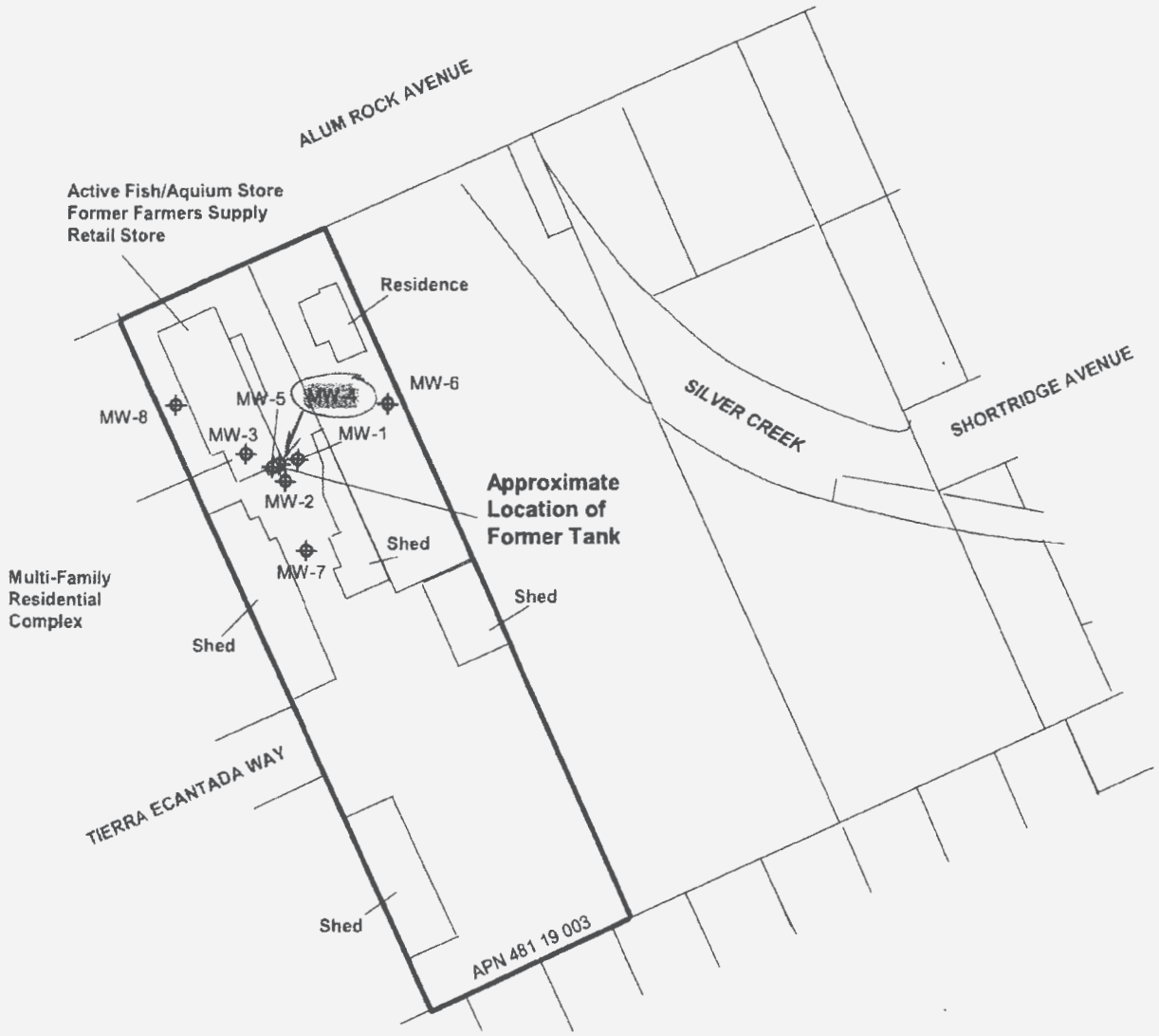
Project: WellTest, Inc. (Project #5201) Project Name: Farmers Supply Project Location: 1936 Alum Rock Boulevard, San Jose, CA	**Log of Well MW-4** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

Elevation, feet	Depth, feet	Sample Depth	Sample Number	Sample Matrix	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
95	0				CL		Silty Clay, Black-brown, estimated stiff, medium estimated plasticity. Backfill materials from initial 7 feet of excavation.		12" Diameter Vault 2" Dia. Locking Well Cap 8" Diameter Boring (0' to 28')
90	5								2" I.D. Schedule 40 PVC Blank Casing (0.5' to 18')
					GC-CL		Silty Clay to gravelly Clay, light brown to brown, moist, stiff, estimated plasticity. Fill: Stevens Creek Quarry Fines. Petroelum hydrocarbon odor.		
85	10						(after 10 minutes) ▼		
80	15				CH		Silty Clay, light gray with turquois mottling, moist, stiff to very stiff, estimated low plasticity with root holes and trace gravels. Strong petroleum odor.		Bentonite Seal (15.5.' to 17.5') Top of Well Screen 18'
75	20						First-Encountered Water at 20 ft bgs. (ATD) ▼		#2/12 Sand (17.5' to 28') 2" I.D. Schedule 40 PVC 0.010 Slotted Casing
70	25						decreasing petroleum staining and odor.		Soils Logged from Cuttings Base of Well Screen 28' 2" I.D. Bottom Cap
							Bottom of Boring at 28 feet bgs		
65	30								
60	35								

J:\2017 Jobs\5201 Farmers Supply\5201 Logs\MW-4 LIT.bgs [07-10-11.tpl]

Figure C-1



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

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

WELL DESTRUCTION APPLICATION

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.6 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (If any): Richard Ryan	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
OR NOTE: Neat cement is the only sealing material approved for pressure grouting.

☒ Drill out well to a total depth of 28 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by:	Date: 9-17-18

District Permit No.: D2018091800 2	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

VACANT

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

D2D180918002

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/17/2018

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	C20160927001-1	07S01E03F010	A
2	MW-5	C20160927002-1	07S01E03F011	A
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW-1	07W00280	07S01E03F008	A
7	MW-3	07W00279	07S01E03F007	A
8	MW-2	07W00281	07S01E03F009	A

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D20180918001

Well Owner:	**Property Owner:**	Name of Business/Residence at Site:
1936 Alum Rock Avenue LLC	1936 Alum Rock Avenue LLC	VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of Well Site: Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant:	Drilling Company:	
Ryan Geologic & Environmental Services, Inc.	Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.:	Owner/Consultant Well No.:	Original Well Construction Permit No.:
07S01E03F011	MW-5	C20160927002
Well Casing Depth: GL 17	Total Boring Depth: GL 17'	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.:	Caseworker Name:
Farmer's Supp SCVWDID No. 07S1E03F03f	Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:			
1.	Outer conductor casing?	☐ Yes	☐ No
2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

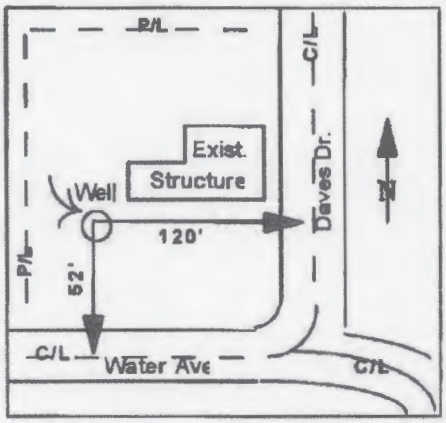
WELL DESTRUCTION APPLICATION

SITE PLAN

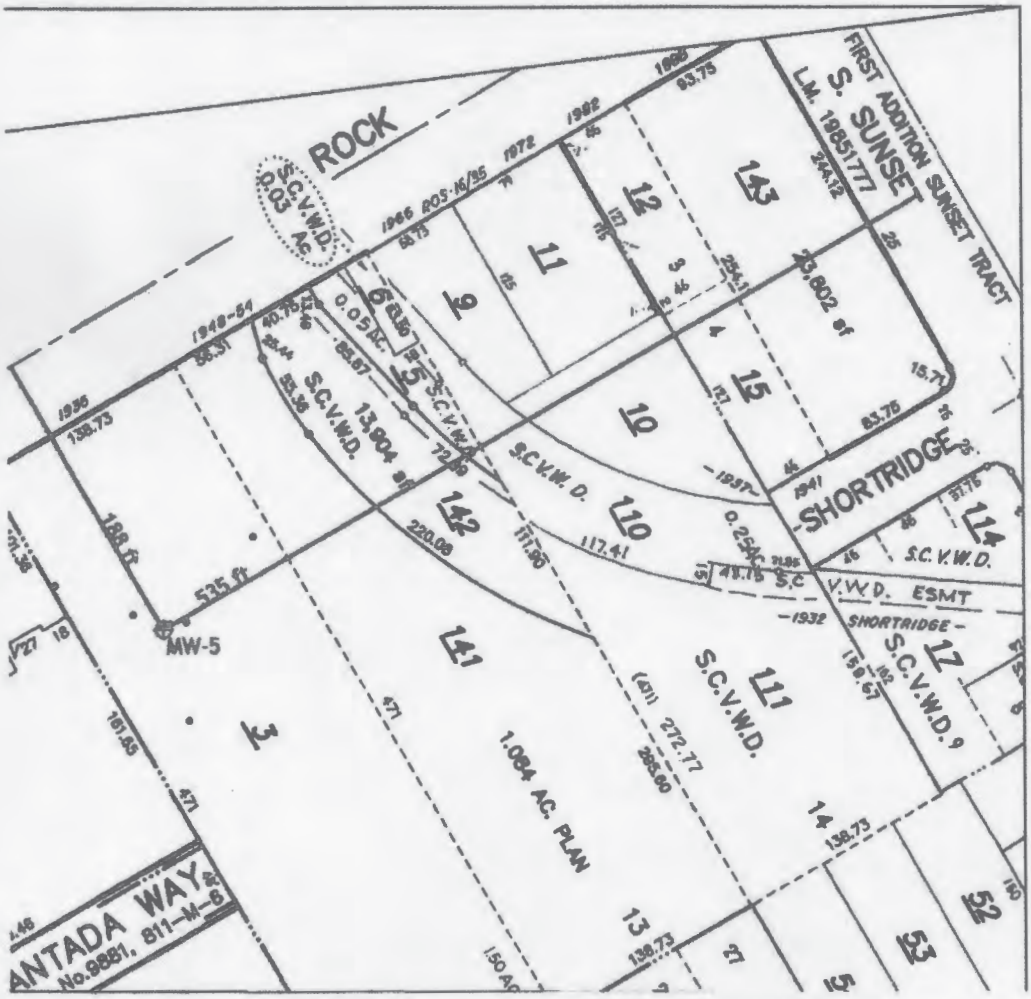
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



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*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328542

Page 1 of 3

Owner's Well Number MW-5

Date Work Began 10/01/2016 Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927002 Permit Date 9/27/16

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F011

Latitude N / Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc.
		See Attached Well Log

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Total Depth of Boring 17 Feet

Total Depth of Completed Well 17 Feet

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

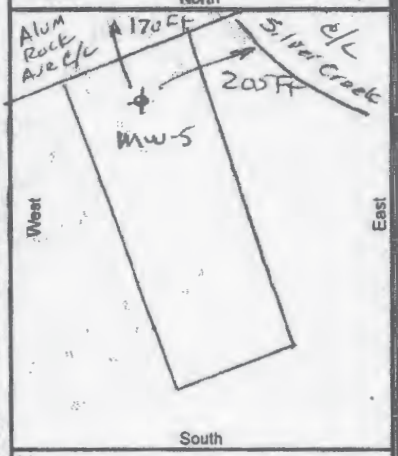
Datum NAD83 Dec. Lat. 37.3546333 Dec. Long. -121.8504058

APN Book 481 Page 19 Parcel 003

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 15 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	12	8	Blank	Sch 40 PVC	0.154	2.375		
12	17	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	9.5	Cement	Neat Cement
9.5	11.5	Bentonite	Hydrated Bentonite
11.5	17.0	Filter Pack	#2/12 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc.
Person, Firm or Corporation

PO Box 8548 San Jose CA 95155
Address City State Zip

Signed Exploration for Geoservices 11/10/16 484288
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Project: WellTest, Inc. (Project #5201)
Project Name: Farmers Supply
Project Location: 1936 Alum Rock Boulevard, San Jose, CA

Log of Well MW-5

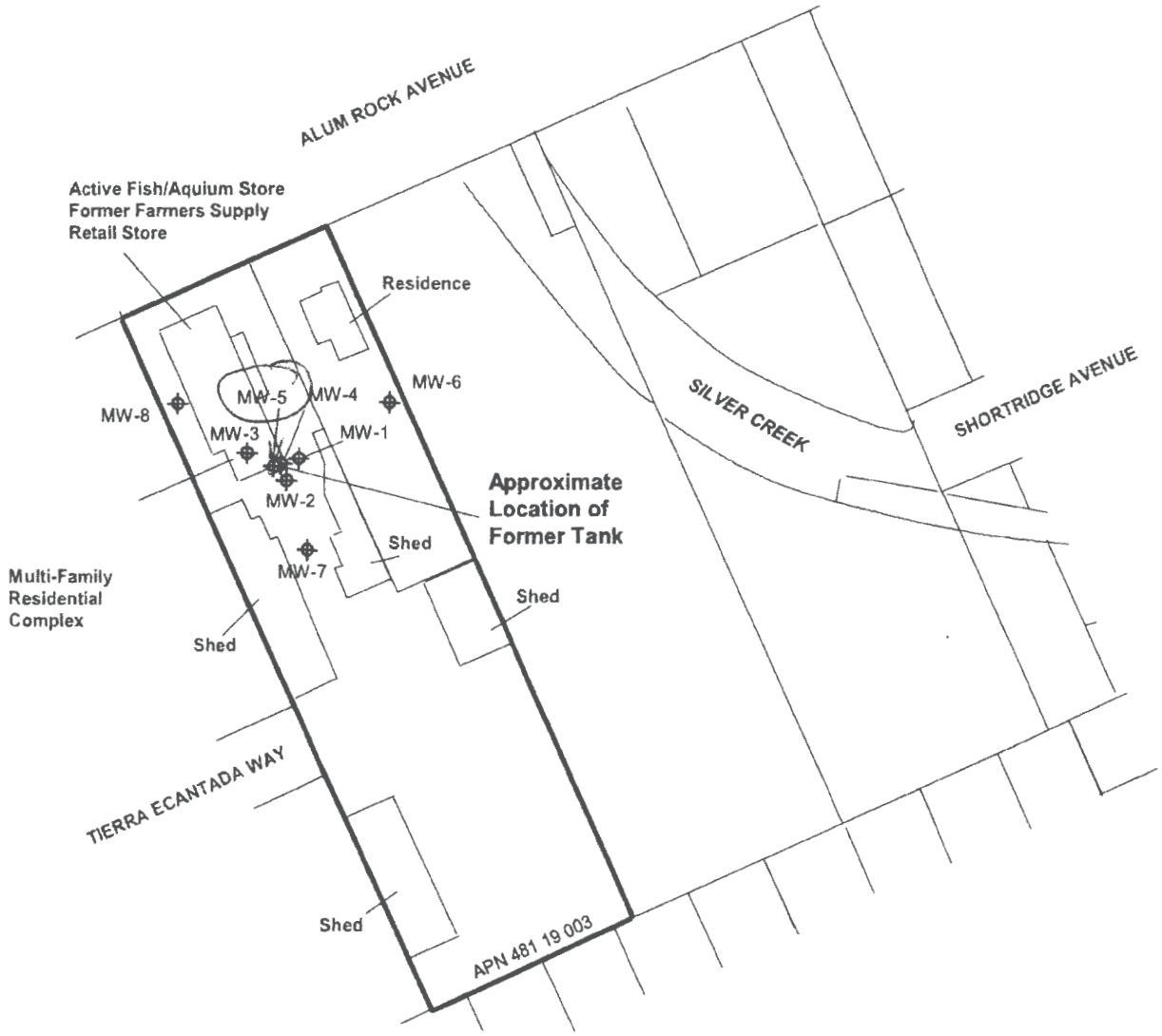
Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **17**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **12.5 Feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

Elevation, feet	Depth, feet	Sample Depth	Sample Number	Sample Matrix	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
95	0				CL		Silty Clay, Black-brown, estimated stiff, medium estimated plasticity. Backfill materials from initial 7 feet of excavation.		12" Diameter Vault 2" Dia. Locking Well Cap 8" Diameter Boring (0' to 17')
90	5								2" I.D. Schedule 40 PVC Blank Casing (0.5' to 17')
					GC-CL		Silty Clay to gravelly Clay, light brown to brown, moist, stiff, estimated plasticity. Fill: Stevens Creek Quarry Fines. Petroelum hydrocarbon odor.		Bentonite Seal (9.5.' to 11.5')
85	10						(after 10 minutes) ▼		Top of Well Screen 12'
									Soils Logged from Cuttings
80	15				CH		Silty Clay, light gray with turquois mottling, moist, stiff to very stiff, estimated low plasticity with root holes and trace gravels. Strong petroleum odor.		2" I.D. Schedule 40 PVC 0.010 Slotted Casing
							Bottom of Boring at 17 feet bgs		Base of Well Screen 17' 2" I.D. Bottom Cap
75	20								
70	25								
65	30								
60	35								

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-5.bgs [07-10-11.tpl]

Figure C-2



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

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

WELL DESTRUCTION APPLICATION

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 2.8 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 17 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by:			Date: 9-17-18
District Permit No.: D20180918001	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

VACANT

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

D2018091800l

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/17/2018

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	C20160927001-1	07S01E03F010	A
2	MW-5	C20160927002-1	07S01E03F011	A
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW-1	07W00280	07S01E03F008	A
7	MW-3	07W00279	07S01E03F007	A
8	MW-2	07W00281	07S01E03F009	A

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009268

Owner's Well Number: MW-1 | Date Work Began: | Date Work Ended: 06/21/2007

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: 07W00280 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 30 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 6.04 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 30ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P
Person, Firm or Corporation

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-1.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009270

Owner's Well Number: MW-2 | Date Work Began: | Date Work Ended: 06/21/2007

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: 07W00281 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 30 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 5.63 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 30ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-2.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009276

Owner's Well Number: MW-3 | Date Work Began: | Date Work Ended: 06/21/2007

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: 07W00279 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 30 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 6.42 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 30ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P
Person, Firm or Corporation

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-3.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

						N						W

Latitude Deg/Min/Sec **Longitude Deg/Min/Sec**

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009271

Owner's Well Number: MW-4 | Date Work Began: | Date Work Ended: 10/01/2016

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: 07W00281 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 30 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 6.44 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 30ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-4.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009274

Owner's Well Number: MW-5 | Date Work Began: | Date Work Ended: 10/01/2016

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: C20160927002-1 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 20 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 6.16 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 20ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-5.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

APPENDIX B: Pressure Injection Depth Intervals, Pressures, Flows, and Volumes

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
10/29/2018 12:50	Test	18.0-19.2	0.0	50.0	6.9	0.0		RAS not functional
10/29/2018 12:51	Test	18.0-19.2	0.0	85.0	14.5	0.0		RAS not functional
10/29/2018 12:52	Test	18.0-19.2	0.0	105.0	18.5	0.0		RAS not functional
10/29/2018 13:01	Test	25.0-26.2	0.0	40.0	7.5	0.0		RAS not functional
10/29/2018 13:02	Test	25.0-26.2	0.0	100.0	19.0	0.0		RAS not functional
10/29/2018 13:03	Test	25.0-26.2	0.0	115.0	21.0	0.0		RAS not functional
10/29/2018 14:08	B1	17.3-18.5	39.6	110.0	13.2	39.6		RAS not functional
10/29/2018 14:13	B1	19.7-20.9	39.6	120.0	13.2	39.6		RAS not functional
10/29/2018 14:20	B1	22.0-23.2	39.6	9.0	13.2	39.6		RAS not functional
10/29/2018 14:28	B1	24.3-25.5	39.6	100.0	13.2	39.6		RAS not functional
10/29/2018 14:37	B1	26.7-27.9	39.6	10.0	13.2	39.6		RAS not functional
10/29/2018 14:45	B1	29.0-30.2	39.6	8.0	9.9	39.6		RAS not functional
10/29/2018 14:55	B1	31.3-32.5	39.6	90.0	9.9	39.6		RAS not functional
10/29/2018 15:03	B1	33.7-34.9	39.6	90.0	13.2	39.6		RAS not functional
10/29/2018 15:10	B1	36.0-37.2	39.6	9.0	13.2	39.6		RAS not functional
10/30/2018 08:29	B2	17.3-18.5	39.6	115.0	11.8	39.6		RAS not functional
10/30/2018 08:40	B2	19.7-20.9	39.6	115.0	11.2	39.6		RAS not functional
10/30/2018 09:34	B2	26.7-27.9	39.6	85.0	9.1	39.6		RAS not functional
10/30/2018 09:39	B2	22.0-23.2	39.6	100.0	10.9	39.6		RAS not functional
10/30/2018 09:48	B2	24.3-25.5	39.6	90.0	9.5	39.6		RAS not functional
10/30/2018 10:01	B2	29.0-30.2	39.6	110.0	11.5	39.6		RAS not functional
10/30/2018 10:08	B2	31.3-32.5	39.6	105.0	10.4	39.6		RAS not functional
10/30/2018 10:17	B2	33.7-34.9	39.6	115.0	11.5	39.6		RAS not functional
10/30/2018 10:24	B2	36.0-37.2	39.6	115.0	10.2	39.6		RAS not functional
10/30/2018 10:47	B3	15.0-16.2	35.6	116.0	11.7	35.6		RAS not functional
10/30/2018 10:50	B3	17.3-18.5	35.6	120.0	11.9	35.6		RAS not functional
10/30/2018 10:58	B3	19.7-20.9	35.6	110.0	11.4	35.6		RAS not functional
10/30/2018 11:04	B3	22.0-23.2	35.6	120.0	11.9	35.6		RAS not functional
10/30/2018 11:11	B3	24.3-25.5	35.6	115.0	12.2	35.6		RAS not functional
10/30/2018 11:16	B3	26.7-27.9	35.6	120.0	12.2	35.6		RAS not functional
10/30/2018 11:24	B3	29.0-30.2	35.6	120.0	12.4	35.6		RAS not functional
10/30/2018 11:30	B3	31.3-32.5	35.6	115.0	12.0	35.6		RAS not functional
10/30/2018 11:40	B3	33.7-34.9	35.6	120.0	11.3	35.6		RAS not functional
10/30/2018 11:52	B3	36.0-37.2	35.6	120.0	12.6	35.6		RAS not functional
10/30/2018 12:02	B4	17.3-18.5	39.6	120.0	13.2	39.77	79.08	Typical pres/flow
10/30/2018 12:23	B4	19.7-20.9	39.6	115.0	13.2	40.65	66.24	Typical pres/flow
10/30/2018 12:30	B4	22.0-23.2	39.6	115.0	13.2	29.00	77.40	Typical pres/flow
10/30/2018 12:37	B4	24.3-25.5	39.6	110.0	13.2	30.09	59.85	Typical pres/flow
10/30/2018 12:45	B4	26.7-27.9	39.6	115.0	13.2	40.53	80.65	Typical pres/flow
10/30/2018 12:54	B4	29.0-30.2	39.6	115.0	13.2	40.98	88.03	Typical pres/flow
10/30/2018 13:02	B4	31.3-32.5	39.6	120.0	13.2	40.41	80.65	Typical pres/flow
10/30/2018 13:10	B4	33.7-34.9	39.6	125.0	13.2	32.09	83.04	Typical pres/flow
10/30/2018 13:16	B4	36.0-37.2	39.6	120.0	13.2	31.31	100.04	Typical pres/flow (+end of mix?)

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
10/30/2018 14:09	B5	17.3-18.5	39.6	120.0	13.2	39.58	70.58	Typical pres/flow
10/30/2018 14:16	B5	19.7-20.9	39.6	100.0	13.2	40.90	72.13	Typical pres/flow
10/30/2018 14:23	B5	22.0-23.2	39.6	110.0	13.2	40.54	77.00	Typical pres/flow
10/30/2018 14:31	B5	24.3-25.5	39.6	100.0	13.2	40.23	73.01	Typical pres/flow
10/30/2018 14:40	B5	26.7-27.9	39.6	110.0	13.2	40.77	90.88	Typical pres/flow
10/30/2018 14:48	B5	29.0-30.2	39.6	110.0	13.2	40.88	77.26	Typical pres/flow
10/30/2018 14:55	B5	31.3-32.5	39.6	120.0	13.2	40.60	73.32	Typical pres/flow
10/30/2018 15:08	B5	33.7-34.9	39.6	125.0	13.2	41.25	75.05	Typical pres/flow + tool string leak
10/30/2018 15:15	B5	36.0-37.2	39.6	125.0	13.2	37.76	107.11	Typical pres/flow (+end of mix?)
10/31/2018 09:04	B6	19.7-20.9	35.6	110.0	11.9	36.11	68.88	Kerfuffle at start
10/31/2018 09:12	B6	15.0-16.2	35.6	110.0	11.9	36.99	63.36	Kerfuffle at start
10/31/2018 09:18	B6	17.3-18.5	35.6	115.0	11.9	39.53	69.26	Typical pres/flow
10/31/2018 09:25	B6	22.0-23.2	35.6	110.0	11.9	40.44	66.55	Kerfuffle at start
10/31/2018 09:32	B6	24.3-25.5	35.6	115.0	11.9	35.73	91.25	Typical pres/flow almost
10/31/2018 09:37	B6	26.7-27.9	35.6	120.0	11.9	38.80	88.79	Typical pres/flow
10/31/2018 09:43	B6	29.0-30.2	35.6	125.0	11.9	39.85	85.04	Typical pres/flow
10/31/2018 09:48	B6	31.3-32.5	35.6	120.0	11.9	39.08	94.85	Typical pres/flow
10/31/2018 09:54	B6	33.7-34.9	35.6	125.0	11.9	1.35	98.95	Typical pres/flow + flow meter non-functional
10/31/2018 10:01	B6	36.0-37.2	35.6	120.0	11.9	32.70	97.89	Typical pres/flow (+end of mix?)
10/31/2018 10:26	B7	17.3-18.5	39.6	115.0	13.2	28.42	73.32	Zero flow + hi press at start
10/31/2018 10:32	B7	19.7-20.9	39.6	105.0	13.2	41.06	66.28	Typical pres/flow
10/31/2018 10:39	B7	22.0-23.2	39.6	105.0	13.2	42.56	66.70	Typical pres/flow
10/31/2018 10:47	B7	24.3-25.5	39.6	120.0	13.2	42.33	74.12	Typical pres/flow
10/31/2018 10:55	B7	26.7-27.9	39.6	105.0	13.2	36.19	64.14	Zero flow + hi press in middle; Surfacing occurs in crack between B7 and B4 during early injection
10/31/2018 11:12	B7	29.0-30.2	10.0	105.0	13.2	11.54	90.15	Typical pres/flow
10/31/2018 13:25	B8	22.0-23.2	37.0	60.0	7.4	41.06	45.27	Zero flow + hi press at start; B4 - End of mix flow decrease
10/31/2018 13:34	B8	24.3-25.5	37.0	55.0	7.4	49.24	44.57	Kerfuffle at start
10/31/2018 13:45	B8	26.7-27.9	37.0	55.0	7.4	42.20	46.74	Typical pres/flow
10/31/2018 13:57	B8	29.0-30.2	37.0	50.0	5.3	39.60	46.14	Zero flow + hi press in middle
11/01/2018 10:04	B11	15.0-16.2	35.6	55.0	5.9	33.63	46.50	Zero flow + hi press at start
11/01/2018 10:15	B11	17.3-18.5	35.6	50.0	5.8	37.00	45.42	Kerfuffle at start
11/01/2018 10:26	B11	19.7-20.9	35.6	50.0	5.5	42.15	42.25	Kerfuffle at start
11/01/2018 10:34	B11	22.0-23.2	35.6	60.0	6.0	40.40	40.87	Kerfuffle at start
11/01/2018 10:43	B11	24.3-25.5	35.6	50.0	5.0	28.76	41.29	Typical pres/flow (+end of mix?); End of mix signature (Surfacing at B3?)
11/01/2018 10:52	B11	26.7-27.9	20.0	60.0	6.6	21.24	49.36	Typical pres/flow

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
11/01/2018 11:21	B10	19.7-20.9	39.6	50.0	5.2	42.02	56.48	Typical pres/flow; Partial boring completed; Inject remaining mix into main depth and quit event 1
11/01/2018 11:32	B10	22.0-23.2	39.6	50.0	5.9	43.17	48.19	Kerfuffle at start
11/01/2018 11:43	B10	24.3-25.5	39.6	50.0	6.5	42.19	39.78	Zero flow + hi press at end
11/01/2018 11:51	B10	26.7-27.9	39.6	50.0	5.6	29.77	44.15	Typical pres/flow (+end of mix?)
11/19/2108 10:12	B12	18.5-19.67	44.5	40.0	6.4	44.5	46.0	5 gpm with 46psi to start
11/19/2108 10:24	B12	20.8-21.97	44.5	35.0	8.9	44.5	40.0	6.2gpm with 40psi to start
11/19/2108 10:34	B12	23.2-24.37	44.5	32.0	7.4	44.5	35.0	7.3gpm with 35psi to start
11/19/2108 10:42	B12	25.5-26.67	44.5	34.0	7.4	44.5	40.0	6.4gpm with 40psi to start
11/19/2108 10:53	B12	27.8-28.97	44.5	35.0	6.4	44.5	42.0	6.1gpm with 42psi to start
11/19/2108 11:03	B12	30.2-31.37	44.5	40.0	8.9	44.5	40.0	6.6gpm with 40psi to start
11/19/2108 11:11	B12	32.5-33.67	44.5	42.0	8.9	44.5	48.0	8.3gpm with 48psi to start
11/19/2108 11:19	B12	34.8-35.97	44.5	42.0	8.9	44.5	48.0	8.5gpm with 48psi to start
11/19/2108 12:31	B13	18.5-19.67	44.5	40.0	5.6	44.5	40.0	5.9gpm with 40psi to start
11/19/2108 12:44	B13	20.8-21.97	44.5	42.0	7.4	44.5	54.0	4.9gpm with 54psi to start
11/19/2108 12:53	B13	23.2-24.37	44.5	35.0	7.4	44.5	38.0	7gpm with 38psi to start
11/19/2108 13:03	B13	25.5-26.67	44.5	36.0	8.9	44.5	42.0	6.6gpm with 42psi to start
11/19/2108 13:11	B13	27.8-28.97	44.5	48.0	8.9	44.5	60.0	7.8gpm with 60psi to start
11/19/2108 13:20	B13	30.2-31.37	44.5	54.0	8.9	44.5	58.0	8.5gpm with 58psi to start
11/19/2108 13:28	B13	32.5-33.67	44.5	56.0	8.9	44.5	62.0	8.9gpm with 62psi to start
11/19/2108 13:36	B13	34.8-35.97	44.5	54.0	8.9	44.5	58.0	8.9gpm with 58psi to start
11/19/2108 14:32	B14A	16.2-17.37	39.6	28.0	6.6	39.6	30.0	5.4gpm with 30psi to start
11/19/2108 14:42	B14A	18.5-19.67	39.6	36.0	6.6	39.6	40.0	5.7gpm with 40psi to start
11/19/2108 14:49	B14A	20.8-21.97	39.6	46.0	9.9	39.6	50.0	8.7gpm with 50psi to start
11/19/2108 14:57	B14A	23.2-24.37	30.0	44.0	10	30	50.0	8.8gpm with 50psi to start. Stop injecting after 30gal due to daylighting from B3.
11/19/2108 15:08	B14A	27.8-28.97	21.0	30.0	5.3	21	38.0	3.8gpm with 38psi to start. Skipped two intervals and tried to inject at this interval but again saw daylighting up same adjacent borehole after 21gal injected.
11/20/2018 08:09	B14B	25.5-26.67	46.6	48.0	6.7	46.6	50.0	Grouted up location 14 and pushed rods down location 3 and regrouted old borehole to try and get a better seal. Moved over to reset tooling at new location, 14B, to finish injecting remaining mixed reagent. 5.4gpm with 50psi to start
11/20/2018 08:18	B14B	30.2-31.37	46.6	48.0	7.8	46.6	48.0	6.6gpm with 48psi to start
11/20/2018 08:26	B14B	32.5-33.67	46.6	50.0	7.8	46.6	50.0	6.8gpm with 50psi to start
11/20/2018 08:34	B14B	34.8-35.97	46.6	50.0	7.8	46.6	50.0	6.4gpm with 50psi to start

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
11/20/2018 09:09	B15	18.5-19.67	44.5	46.0	6.4	44.5	50.0	5.3gpm with 50psi to start
11/20/2018 09:17	B15	20.8-21.97	44.5	47.0	8.9	44.5	52.0	6.7gpm with 52psi to start
11/20/2018 09:24	B15	23.2-24.37	44.5	44.0	8.9	44.5	50.0	8gpm wit 50psi to start
11/20/2018 09:32	B15	25.5-26.67	44.5	48.0	8.9	44.5	50.0	7.3gpm with 50psi to start
11/20/2018 09:40	B15	27.8-28.97	44.5	52.0	8.9	44.5	60.0	7.1gpm with 60psi to start
11/20/2018 09:48	B15	30.2-31.37	44.5	54.0	8.9	44.5	56.0	7.5gpm with 56psi to start
11/20/2018 09:55	B15	32.5-33.67	44.5	56.0	8.9	44.5	60.0	7.3gpm with 60psi to start
11/20/2018 10:05	B15	34.8-35.97	44.5	54.0	8.9	44.5	60.0	7.4gpm with 60psi to start
11/20/2018 10:26	B16	18.5-19.67	44.5	48.0	7.4	44.5	52.0	5.8gpm with 52psi to start
11/20/2018 10:34	B16	20.8-21.97	44.5	46.0	8.9	44.5	52.0	7.9gpm with 52psi to start
11/20/2018 10:41	B16	23.2-24.37	44.5	45.0	8.9	44.5	50.0	8.8gpm with 50psi to start
11/20/2018 10:46	B16	25.5-26.67	44.5	48.0	8.9	44.5	52.0	8.6gpm with 52psi to start
11/20/2018 10:54	B16	27.8-28.97	44.5	51.0	8.9	44.5	60.0	7.5gpm with 60psi to start
11/20/2018 11:02	B16	30.2-31.37	44.5	52.0	8.9	44.5	54.0	8.0gpm with 54psi to start
11/20/2018 11:11	B16	32.5-33.67	44.5	55.0	8.9	44.5	58.0	7.8gpm with 58psi to start
11/20/2018 11:18	B16	34.8-35.97	44.5	51.0	8.9	44.5	56.0	8.1gpm with 56psi to start
11/20/2018 11:43	B17	18.5-19.67	44.5	48.0	6.4	44.5	52.0	5.5gpm with 52psi to start
11/20/2018 11:52	B17	20.8-21.97	44.5	46.0	7.4	44.5	52.0	5.8gpm with 52psi to start
11/20/2018 12:02	B17	23.2-24.37	44.5	45.0	8.9	44.5	50.0	8gpm with 50psi to start
11/20/2018 12:09	B17	25.5-26.67	44.5	46.0	8.9	44.5	52.0	8gpm with 52psi to start
11/20/2018 12:17	B17	27.8-28.97	44.5	48.0	8.9	44.5	56.0	7.6gpm with 56psi to start
11/20/2018 12:25	B17	30.2-31.37	44.5	48.0	8.9	44.5	54.0	7.8gpm with 54psi to start
11/20/2018 12:32	B17	32.5-33.67	44.5	52.0	8.9	44.5	56.0	7.5gpm with 56psi to start
11/20/2018 12:41	B17	34.8-35.97	44.5	52.0	8.9	44.5	60.0	7gpm with 60psi to start

APPENDIX C: Laboratory Analytical Report Sheets

Neil O'Hara
RNC Environmental, LLC
151 Nursery St
Ashland, OR 97520
Tel: (888) 485-3330
Email: neil@rnc-enviro.com

RE:

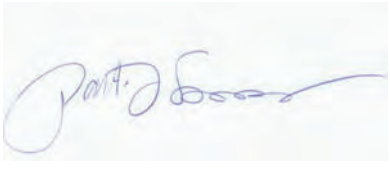
Work Order No.: 1811122

Dear Richard Ryan:

Torrent Laboratory, Inc. received 3 sample(s) on November 20, 2018 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991 If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.



Patti L Sandrock
QA Officer

November 29, 2018
Date

Date: 11/29/2018

Client: RNC Environmental, LLC

Project:

Work Order: 1811122

CASE NARRATIVE

Unless otherwise indicated in the following narrative, no issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date Received: 11/20/18
Date Reported: 11/29/18

MW-8 1811122-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	20	0.010	10	98	mg/L

MW-7 1811122-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	50	0.025	25	280	mg/L
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	1.5	ug/L
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	1.3	ug/L
sec-Butyl Benzene	SW8260B	1	0.30	0.50	1.1	ug/L
n-Butylbenzene	SW8260B	1	0.27	0.50	2.2	ug/L
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	3.4	ug/L
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	6.2	ug/L

MW-6 1811122-003

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	50	0.025	25	270	mg/L
MTBE	SW8260B	1	0.077	0.50	0.66	ug/L
1,2-Dichloroethane	SW8260B	1	0.11	0.50	0.65	ug/L
Naphthalene	SW8260B	1	1.2	2.0	2.6	ug/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 11/20/18, 8:53 am
Date Reported: 11/29/18

Client Sample ID:	MW-8	**Lab Sample ID:**	1811122-001A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	11/19/18 / 9:12		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	11/21/18 10:09:00AM
Prep Batch ID:	1109433	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	11/21/18	15:27	BP	435785
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	15:27	BP	435785
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	11/21/18	15:27	BP	435785
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	11/21/18	15:27	BP	435785
Diisopropyl ether (DIPE)	SW8260B	1	0.12	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	11/21/18	15:27	BP	435785
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	11/21/18	15:27	BP	435785
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	15:27	BP	435785
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Benzene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	15:27	BP	435785
TAME	SW8260B	1	0.072	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	11/21/18	15:27	BP	435785
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	11/21/18	15:27	BP	435785
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	15:27	BP	435785

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 11/20/18, 8:53 am
Date Reported: 11/29/18

Client Sample ID:	MW-8	**Lab Sample ID:**	1811122-001A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	11/19/18 / 9:12		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	11/21/18 10:09:00AM
Prep Batch ID:	1109433	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Ethyl Benzene	SW8260B	1	0.20	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	11/21/18	15:27	BP	435785
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	11/21/18	15:27	BP	435785
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	15:27	BP	435785
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	11/21/18	15:27	BP	435785
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	11/21/18	15:27	BP	435785
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	15:27	BP	435785
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	15:27	BP	435785
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	11/21/18	15:27	BP	435785
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	11/21/18	15:27	BP	435785
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	11/21/18	15:27	BP	435785
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	15:27	BP	435785
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	11/21/18	15:27	BP	435785
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	11/21/18	15:27	BP	435785
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	11/21/18	15:27	BP	435785
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	11/21/18	15:27	BP	435785
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	11/21/18	15:27	BP	435785
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**113**		%	11/21/18	15:27	BP	435785
(S) Toluene-d8	SW8260B		75.1 - 127		**103**		%	11/21/18	15:27	BP	435785
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**98.4**		%	11/21/18	15:27	BP	435785

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 11/20/18, 8:53 am
Date Reported: 11/29/18

Client Sample ID:	MW-8	**Lab Sample ID:**	1811122-001B
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	11/19/18 / 9:12		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	11/20/18 5:00:00PM
Prep Batch ID:	1109451	**Prep Analyst:**	ERAGUDO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	20	0.010	10	**98**		mg/L	11/21/18	15:45	ERR	435800

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 11/20/18, 8:53 am
Date Reported: 11/29/18

Client Sample ID:	MW-7	**Lab Sample ID:**	1811122-002A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	11/19/18 / 9:35		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	11/21/18 10:09:00AM
Prep Batch ID:	1109433	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	11/21/18	17:27	BP	435785
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:27	BP	435785
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	11/21/18	17:27	BP	435785
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	11/21/18	17:27	BP	435785
Diisopropyl ether (DIPE)	SW8260B	1	0.12	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	11/21/18	17:27	BP	435785
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	11/21/18	17:27	BP	435785
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:27	BP	435785
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Benzene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:27	BP	435785
TAME	SW8260B	1	0.072	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	11/21/18	17:27	BP	435785
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	11/21/18	17:27	BP	435785
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	17:27	BP	435785

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 11/20/18, 8:53 am
Date Reported: 11/29/18

Client Sample ID:	MW-7	**Lab Sample ID:**	1811122-002A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	11/19/18 / 9:35		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	11/21/18 10:09:00AM
Prep Batch ID:	1109433	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Ethyl Benzene	SW8260B	1	0.20	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	11/21/18	17:27	BP	435785
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	11/21/18	17:27	BP	435785
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	17:27	BP	435785
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	11/21/18	17:27	BP	435785
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	11/21/18	17:27	BP	435785
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	**1.5**		ug/L	11/21/18	17:27	BP	435785
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:27	BP	435785
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	17:27	BP	435785
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	**1.3**		ug/L	11/21/18	17:27	BP	435785
sec-Butyl Benzene	SW8260B	1	0.30	0.50	**1.1**		ug/L	11/21/18	17:27	BP	435785
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	11/21/18	17:27	BP	435785
n-Butylbenzene	SW8260B	1	0.27	0.50	**2.2**		ug/L	11/21/18	17:27	BP	435785
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:27	BP	435785
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	11/21/18	17:27	BP	435785
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	11/21/18	17:27	BP	435785
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	**3.4**		ug/L	11/21/18	17:27	BP	435785
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	11/21/18	17:27	BP	435785
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	**6.2**		ug/L	11/21/18	17:27	BP	435785
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**121**		%	11/21/18	17:27	BP	435785
(S) Toluene-d8	SW8260B		75.1 - 127		**99.7**		%	11/21/18	17:27	BP	435785
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**93.2**		%	11/21/18	17:27	BP	435785

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 11/20/18, 8:53 am
Date Reported: 11/29/18

Client Sample ID:	MW-7	**Lab Sample ID:**	1811122-002B
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	11/19/18 / 9:35		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	11/20/18	5:00:00PM
Prep Batch ID:	1109451	**Prep Analyst:**	ERAGUDO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	50	0.025	25	**280**		mg/L	11/21/18	16:05	ERR	435800

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 11/20/18, 8:53 am
Date Reported: 11/29/18

Client Sample ID:	MW-6	**Lab Sample ID:**	1811122-003A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	11/19/18 / 9:50		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	11/21/18 10:09:00AM
Prep Batch ID:	1109433	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	11/21/18	17:58	BP	435785
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:58	BP	435785
MTBE	SW8260B	1	0.077	0.50	**0.66**		ug/L	11/21/18	17:58	BP	435785
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	11/21/18	17:58	BP	435785
Diisopropyl ether (DIPE)	SW8260B	1	0.12	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	11/21/18	17:58	BP	435785
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	11/21/18	17:58	BP	435785
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:58	BP	435785
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Benzene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:58	BP	435785
TAME	SW8260B	1	0.072	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,2-Dichloroethane	SW8260B	1	0.11	0.50	**0.65**		ug/L	11/21/18	17:58	BP	435785
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	11/21/18	17:58	BP	435785
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	11/21/18	17:58	BP	435785
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	17:58	BP	435785

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 11/20/18, 8:53 am
Date Reported: 11/29/18

Client Sample ID:	MW-6	**Lab Sample ID:**	1811122-003A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	11/19/18 / 9:50		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	11/21/18 10:09:00AM
Prep Batch ID:	1109433	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Ethyl Benzene	SW8260B	1	0.20	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	11/21/18	17:58	BP	435785
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	11/21/18	17:58	BP	435785
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	17:58	BP	435785
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	11/21/18	17:58	BP	435785
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	11/21/18	17:58	BP	435785
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	11/21/18	17:58	BP	435785
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	11/21/18	17:58	BP	435785
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	11/21/18	17:58	BP	435785
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	11/21/18	17:58	BP	435785
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	11/21/18	17:58	BP	435785
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	11/21/18	17:58	BP	435785
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	11/21/18	17:58	BP	435785
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	11/21/18	17:58	BP	435785
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	11/21/18	17:58	BP	435785
Naphthalene	SW8260B	1	1.2	2.0	**2.6**		ug/L	11/21/18	17:58	BP	435785
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	11/21/18	17:58	BP	435785
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**122**		%	11/21/18	17:58	BP	435785
(S) Toluene-d8	SW8260B		75.1 - 127		**98.6**		%	11/21/18	17:58	BP	435785
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**95.0**		%	11/21/18	17:58	BP	435785

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 11/20/18, 8:53 am
Date Reported: 11/29/18

Client Sample ID:	MW-6	**Lab Sample ID:**	1811122-003B
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	11/19/18 / 9:50		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	11/20/18 5:00:00PM
Prep Batch ID:	1109451	**Prep Analyst:**	ERAGUDO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	50	0.025	25	**270**		mg/L	11/21/18	16:26	ERR	435800

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1811122	**Prep Method:**	5030VOC	**Prep Date:**	11/21/18	**Prep Batch:**	1109433
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/21/2018	**Analytical Batch:**	435785
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.26	0.50	ND	
Chloromethane	0.17	0.50	ND	
Vinyl Chloride	0.21	0.50	ND	
Bromomethane	0.21	0.50	ND	
Chloroethane	0.11	0.50	ND	
Trichlorofluoromethane	0.19	0.50	ND	
1,1-Dichloroethene	0.14	0.50	ND	
Freon 113	0.34	0.50	ND	
Methylene Chloride	0.13	1.0	ND	
trans-1,2-Dichloroethene	0.16	0.50	ND	
MTBE	0.077	0.50	ND	
tert-Butanol	7.4	10	ND	
Diisopropyl ether (DIPE)	0.12	0.50	ND	
1,1-Dichloroethane	0.12	0.50	ND	
ETBE	0.064	0.50	ND	
cis-1,2-Dichloroethene	0.15	0.50	ND	
2,2-Dichloropropane	0.094	0.50	ND	
Bromochloromethane	0.15	0.50	ND	
Chloroform	0.12	0.50	ND	
Carbon Tetrachloride	0.16	0.50	ND	
1,1,1-Trichloroethane	0.16	0.50	ND	
1,1-Dichloropropene	0.19	0.50	ND	
Benzene	0.16	0.50	ND	
TAME	0.072	0.50	ND	
1,2-Dichloroethane	0.11	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
Dibromomethane	0.11	0.50	ND	
1,2-Dichloropropane	0.089	0.50	ND	
Bromodichloromethane	0.076	0.50	ND	
cis-1,3-Dichloropropene	0.078	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.24	0.50	ND	
trans-1,3-Dichloropropene	0.22	0.50	ND	
1,1,2-Trichloroethane	0.076	0.50	ND	
Dibromochloromethane	0.18	0.50	ND	
1,3-Dichloropropane	0.22	0.50	ND	
1,2-Dibromoethane	0.079	0.50	ND	
Chlorobenzene	0.16	0.50	ND	
Ethyl Benzene	0.20	0.50	ND	
1,1,1,2-Tetrachloroethane	0.087	0.50	ND	
m,p-Xylene	0.39	1.0	ND	
o-Xylene	0.15	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1811122	**Prep Method:**	5030VOC	**Prep Date:**	11/21/18	**Prep Batch:**	1109433
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/21/2018	**Analytical Batch:**	435785
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.11	0.50	ND	
Bromoform	0.076	0.50	ND	
Isopropyl Benzene	0.22	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.079	0.50	ND	
2-Chlorotoluene	0.25	0.50	ND	
1,3,5-Trimethylbenzene	0.24	0.50	ND	
1,2,3-Trichloropropane	0.15	0.50	ND	
4-Chlorotoluene	0.22	0.50	ND	
tert-Butylbenzene	0.26	0.50	ND	
1,2,4-Trimethylbenzene	0.23	0.50	ND	
sec-Butyl Benzene	0.30	0.50	ND	
p-Isopropyltoluene	0.27	0.50	ND	
1,3-Dichlorobenzene	0.17	0.50	ND	
1,4-Dichlorobenzene	0.18	0.50	ND	
n-Butylbenzene	0.27	0.50	ND	
1,2-Dichlorobenzene	0.16	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.76	2.0	ND	
Hexachlorobutadiene	0.62	2.0	ND	
1,2,4-Trichlorobenzene	0.93	2.0	ND	
Naphthalene	1.2	2.0	ND	
1,2,3-Trichlorobenzene	1.2	2.0	1.5	
(S) Dibromofluoromethane			110	
(S) Toluene-d8			105	
(S) 4-Bromofluorobenzene			98.2	

Work Order:	1811122	**Prep Method:**	300.0P	**Prep Date:**	11/20/18	**Prep Batch:**	1109451
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	11/20/2018	**Analytical Batch:**	435800
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Sulfate	0.00050	0.50	ND	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1811122	**Prep Method:**	5030VOC	**Prep Date:**	11/21/18	**Prep Batch:**	1109433
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	11/21/2018	**Analytical Batch:**	435785
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.9	82.9	78.5	5.56	61.4 - 129	30	
Benzene	0.16	0.50	ND	17.9	101	99.5	1.67	66.9 - 140	30	
Trichloroethylene	0.15	0.50	ND	17.9	105	104	1.08	69.3 - 144	30	
Toluene	0.14	0.50	ND	17.9	105	103	1.08	76.6 - 123	30	
Chlorobenzene	0.16	0.50	ND	17.9	100	99.0	1.12	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	103	103		61.2 - 131		
(S) Toluene-d8				17.9	104	103		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	96.1	97.2		64.1 - 120		

Work Order:	1811122	**Prep Method:**	300.0P	**Prep Date:**	11/20/18	**Prep Batch:**	1109451
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	11/20/2018	**Analytical Batch:**	435800
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Sulfate	0.00050	0.50	ND	2.5	93.7	93.9	0.426	80 - 120	20	

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg/m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the analyte is found in the associated method or preparation blank

D - Surrogate is not recoverable due to the necessary dilution of the sample

E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.

H- Indicates that the recommended holding time for the analyte or compound has been exceeded

J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative

NA - Not Analyzed

N/A - Not Applicable

ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.

NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added

R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts

S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative

X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: RNC Environmental, LLC

Project Name:

Work Order No.: 1811122

Date and Time Received: 11/20/2018 8:53:00AM

Received By: er

Physically Logged By: Navin Ghodasara

Checklist Completed By: Navin Ghodasara

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	Yes	Temperature:	4.0	°C
Water-VOA vials have zero headspace?	Yes			
Water-pH acceptable upon receipt?	N/A			

pH Checked by: na

pH Adjusted by: na

Comments:

Login Summary Report

Client ID:	TL6321	RNC Environmental, LLC	**QC Level:**	II
Project Name:			**TAT Requested:**	5+ day:5
Project # :	AR1936		**Date Received:**	11/20/2018
Report Due Date:	11/29/2018		**Time Received:**	8:53 am

Comments:

Work Order # : ***1811122***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1811122-001A	MW-8	11/19/18 9:12	Water	01/03/19			VOC_W_8260B	
1811122-001B	MW-8	11/19/18 9:12	Water	01/03/19			Anion_W_300.0	
Sample Note:	Sulfate.							
1811122-002A	MW-7	11/19/18 9:35	Water	01/03/19			VOC_W_8260B	
1811122-002B	MW-7	11/19/18 9:35	Water	01/03/19			Anion_W_300.0	
1811122-003A	MW-6	11/19/18 9:50	Water	01/03/19			VOC_W_8260B	
1811122-003B	MW-6	11/19/18 9:50	Water	01/03/19			Anion_W_300.0	

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
Fax: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 1811122

Company Name: RNC ENVIRONMENTAL LLC ☐ ☑ Env. ☐ Special | Project #: AR1936 | PO#:

Address: 151 NURSERY ST | Project Name:

City: ASHLAND | State: OR | Zip Code: 97520 | Comments:

Telephone: 888 485 3330 | Cell: NEIL@RNC-ENVIRO.COM | SAMPLER: RICH RYAN 530.925.4932

REPORT TO: | BILL TO: | EMAIL: RICHERYANGES.COM

TURNAROUND TIME:
☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day
☐ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day
☒ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE:
☐ Storm Water ☐ Air
☐ Waste Water ☐ Wipe
☒ Ground Water ☐ Other
☐ Soil ☐ Product / Bulk

REPORT FORMAT:
☒ Level II - Std.
☐ Excel - EDD
☐ EDF ☐ Std.-EDD
☐ QC Level III
☐ QC Level IV

ANALYSIS REQUESTED

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	VOC 8260	SULFATE	REMARKS
		~~MW-8~~	~~11/19/18 0912~~	~~GW~~	~~1+4~~	~~VOA+4 1L PLY~~	~~✓~~	~~✓~~	
001A/B		MW-8	11/19/18 0912	GW	1+4	4 VOA 1 L PLY	✓	✓	
002A/B		MW-7	0935	"		"	✓	✓	
003A/B		MW-6	0950	"		"	✓	✓	

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1		RICH RYAN	11/20/18	0853		EMILY RAGSDALE	11/21/18	0853
2	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:

Were Samples Received in Good Condition? ☒ Yes ☐ NO Samples on Ice? ☒ Yes ☐ NO Method of Shipment: PUD Sample seals intact? ☐ Yes ☐ NO ☒ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Log In By: [signature] Date: 11-20-18 Labeled By: [signature] Date: 11-20-18 Temp: 4 °C

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12/14/2018
Mr. Richard Ryan
Ryan Geologic & Environmental Services, Inc.
PO Box 525

McCloud CA 96057

Project Name:
Project #: AR1936
Workorder #: 1811438

Dear Mr. Richard Ryan

The following report includes the data for the above referenced project for sample(s) received on 11/21/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive S.E. WMS are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Sarah Westerman

Project Manager

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WORK ORDER #: 1811438

Work Order Summary

CLIENT:	Mr. Richard Ryan Ryan Geologic & Environmental Services, Inc. PO Box 525 McCloud, CA 96057	**BILL TO:**	Mr. Neil OHara RNC Environmental 151 Nursery St Ashland, OR 97520
PHONE:		**P.O. #**	
FAX:		**PROJECT #**	AR1936
DATE RECEIVED:	11/21/2018	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	12/14/2018		

FRACTION #	NAME	TEST
01A	SG-20	Passive S.E. WMS
02A	BLK	Passive S.E. WMS
03A	Lab Blank	Passive S.E. WMS
04A	LCS	Passive S.E. WMS
04AA	LCSD	Passive S.E. WMS

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 12/14/18

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
WMS Passive SE by Mod EPA TO-17
Ryan Geologic & Environmental Services, Inc.
Workorder# 1811438

Two WMS-LU samples were received on November 21, 2018. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

Please note that 1,1,2,2-Tetrachloroethane (1,1,2,2-PCA) can degrade into Trichloroethene (TCE) during storage on the charcoal-based sorbent used in the WMS device. Samples containing 1,1,2,2-PCA may yield reduced concentrations of 1,1,2,2-PCA and elevated concentrations of TCE.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank and sample BLK, a sampling duration of 9,521 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Toluene was detected in the laboratory blank at less than 5X the reporting limit. Associated sample results are reported as qualified.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
VOC BY PASSIVE SAMPLER - GC/MS

Client Sample ID: SG-20

Lab ID#: 1811438-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	29	4.1	590
Toluene	0.050	5.2	23 B	2400 B
Ethyl Benzene	0.050	3.8	62	4600
m,p-Xylene	0.050	3.8	110	8400
o-Xylene	0.050	3.5	61	4300
Naphthalene	0.050	3.5	2.5	170

Client Sample ID: BLK

Lab ID#: 1811438-02A

No Detections Were Found.

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Client Sample ID: SG-20

Lab ID#: 1811438-01A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**9121119sim**	**Date of Collection: 11/20/18 7:36:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/18 02:31 PM**
		Date of Extraction: 12/11/18

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	29	4.1	590
Toluene	0.050	5.2	23 B	2400 B
Ethyl Benzene	0.050	3.8	62	4600
m,p-Xylene	0.050	3.8	110	8400
o-Xylene	0.050	3.5	61	4300
Naphthalene	0.050	3.5	2.5	170

B = Analyte present in laboratory blank greater than reporting limit.

Temperature = 77.0F , duration time = 9521 minutes.
Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130

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Client Sample ID: BLK

Lab ID#: 1811438-02A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**9121120sim**	**Date of Collection: 11/20/18 7:36:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/18 02:54 PM**
		Date of Extraction: 12/11/18

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	29	Not Detected	Not Detected
Toluene	0.050	5.2	Not Detected	Not Detected
Ethyl Benzene	0.050	3.8	Not Detected	Not Detected
m,p-Xylene	0.050	3.8	Not Detected	Not Detected
o-Xylene	0.050	3.5	Not Detected	Not Detected
Naphthalene	0.050	3.5	Not Detected	Not Detected

Temperature = 77.0F , duration time = 9521 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	111	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1811438-03A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**9121110sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/18 11:07 AM**	
		Date of Extraction: 12/11/18	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	29	Not Detected	Not Detected
Toluene	0.050	5.2	0.052	5.5
Ethyl Benzene	0.050	3.8	Not Detected	Not Detected
m,p-Xylene	0.050	3.8	Not Detected	Not Detected
o-Xylene	0.050	3.5	Not Detected	Not Detected
Naphthalene	0.050	3.5	Not Detected	Not Detected

Temperature = 77.0F , duration time = 9521 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	112	70-130

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Client Sample ID: LCS

Lab ID#: 1811438-04A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**9121108sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/18 10:22 AM**	
		Date of Extraction: 12/11/18	

Compound	%Recovery	Method Limits
Benzene	101	70-130
Toluene	106	70-130
Ethyl Benzene	109	70-130
m,p-Xylene	103	70-130
o-Xylene	100	70-130
Naphthalene	20	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	111	70-130

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Client Sample ID: LCSD

Lab ID#: 1811438-04AA

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**9121109sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/11/18 10:45 AM**	
		Date of Extraction: 12/11/18	

Compound	%Recovery	Method Limits
Benzene	101	70-130
Toluene	108	70-130
Ethyl Benzene	110	70-130
m,p-Xylene	103	70-130
o-Xylene	100	70-130
Naphthalene	19	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	110	70-130

eurofins | Air Toxics

Passive Sorbent Chain of Custody

WO#: 1811438

Case Seal #: _____

Company: RNC ENVIRONMENTAL LLC Project #: AR1936 P.O.#

Project Manager: NEIL O'HARA Project Name:

Contact phone/email: 888 485 3330 Collected by: RICH RYAN 530 925 4932

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other( )

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush — Specify

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other( )	Analysis Requested	Sample Comments:
01A	SG-20	1831-AN-093	11-13-18	1655	11-20-18	0736		✓			BTEX NAPH	
02A	BLK	1831-AN-084			11-20-18	0736		✓				

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
Richard Ryan	11-20-18	0833	EATC	11/21/18	1010	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: FEDEX

Air bill #: 7838 7582 1369

Custody Seals Intact? Yes No None

Temperature (°C): NA

Sample Condition Upon Receipt: (circle) Good SDR

Remedial Action Status Report #2
ISCO Event #3: December 27-28, 2018
1936 Alum Rock Avenue; San Jose, CA 95116

January 18, 2019

Prepared for
Santa Clara County Department of Environmental Health
Hazardous Materials Compliance Division – Site Mitigation Program
1555 Berger Drive #300
San Jose, CA 95112

On Behalf of
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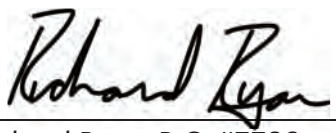

Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

Neil O'Hara
RNC Environmental, LLC

Statement of Accuracy

I am the primary author of this document and have either performed all field activities documented herein or been present as a field supervised while the activities were performed. I declare under penalty of perjury that the information, interpretations, and recommendations contained in this document are true and correct to the best of my knowledge and my professional experience.

Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

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Acronyms

AMSL	Above mean sea level
BGL	Below ground level
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CaDWR	California Department of Water Resources
Cond	Conductivity
DTW	Depth to water
ESLs	Environmental Screening Levels
ISCO	In-Situ Chemical Oxidation
MiHPT	Membrane interface probe and hydraulic profiling tool
mg/L	Milligrams per Liter
µg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per cubic meter
MTBE	Methyl-tert-butyl-ether
PID	Photo Ionization Detector
ppmV	Parts per million by volume
ORP	Oxygen/Reduction Potential
OVM	Organic Vapor Meter
SCCDEH	Santa Clara County Dept. of Environmental Health
SCVWD	Santa Clara Valley Water District
SFBay RWQCB	San Francisco Bay Regional Water Quality Control Board
TDS	Total dissolved solids
TPH_{gas}	Total petroleum hydrocarbons in the gasoline rage
UST	Underground storage tank
VOCs	Volatile organic compounds

1.0 Introduction

During an August 10, 2018 meeting with SCCDEH, in-situ chemical oxidation was selected as the best remedial option to address gasoline remaining in the subsurface. Subsequent correspondence from SCCDEH dated September 11, 2018, required submittal of technical reports documenting each injection event within 45 days after completion of the event.

The purpose of this report is to document the third pressure injection event conducted on December 27th and 28th, 2018. That event included specific activities as follows:

- Pressure injection of 2138 gallons of PersulfOx solution into the subsurface target area,
- Collection and laboratory analysis of one soil gas sample,
- Collection and laboratory analysis of four groundwater samples,
- Inspection of a continuous soil core collected from a boring near the center of the target area.

2.0 Pressure Injection Event #3

The third pressure injection event occurred over a two-day period (Dec. 27th – Dec. 28th). Gregg Drilling performed mixing, drilling, and injection services. The scheduled start date of December 26th was canceled on short notice due to equipment problems.

The goal of the event was to evenly distribute 356 gallons of PersulfOx solution into the subsurface target area at each of six locations (B18 through B23). The planned distribution had to be modified in the field to address solution surfacing which occurred after 4 of 6 planned injection locations had been completed. A seventh injection locations (B24) was added in response to solution surfacing problems. **Figure 1** is a site map showing injection point locations.

2.1 Pressure Injection Activities

The injection tool consisted of a short section of perforated steel pipe (1.5-inches diameter by 14-inches long with 30 evenly distributed 0.125-inch diameter holes). The top of the tool was attached to the end of the steel drive rod drilling string (1.5-inch diameter) and pushed to either 15.6 or 17.9 feet BGL before pressure injection began. The shallower starting depth was used when the injection point was in the proximity of the former source area. Ideally, either 39.6 or 44.5 gallons of solution was pressure injected at the initial depth before driving the top of the tool 28-inches deeper and repeating the process until injection had been completed with the top of the tool at the maximum depth of 34.3 feet BGL. The injection pipe generally remained in the boring until the end of the day when it was replaced with a tremie pipe that was used to fill each boring with cement grout. **Figure 2** is a cross-section showing the injection depth intervals in relation to the petroleum mass in the subsurface.

A total of 2138 gallons of PersulfOx solution (2424.4 lbs PersulfOx mixed with 2016 gallons of potable water) was consumed during the event. The mixing trailer operator recorded pump pressure, flow rate, and total volume for each injection depth interval at each location. **Table 1** is a summary listing of the injection depths and volumes at each location during the third event. **Appendix A** contains a cumulative listing of injection depth intervals, pressures, and volumes for all events to date.

At the conclusion of the third injection event:

- A total of 7,989.5 lbs (145 bags) of the design total 13,224 lbs of PersulfOx have been placed in the subsurface,
- There was no PersulfOx remaining in the secure, placarded, and ventilated conex storage container at the site,
- Fourth and fifth injection events, substantially identical to the third event (44 bags each), are planned for Jan. 21st and late Feb. 2019 respectively,
- A total of 12,839.5 lbs of PersulfOx is projected to be in the subsurface after completing the fifth event (97% of the design total).

2.2 Solution Surfacing Problems

Solution surfacing problems occurred during injection at B19, B21, and B22. Solution surfacing at B22 occurred from the former B3 location and consisted of small, almost insignificant volumes. Both B22 and B3 are adjacent to the former tank pit, and it is suggested that backfill in the former tank pit excavation may have influenced surfacing.

Solution surfacing during the final moments of injection at B19:22.6-23.8 feet BGL was significant and obviously occurring along a vertical crack between B4 and B12 that had formed during the first injection event. Injection at the B19 location was terminated and activities moved to the next boring (B21). During injection at B21:29.6-30.8 feet BGL, solution surfacing occurred again along the B4-B12 crack and also through the top of the B19 injection rods. At that point the final 327 gallons of third event solution had already been mixed, so a seventh, unplanned injection location (B24) was added and the remaining solution injected without any surfacing problems.

Initial plans were made with the mixing trailer operator to use high pressure grouting techniques during the next event to seal the vertical crack that extends between B12-B19-B4-B21 (see **Figure 1**).

2.3 Digital Pressure and Flow Monitoring

Gregg Drilling provided a digital monitoring device to continuously record and document subsurface pressure and flow relationships during injection. That device was present on the 27th, but it was not functional during the third event.

3.0 Soil, Soil Gas, and Groundwater Sampling

One soil gas sample, four groundwater samples, and one 35-foot soil core were collected prior to injection activities on the 27th. The purpose of these samples was to help evaluate the effectiveness of PersulfOx in reducing the concentration of petroleum in the subsurface.

A soil boring was installed to 35 feet deep near the center of the target area prior to beginning injection activities on the 27th. The primary purpose of the boring was to collect a grab groundwater sample at that location, but a secondary purpose was to collect and inspect a soil core. The soil boring was installed using a dual-wall macro-core drill string and 2-inch diameter soil cores encased in 5-foot long clear plastic tubes were retrieved after every 5 feet the boring was advanced. The clear plastic tubes containing soil cores were labeled and capped at both ends as they were retrieved. After sitting in the sun for about and hour, the end caps were removed and an OVM was attached to one end of the tube. The concentration of VOCs in each 5-foot tube as measured by the OVM were recorded. The plastic tubes were then cut open lengthwise and the soil cores inspected by a geologist.

After reaching a final boring depth of 35 feet BGL, 35 feet of temporary well pipe (10 feet of 10-slot well screen attached to 25 feet of 0.75-inch diameter flush thread PVC well pipe) was inserted into the boring. The outer wall of the dual-wall tool string was then withdrawn to 20 feet BGL exposing the primary impact zone from 20 to 35-foot BGL and allowing groundwater to flow into the boring. Sufficient groundwater for sampling accumulated in the well pipe after about 1 hour. A peristaltic pump attached to 35-feet of new 0.25-inch diameter polyethylene tubing was then used to retrieve a groundwater sample from the temporary well. The sample was collected into laboratory supplied containers, the containers were labeled and temporarily stored on ice until being transported to the laboratory later the same day. In addition to the laboratory sample, a hand-held multimeter was used to measure indicator parameters from a portion of recovered groundwater. After sampling was complete, the well pipe was replaced with a tremie pipe and the boring was filled with grout.

A Waterloo Membrane Sampler – Low Uptake (WMS-LU) passive soil gas sampler was retrieved from SG-20 on December 18th. The third injection event was originally scheduled to occur on December 18th, so the WMS-LU had been deployed on December 3rd and needed to be recovered on the 18th. The WMS-LU sampler was supplied by Eurofins Air Toxics and was returned to that laboratory via UPS overnight shipping for analysis.

Three groundwater samples were collected from the existing monitoring wells (MW6, MW7, and MW8) on December 27th using Hydra-Sleeve no purge sampling method. The samplers had been deployed on December 3rd. Prior to retrieving the Hydra-Sleeve samplers, the wells were gauged for depth to water. After retrieval, groundwater samples were collected from the Hydra-Sleeve samplers directly into laboratory supplied containers, the containers were labeled and temporarily stored on ice until being transported to the laboratory later the same day. A hand-held multimeter was used to measure indicator parameters from a portion of recovered groundwater remaining in the Hydra-

Sleeve samplers at each well. Copies of the laboratory analytical report sheets for soil gas and groundwater samples are included as **Appendix B**.

3.1 Results of Soil Boring

The soil cores recovered from the December 27th soil boring were inspected by a geologist and a record of observations maintained in a field log. **Figure 3** is a graphical boring log showing lithology and OVM readings from that boring. MiHPT traces from former MP-3 boring are included on the log for comparative purposes. **Figure 4** is a composite photograph of the soil cores recovered from the boring.

Recovered soil cores were wet in areas below about 8 feet BGL. They were uniformly wet below about 13 feet BGL, and very wet below about 24 feet BGL. Petroleum impact was evident in the core between about 24 and 26 feet BGL with a noticeable odor occurring at 25 feet BGL. The upper half of the 35 feet of core was predominantly hard clay while the lower half was largely soft indicating the presence of fine sand interbedded with silty clay. There were no visible signs of solution injection (e.g., thin discolored veins or fractures). OVM scanning of soil cores indicated values between 10 and 50 ppmV from 0 to 20 feet BGL, and the highest reading of 101 ppmV occurred at 25 feet BGL. OVM readings below 25 feet BGL were less than 10 ppmV.

3.2 Results of Groundwater Sampling and Well Gauging

Monitoring wells were gauged for depth to water prior to collecting groundwater samples on December 27th. For reference, **Table 2** is a listing of monitoring well construction. **Table 3** is a listing of all depth to water gauging data accumulated since May 2017 for existing monitoring wells. **Table 4** is a listing of groundwater elevations calculated from the depth to water gauging data.

Figure 5 is a groundwater potentiometric elevation map for December 27th. The direction of groundwater flow on December 27th is indicated to be toward the north-northeast under a hydraulic gradient of 0.01 ft/ft. That direction is consistent with that observed during previous sampling events.

Table 5 is a summary of laboratory analytical results for the four groundwater samples collected on December 27th. Groundwater samples were analyzed for sulfate by EPA-NERL 300 and for 65 VOCs by SW-846 8260. Note that the GRAB sample from the center of the impact area contains the greatest number of detected constituents at the highest concentrations, as would be expected. **Table 5** also shows that five VOCs were detected in MW-6 and the concentration of naphthalene in MW-6 exceeds Tier 1 ESLs.

Table 6 shows the December 27th groundwater analytical results in comparison to previous sampling results. Note that the last two sampling events have shown detectable concentrations of MTBE and naphthalene in MW-6. MW-6 is the furthest downgradient well, and the confirmed presents of MTBE and naphthalene in that well suggests injection activities have pushed impacted groundwater in that

direction. Results from former MW-3 have been included in **Table 6** for comparison to the GRAB sample. The fact that the GRAB sample contains significantly lower concentrations of VOCs than recorded in MW-3 suggests that PersulfOx injection may be producing favorable results.

Table 7 shows current and historic results for groundwater indicator parameters measured in the field during groundwater sampling. The results for MW-6 show an unusual ORP value for December 27th compared to previous results suggesting that some change has recently occurred in that well.

3.3 Results of Soil Gas Sampling

A single soil gas sample was collected from well SG-20 on December 18th and was analyzed for six VOCs using modified method TO-17. That sample represents an average soil gas concentration over a 14.97-day period between December 3rd and December 18th, and it is the second soil gas sample collected by passive sampling techniques at the site. **Table 8** is a summary of laboratory analytical results for those passive soil gas samples. Note that the concentration of VOCs in the December 18th sample are significantly lower than the previous sample, and the VOC concentrations are also below the screening level of 1000 times the Tier 1 ESL for indoor air.

4.0 Disscussion

Previous attempts to collect a grab groundwater sample from the center of the target area had uncharacteristically failed while using the hydro-punch method of sampling. The cause of that failure was believed to be decreased permeability caused by precipitation of sodium bisulfate due to interaction of PersulfOx with gasoline. It was possible to collect a grab groundwater sample during the third event using dual-wall macro-core drilling techniques to construct a temporary well, however groundwater flow into the well was uncharacteristically slow. Visual examination of a soil core collected from that boring showed no visual signs of sodium bisulfate accumulating in the sediments, the core was wet, and petroleum impact in the core was obvious based on visual observation and OVM scanning results. From a purely subjective point of view, the petroleum impact observed in the core was not as significant as the MiHPT trace from MP3 would suggest.

Conflicting observations regarding soil gas are apparent between laboratory results for soil gas showing decreased concentration of VOCs and OVM scanning of soil cores showing significant VOCs remain in soil. One possible explanation is that CO_2 produced by reaction between PersulfOx and gasoline gas may be elevating OVM readings while the target VOC concentrations have decreased. While the OVM is generally unaffected by CO_2 at concentrations below 7% by volume (70,000 ppmV), a high concentration of CO_2 could explain the apparent discrepancy. The stoichiometric description of the reaction between PersulfOx and gasoline is as follows:

$$1\ C_7H_8\ (\text{toluene}) + 18\ Na_2S_2O_8\ (\text{PersulfOx}) + 14\ H_2O \Rightarrow 7\ CO_2 + 36\ NaHSO_4\ (\text{sodium bisulfate})$$

5.0 Summary and Conclusions

Elevated sulfate concentrations in the grab groundwater sample, surprisingly low BTEX concentrations in the grab groundwater sample compared to previous MW3 results, and surprisingly low BTEX concentrations in the soil gas sample, all suggest that PersulfOx injected into the subsurface is having the desired effect. However, caution is strongly advised before concluding that remediation is a success because these results are based on a single round of sampling, and petroleum impact was observed in the soil core.

Groundwater samples from MW6 indicate that pressure injection activities have pushed dissolved phase groundwater plume away from the target area and towards MW6. The concentration of naphthalene in MW6 is now above Tier 1 ESLs. However, if the petroleum in the source area is remediated then a dissolved phase plume remaining in the groundwater should be of limited concern. Potential exposure to indoor air impacted by VOCs from soil gas remains the primary concern at the site.

Solution surfacing problems re-occurred along a vertical crack between B4 and B12 that had developed during the first injection event. The location of the crack is now known to extend along the B12-B19-B4-B21 locations. Vertical fracturing is an undesirable condition which hinders proper placement of PersulfOx. and causes injected solution to surface. Specialized equipment for high pressure grouting will be available on site during subsequent injection events so that an attempt to seal the crack can be made.

Sampling activities will be modified during subsequent events in an attempt to address sampling problems. To address continued grab groundwater sampling problems near the center of the target area, all subsequent events will use dual-wall sampling techniques to install a temporary well at the end of the first day of injection events, the temporary well will be allowed to stand overnight to accumulate groundwater, and a grab groundwater sample will be collected at the beginning of the second day of injection activities. To address apparently conflicting soil gas sampling results, the laboratory might be able to analyze CO_2 content in soil gas samples and/or an additional instrument may be used in the field to measure CO_2 in soil cores.

To date, a total of 7,989.5 lbs (145 bags) of PersulfOx have been placed in the subsurface. That amounts to 60% of the design total 13,224 lbs. Two additional injection events are planned and should result in 97% of the design total to be placed in the subsurface.

TABLES

TABLE 1: Summary of Pressure Injection Depths, Volumes, and Locations

BORING	DATE	NaS_2O_8 USED (lbs/gal)	COMMENTS
B23	12/27	401/356	9 intervals between 15.6-35.4 ft BGL @ 39.6 gallons each interval.
B22	12/27	401/356	9 intervals between 15.6-35.4 ft BGL @ 39.6 gallons each interval. Minor surfacing at B3.
B18	12/27	401/356	8 intervals between 17.9-35.4 ft BGL @ 44.5 gallons each interval.
B20	12/28	401/356	8 intervals between 17.9-35.4 ft BGL @ 44.5 gallons each interval.
B19	12/28	150/134	3 intervals between 17.9-23.8 ft BGL @ 44.5 gallons each interval. Injection terminated at the end of third interval due to significant surfacing along vertical crack between B12-B4 created during first event.
B21	12/28	284/253	6 intervals between 17.9-30.8 ft BGL @ 44.5 gallons in each of first five intervals and 30.0 gallons in last interval. Injection terminated after surfacing occurs from B19 injection rods.
B24	12/28	368/327	7 intervals between 17.9-33.1 ft BGL @ 44.5 gallons each interval except 60 gallons at 24.9-26.1 ft BGL. Unplanned boring added to use remainder of mixed solution after surfacing problems at other borings.

NOTES:

(1) Borings were not installed in numeric order.

(2) A total of 2424.4 lbs (44 bags) of PersulfOx was consumed during the event.

TABLE 2: Summary of Monitoring Well Construction

Well ID	Status	TOC Elev (ft AMSL)	Casing Diameter (in)	Screen Length (ft)	Top Scrn (ft)	Bot. Scrn (ft)	Boring TD (ft)
MW-1	Removed	95.46	2	15.0	15.0	30.0	30.0
MW-2	Removed	95.19	2	10.0	20.0	30.0	30.0
MW-3	Removed	95.45	2	10.0	19.5	29.5	29.5
MW-4	Removed	95.45	2	10.0	18.0	28.0	28.0
MW-5	Removed	95.38	2	15.0	12.0	17.0	17.0
MW-6	Active	95.73	2	10.0	20.0	30.0	30.0
MW-7	Active	94.97	2	10.0	18.0	28.0	28.0
MW-8	Active	95.02	2	10.0	18.0	28.0	28.0
SG-20	Active	--	0.75	0.5	4.5	5.0	5.0

TABLE 3: Historic Depth to Water Data for MW6, MW7, and MW8

DATE	MW-6	MW-7	MW-8
05/04/17	8.67	6.99	7.38
05/10/17	8.72	7.30	7.65
05/17/17	8.91	7.46	7.77
06/08/17	9.23	7.81	8.09
06/13/17	9.14	7.82	8.03
06/21/17	9.15	7.83	8.00
07/07/17	9.50	8.19	8.35
07/19/17	9.83	8.42	8.61
08/31/17	10.24	8.89	9.00
09/07/17	10.36	9.08	9.19
12/21/17	9.93	8.94	8.99
01/10/18	9.04	4.31	5.32
04/11/18	8.07	5.11	6.48
11/13/18	10.73	9.01	9.35
11/19/18	10.58	8.87	9.22
12/03/18	9.06	6.42	7.89
12/27/18	9.10	7.08	7.84

NOTES:

(1) All values are in units of feet below top of well casing.

(2) Only values collected since May 2017 are shown.

TABLE 4: Historic Groundwater Potentiometric Elevations for MW6, MW7, and MW8

Ref. Elev.	**95.73**	**94.97**	**95.02**
Date	**MW-6**	**MW-7**	**MW-8**
05/04/17	87.06	87.98	87.64
05/10/17	87.01	87.67	87.37
05/17/17	86.82	87.51	87.25
06/08/17	86.50	87.16	86.93
06/13/17	86.59	87.15	86.99
06/21/17	86.58	87.14	87.02
07/07/17	86.23	86.78	86.67
07/19/17	85.90	86.55	86.41
08/31/17	85.49	86.08	86.02
09/07/17	85.37	85.89	85.83
12/21/17	85.80	86.03	86.03
01/10/18	86.69	90.66	89.70
04/11/18	87.66	89.86	88.54
11/13/18	85.00	85.96	85.67
11/19/18	85.15	86.10	85.80
12/03/18	86.67	88.55	87.13
12/27/18	86.63	87.89	87.18

NOTES:

(1) All values are in units of feet above mean sea level.

(2) Only values collected since May 2017 are shown.

TABLE 5: Summary of Groundwater Analytical Results for Dec. 27, 2019

Sample ID	Benzene	Toluene	Ethyl Benzene	o-Xylene	m,p-Xylene	MTBE	Naphthalene	Sulfate	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Bromomethane	Isopropyl Benzene	n-Propylbenzene
GRAB	**26**	**45**	**52**	**55**	**83**	<0.5	**13**	**2,100,000**	**51**	**14**	**1.8**	**3.9**	**10**
MW-6	<0.5	<0.5	<0.5	**0.8**	<1	**0.55**	**4.6**	**270,000**	**1.7**	**1.9**	<0.5	<0.5	<0.5
MW-7	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**110,000**	<0.5	<0.5	<0.5	<0.5	<0.5
MW-8	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**95,000**	<0.5	<0.5	<0.5	<0.5	<0.5
Tier 1 ESLs:	1	40	12.7	20*	20*	5	0.165	--	--	--	7.55	--	--

NOTES:

(1) All values are in units of µg/L. Only constituents detected in at least one sample are shown.

(2) "<" indicates the constituent was not detected, the associated value is the reporting limit.

(3) Samples analyzed for 65 VOCs by SW-846 8260 and for sulfate by EPA-NERL 300.0.

(4) Tier 1 ESLs are from SF Bay RWQCB, February 22, 2016, Ver 3. The values listed for o-Xylene and m,p-Xylene is the value for total xylenes.

TABLE 6: Historic Groundwater Analytical Results for MW6, MW7, MW8, and GRAB

Date	Sample ID	TPH_{GAS}	Benzene	Toluene	Ethyl Benzene	o-Xylene	m,p-Xylene	MTBE	Naphthalene	Sulfate	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene
09/07/17	MW-6	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
01/10/18	MW-6	<50	**2.6**	**9.6**	**0.96**	**1.4**	**1.3**	<0.5	<2	--	<0.5	<0.5
04/11/18	MW-6	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
11/19/18	MW-6	--	<0.5	<0.5	<0.5	<0.5	<1	**0.66**	**2.6**	**270,000**	<0.5	<0.5
12/27/18	MW-6	--	<0.5	<0.5	<0.5	**0.8**	<1	**0.55**	**4.6**	**270,000**	**1.7**	**1.9**
09/07/17	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
01/10/18	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
04/11/18	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
11/19/18	MW-7	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**280,000**	**1.3**	**1.5**
12/27/18	MW-7	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**110,000**	<0.5	<0.5
09/07/17	MW-8	<50	<0.5	<0.5	**0.61**	**0.7**	**2.3**	<0.5	<2	--	<0.5	<0.5
01/10/18	MW-8	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
04/11/18	MW-8	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
11/19/18	MW-8	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**98,000**	<0.5	<0.5
12/27/18	MW-8	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**95,000**	<0.5	<0.5
09/07/17	(MW-3)*	**23300**	**2900**	**190**	**2800**	**1100**	**1300**	<21	**360**	--	**1400**	**100**
01/10/18	(MW-3)*	**23100**	**1200**	**100**	**2300**	**550**	**1100**	<21	**370**	--	**1400**	**120**
04/11/18	(MW-3)*	**20600**	**3500**	**360**	**2800**	**1300**	**1600**	<21	**420**	--	**1300**	**140**
11/19/18	--	--	--	--	--	--	--	--	--	--	--	--
12/27/18	GRAB	--	**26**	**45**	**52**	**55**	**83**	<0.5	**13**	**2,100,000**	**51**	**14**
Tier 1 ESLs:												

…continued on next page

TABLE 6: Historic Groundwater Analytical Results for MW6, MW7, MW8, and GRAB (continued)

Date	Sample ID	Bromomethane	Isopropyl Benzene	n-Propylbenzene	n-Butylbenzene	sec-Butyl Benzene	p-Isopropyltoluen	1,2-Dichloroethane	1,2,3-Trichlorobenzen	1,2,4-Trichlorobenzen	Bromoform
09/07/17	MW-6	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	<0.5	<2	<2	<0.5
01/10/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
04/11/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
11/19/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.65**	<2	<2	<0.5
12/27/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
09/07/17	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/10/18	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
04/11/18	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	**1.5**	<0.5	<2	<2	<0.5
11/19/18	MW-7	<0.5	<0.5	<0.5	**2.2**	**1.1**	<0.5	<0.5	**6.2**	**3.4**	<0.5
12/27/18	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
09/07/17	MW-8	<0.5	<0.5	<0.5	**0.57**	<0.5	<0.5	<0.5	<2	<2	<0.5
01/10/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	**0.89**
04/11/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
11/19/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
12/27/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
09/07/17	(MW-3*)	<21	**110**	**280**	**50**	<21	<21	<21	<84	<84	<21
01/10/18	(MW-3*)	<21	**130**	**360**	**40**	**25**	<21	<21	<84	<84	<21
04/11/18	(MW-3*)	<21	**150**	**350**	**30**	<21	<21	<21	<84	<84	<21
11/19/18	--	--	--	--	--	--	--	--	--	--	--
12/27/18	GRAB	**1.8**	**3.9**	**10**	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
Tier 1 ESLs:											

NOTES:

(1) All values are in units of µg/L. Only constituents detected in at least one sample are shown.

(2) "<" indicates the constituent was not detected, the associated value is the reporting limit.

(3) "(MW-3*)" - results for MW-3 are included for comparative purposes only. The "GRAB" sample is from a location and depth comparable to former MW-3. Monitoring well MW-3 was destroyed in Oct 2018 under permit with SCVWD.

(4) "Tier 1 ESL's" are from SFBay RWQCB, 2016, Ver 3. The values listed for o-Xylene and m,p-Xylene is the value for total xylenes.

Table 7: Historic Groundwater Indicator Parameters for MW6, MW7, MW8, and GRAB

Date	Well	DTW (ft)	Cond. (µS)	TDS (ppm)	ORP	pH	Temp. (°F)
09/07/17	MW-6	10.36	2234	1650	-77	7.44	66.92
01/10/18	MW-6	9.04	2273	1722	-22	7.28	65.84
04/11/18	MW-6	8.07	2256	1704	-3	7.35	67.46
11/19/18	MW-6	10.58	2275	1718	-19	7.19	65.66
12/27/18	MW-6	9.10	2312	1749	132	7.61	66.20
09/07/17	MW-7	9.08	2157	1590	-22	7.57	66.74
01/10/18	MW-7	4.31	2351	1787	163	7.41	65.12
04/11/18	MW-7	5.11	2147	1615	185	7.57	66.56
11/19/18	MW-7	8.87	2021	1522	-169	7.75	69.08
12/27/18	MW-7	7.08	1247	901.5	71	7.96	66.20
09/07/17	MW-8	9.19	1628	1177	158	8.25	66.56
01/10/18	MW-8	5.32	1378	1014	177	8.02	63.86
04/11/18	MW-8	6.48	1341	976.3	143	8.16	66.38
11/19/18	MW-8	9.22	1521	1136	162	8.29	64.58
12/27/18	MW-8	7.84	1512	1110	120	8.28	64.04
09/07/17	(MW-3*)	--	3120	2356	-136	7.32	67.64
01/10/18	(MW-3*)	--	2934	2254	-144	7.23	66.20
04/11/18	(MW-3*)	--	--	--	--	--	--
11/19/18	--	--	--	--	--	--	--
12/27/18	GRAB	--	4765	3825	173	7.26	65.12

NOTES:

(1) Indicator parameters were measured with a handheld multimeter in the field during sample collection.

TABLE 8: Passive Soil Gas Sample Laboratory Analytical Results for SG-20

Date	Benzene	Toluene	Ethylbenzene	m-,p-Xylene	o-Xylene	Naphthalene
11/20/18	**590**	2400 B	**4600**	8400	4300	**170**
12/18/18	65	250	540	1000	600	17
Sub-Slab ESL:	48	160000	560	52000*	52000*	41
Indoor Air ESL:	0.097	310	1.1	100*	100*	0.083
Indoor Air ESL/0.001:	97	310000	1100	100000*	100000*	83

NOTES:

(1) All values are in units of $\mu g/m^3$.

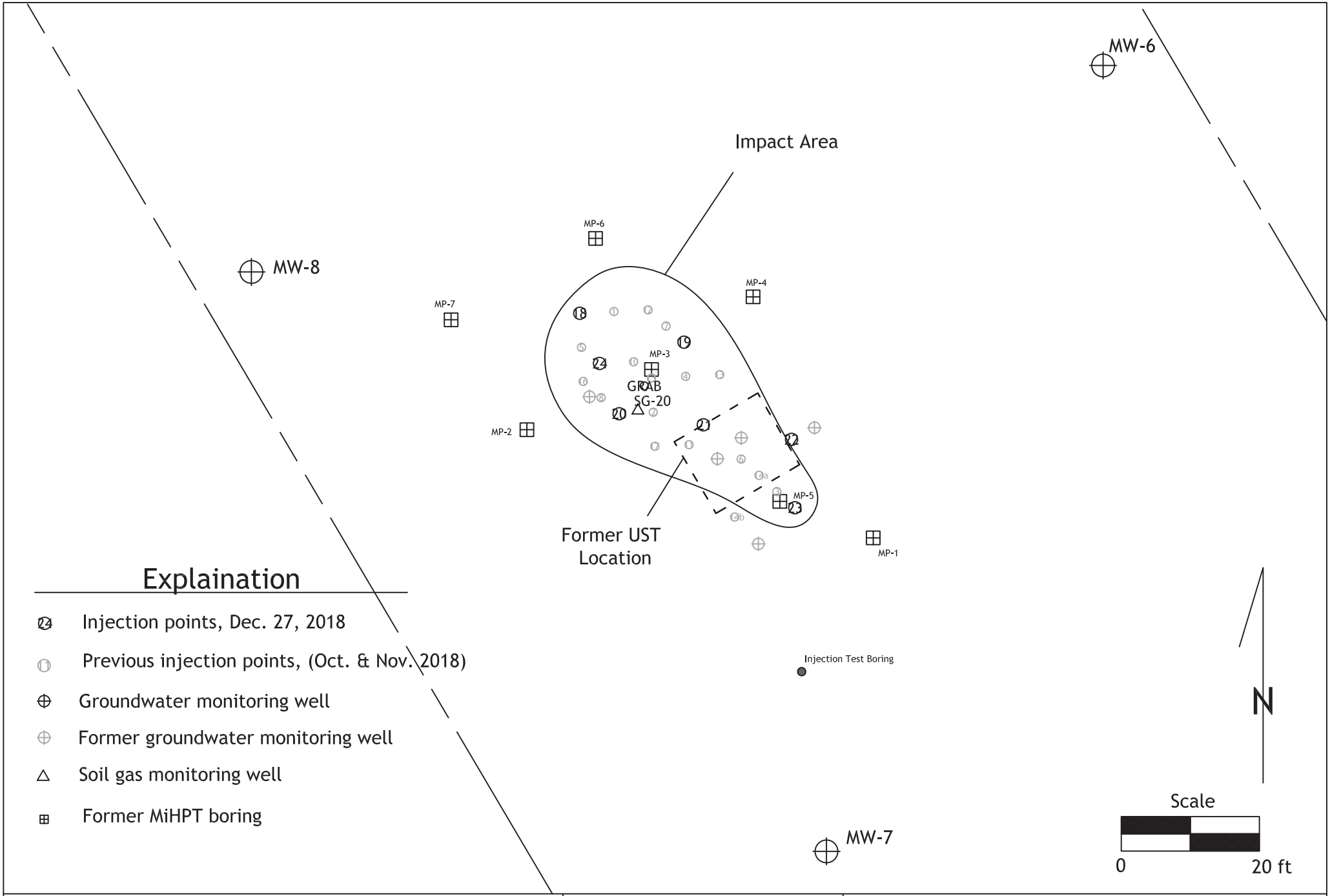
(2) Samples were analyzed for 6 constituents by modified method TO-17.

(3) "B" – indicates analyte was detected at a concentration below the practical quantitation limit.

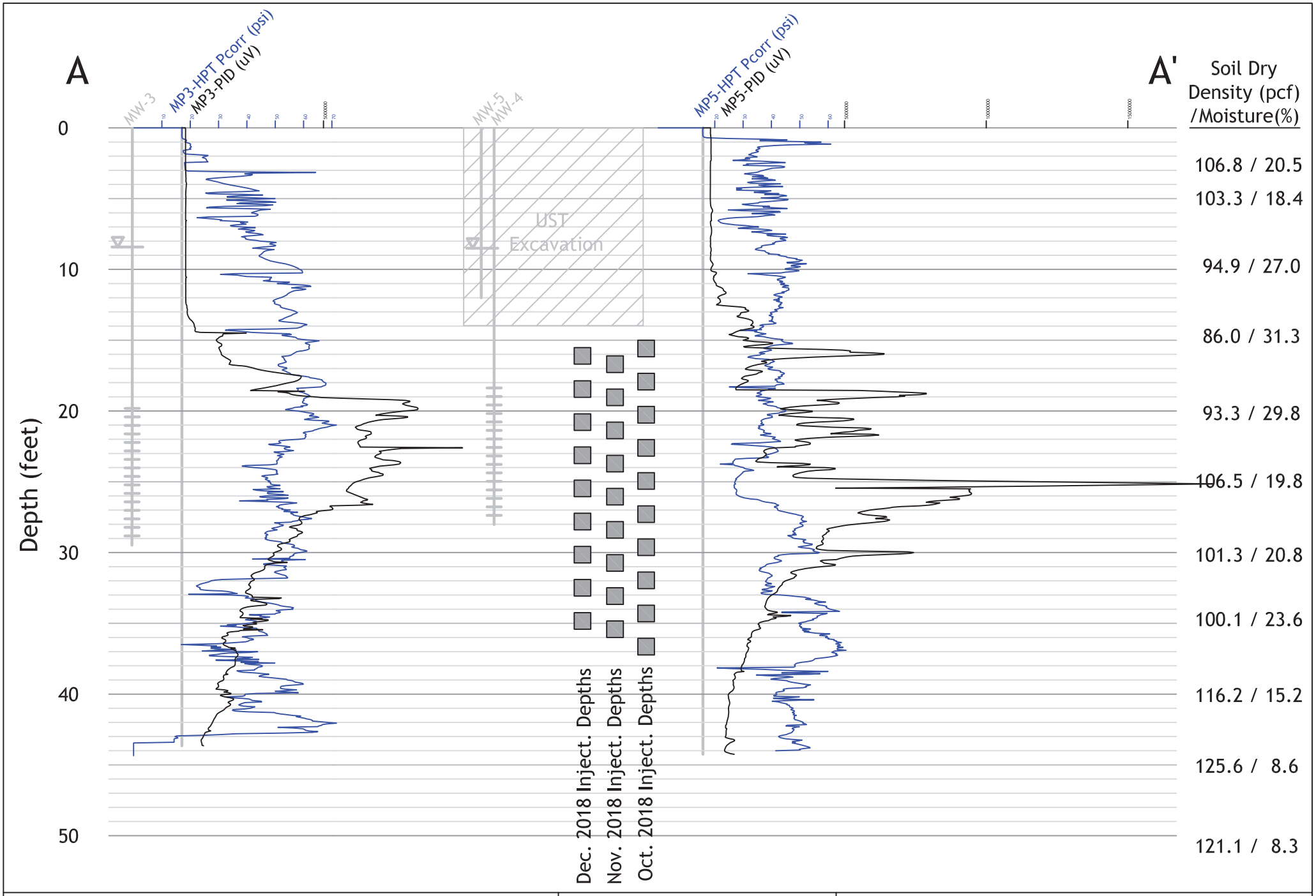
(4) The "**Indoor Air ESL /0.001**" is used to evaluate a potential vapor threat at sites where a future building may be constructed.

(5) ESLs are from SF Bay RWQCB, February 22, 2016, Rev.3. The ESL value of 100000 is for total xylenes.

FIGURES



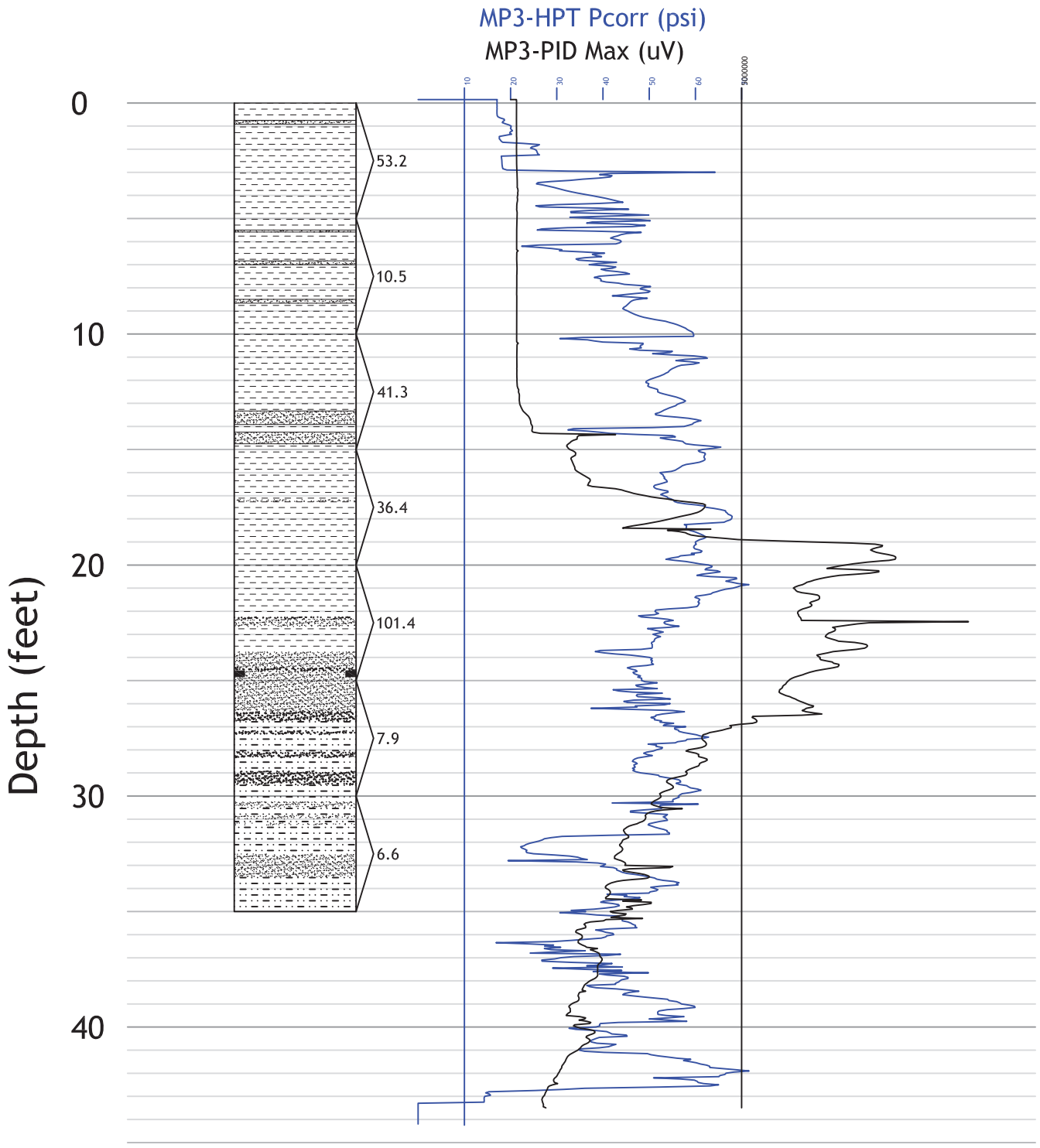
Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 1: Site Map



Ryan Geologic & Environmental Services, Inc.
PO Box 525; McCloud, California 96057
530.925.4932

1936 Alum Rock Ave
San Jose, CA

Figure 2:
Cross-Section thorough Impact Area and ISCO Injection Intervals



Hard Clay

Silty Clay

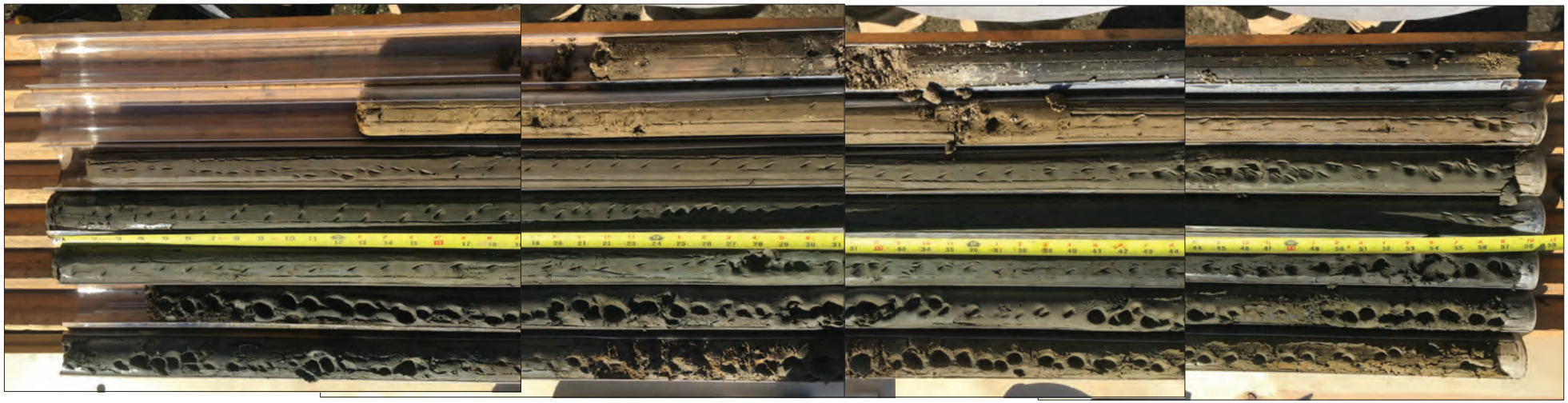
Sand

Strong Petroleum Odor

Organic Vapor Meter from 5 ft Core Tube (ppm)

NOTE: MiHPT traces from MP3 included for comparative purposes

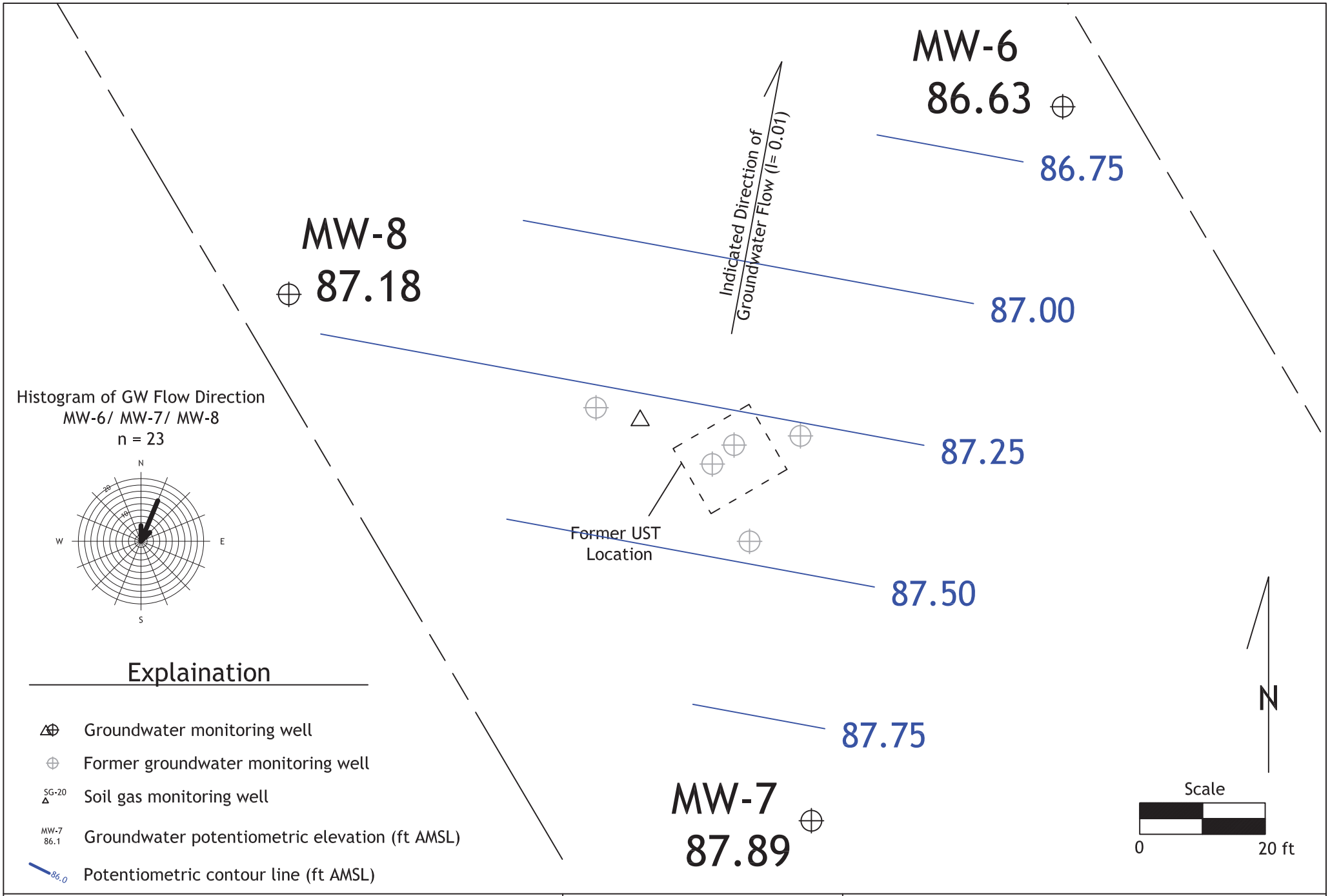
Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, CA 96057 530.925.4932	1936 Alum Rock Ave. San Jose, CA	Figure 3: Dec. 27, 2018 Soil Boring Log



NOTE:

(1) Five foot core tubes are arrange from shallowest in upper left to deepest in lower right
(2) Sandier zones are evident by deeper indentations
(3) Partially filled core tubes are due to poor recovery and is evident in the top 2 core samples.

Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 4: Photograph of December 27, 2018 Soil Boring



Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 5: Direction of Groundwater Flow December 27, 2018

APPENDIX A: Pressure Injection Depths, Pressures, and Volumes

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
10/29/2018 12:50	Test	18.0-19.2	0.0	50.0	6.9	0.0		RAS not functional
10/29/2018 12:51	Test	18.0-19.2	0.0	85.0	14.5	0.0		RAS not functional
10/29/2018 12:52	Test	18.0-19.2	0.0	105.0	18.5	0.0		RAS not functional
10/29/2018 13:01	Test	25.0-26.2	0.0	40.0	7.5	0.0		RAS not functional
10/29/2018 13:02	Test	25.0-26.2	0.0	100.0	19.0	0.0		RAS not functional
10/29/2018 13:03	Test	25.0-26.2	0.0	115.0	21.0	0.0		RAS not functional
10/29/2018 14:08	B1	17.3-18.5	39.6	110.0	13.2	39.6		RAS not functional
10/29/2018 14:13	B1	19.7-20.9	39.6	120.0	13.2	39.6		RAS not functional
10/29/2018 14:20	B1	22.0-23.2	39.6	9.0	13.2	39.6		RAS not functional
10/29/2018 14:28	B1	24.3-25.5	39.6	100.0	13.2	39.6		RAS not functional
10/29/2018 14:37	B1	26.7-27.9	39.6	10.0	13.2	39.6		RAS not functional
10/29/2018 14:45	B1	29.0-30.2	39.6	8.0	9.9	39.6		RAS not functional
10/29/2018 14:55	B1	31.3-32.5	39.6	90.0	9.9	39.6		RAS not functional
10/29/2018 15:03	B1	33.7-34.9	39.6	90.0	13.2	39.6		RAS not functional
10/29/2018 15:10	B1	36.0-37.2	39.6	9.0	13.2	39.6		RAS not functional
10/30/2018 08:29	B2	17.3-18.5	39.6	115.0	11.8	39.6		RAS not functional
10/30/2018 08:40	B2	19.7-20.9	39.6	115.0	11.2	39.6		RAS not functional
10/30/2018 09:34	B2	26.7-27.9	39.6	85.0	9.1	39.6		RAS not functional
10/30/2018 09:39	B2	22.0-23.2	39.6	100.0	10.9	39.6		RAS not functional
10/30/2018 09:48	B2	24.3-25.5	39.6	90.0	9.5	39.6		RAS not functional
10/30/2018 10:01	B2	29.0-30.2	39.6	110.0	11.5	39.6		RAS not functional
10/30/2018 10:08	B2	31.3-32.5	39.6	105.0	10.4	39.6		RAS not functional
10/30/2018 10:17	B2	33.7-34.9	39.6	115.0	11.5	39.6		RAS not functional
10/30/2018 10:24	B2	36.0-37.2	39.6	115.0	10.2	39.6		RAS not functional
10/30/2018 10:47	B3	15.0-16.2	35.6	116.0	11.7	35.6		RAS not functional
10/30/2018 10:50	B3	17.3-18.5	35.6	120.0	11.9	35.6		RAS not functional
10/30/2018 10:58	B3	19.7-20.9	35.6	110.0	11.4	35.6		RAS not functional
10/30/2018 11:04	B3	22.0-23.2	35.6	120.0	11.9	35.6		RAS not functional
10/30/2018 11:11	B3	24.3-25.5	35.6	115.0	12.2	35.6		RAS not functional
10/30/2018 11:16	B3	26.7-27.9	35.6	120.0	12.2	35.6		RAS not functional
10/30/2018 11:24	B3	29.0-30.2	35.6	120.0	12.4	35.6		RAS not functional
10/30/2018 11:30	B3	31.3-32.5	35.6	115.0	12.0	35.6		RAS not functional
10/30/2018 11:40	B3	33.7-34.9	35.6	120.0	11.3	35.6		RAS not functional
10/30/2018 11:52	B3	36.0-37.2	35.6	120.0	12.6	35.6		RAS not functional
10/30/2018 12:02	B4	17.3-18.5	39.6	120.0	13.2	39.77	79.08	Typical pres/flow
10/30/2018 12:23	B4	19.7-20.9	39.6	115.0	13.2	40.65	66.24	Typical pres/flow
10/30/2018 12:30	B4	22.0-23.2	39.6	115.0	13.2	29.00	77.40	Typical pres/flow
10/30/2018 12:37	B4	24.3-25.5	39.6	110.0	13.2	30.09	59.85	Typical pres/flow
10/30/2018 12:45	B4	26.7-27.9	39.6	115.0	13.2	40.53	80.65	Typical pres/flow
10/30/2018 12:54	B4	29.0-30.2	39.6	115.0	13.2	40.98	88.03	Typical pres/flow
10/30/2018 13:02	B4	31.3-32.5	39.6	120.0	13.2	40.41	80.65	Typical pres/flow
10/30/2018 13:10	B4	33.7-34.9	39.6	125.0	13.2	32.09	83.04	Typical pres/flow
10/30/2018 13:16	B4	36.0-37.2	39.6	120.0	13.2	31.31	100.04	Typical pres/flow (+end of mix?)

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
10/30/2018 14:09	B5	17.3-18.5	39.6	120.0	13.2	39.58	70.58	Typical pres/flow
10/30/2018 14:16	B5	19.7-20.9	39.6	100.0	13.2	40.90	72.13	Typical pres/flow
10/30/2018 14:23	B5	22.0-23.2	39.6	110.0	13.2	40.54	77.00	Typical pres/flow
10/30/2018 14:31	B5	24.3-25.5	39.6	100.0	13.2	40.23	73.01	Typical pres/flow
10/30/2018 14:40	B5	26.7-27.9	39.6	110.0	13.2	40.77	90.88	Typical pres/flow
10/30/2018 14:48	B5	29.0-30.2	39.6	110.0	13.2	40.88	77.26	Typical pres/flow
10/30/2018 14:55	B5	31.3-32.5	39.6	120.0	13.2	40.60	73.32	Typical pres/flow
10/30/2018 15:08	B5	33.7-34.9	39.6	125.0	13.2	41.25	75.05	Typical pres/flow + tool string leak
10/30/2018 15:15	B5	36.0-37.2	39.6	125.0	13.2	37.76	107.11	Typical pres/flow (+end of mix?)
10/31/2018 09:04	B6	19.7-20.9	35.6	110.0	11.9	36.11	68.88	Kerfuffle at start
10/31/2018 09:12	B6	15.0-16.2	35.6	110.0	11.9	36.99	63.36	Kerfuffle at start
10/31/2018 09:18	B6	17.3-18.5	35.6	115.0	11.9	39.53	69.26	Typical pres/flow
10/31/2018 09:25	B6	22.0-23.2	35.6	110.0	11.9	40.44	66.55	Kerfuffle at start
10/31/2018 09:32	B6	24.3-25.5	35.6	115.0	11.9	35.73	91.25	Typical pres/flow almost
10/31/2018 09:37	B6	26.7-27.9	35.6	120.0	11.9	38.80	88.79	Typical pres/flow
10/31/2018 09:43	B6	29.0-30.2	35.6	125.0	11.9	39.85	85.04	Typical pres/flow
10/31/2018 09:48	B6	31.3-32.5	35.6	120.0	11.9	39.08	94.85	Typical pres/flow
10/31/2018 09:54	B6	33.7-34.9	35.6	125.0	11.9	1.35	98.95	Typical pres/flow + flow meter non-functional
10/31/2018 10:01	B6	36.0-37.2	35.6	120.0	11.9	32.70	97.89	Typical pres/flow (+end of mix?)
10/31/2018 10:26	B7	17.3-18.5	39.6	115.0	13.2	28.42	73.32	Zero flow + hi press at start
10/31/2018 10:32	B7	19.7-20.9	39.6	105.0	13.2	41.06	66.28	Typical pres/flow
10/31/2018 10:39	B7	22.0-23.2	39.6	105.0	13.2	42.56	66.70	Typical pres/flow
10/31/2018 10:47	B7	24.3-25.5	39.6	120.0	13.2	42.33	74.12	Typical pres/flow
10/31/2018 10:55	B7	26.7-27.9	39.6	105.0	13.2	36.19	64.14	Zero flow + hi press in middle; Surfacing occurs in crack between B7 and B4 during early injection
10/31/2018 11:12	B7	29.0-30.2	10.0	105.0	13.2	11.54	90.15	Typical pres/flow
10/31/2018 13:25	B8	22.0-23.2	37.0	60.0	7.4	41.06	45.27	Zero flow + hi press at start; B4 - End of mix flow decrease
10/31/2018 13:34	B8	24.3-25.5	37.0	55.0	7.4	49.24	44.57	Kerfuffle at start
10/31/2018 13:45	B8	26.7-27.9	37.0	55.0	7.4	42.20	46.74	Typical pres/flow
10/31/2018 13:57	B8	29.0-30.2	37.0	50.0	5.3	39.60	46.14	Zero flow + hi press in middle
11/01/2018 10:04	B11	15.0-16.2	35.6	55.0	5.9	33.63	46.50	Zero flow + hi press at start
11/01/2018 10:15	B11	17.3-18.5	35.6	50.0	5.8	37.00	45.42	Kerfuffle at start
11/01/2018 10:26	B11	19.7-20.9	35.6	50.0	5.5	42.15	42.25	Kerfuffle at start
11/01/2018 10:34	B11	22.0-23.2	35.6	60.0	6.0	40.40	40.87	Kerfuffle at start
11/01/2018 10:43	B11	24.3-25.5	35.6	50.0	5.0	28.76	41.29	Typical pres/flow (+end of mix?); End of mix signature (Surfacing at B3?)
11/01/2018 10:52	B11	26.7-27.9	20.0	60.0	6.6	21.24	49.36	Typical pres/flow

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
11/01/2018 11:21	B10	19.7-20.9	39.6	50.0	5.2	42.02	56.48	Typical pres/flow; Partial boring completed; Inject remaining mix into main depth and quit event 1
11/01/2018 11:32	B10	22.0-23.2	39.6	50.0	5.9	43.17	48.19	Kerfuffle at start
11/01/2018 11:43	B10	24.3-25.5	39.6	50.0	6.5	42.19	39.78	Zero flow + hi press at end
11/01/2018 11:51	B10	26.7-27.9	39.6	50.0	5.6	29.77	44.15	Typical pres/flow (+end of mix?)
11/19/2108 10:12	B12	18.5-19.67	44.5	40.0	6.4	44.5	46.0	5 gpm with 46psi to start
11/19/2108 10:24	B12	20.8-21.97	44.5	35.0	8.9	44.5	40.0	6.2gpm with 40psi to start
11/19/2108 10:34	B12	23.2-24.37	44.5	32.0	7.4	44.5	35.0	7.3gpm with 35psi to start
11/19/2108 10:42	B12	25.5-26.67	44.5	34.0	7.4	44.5	40.0	6.4gpm with 40psi to start
11/19/2108 10:53	B12	27.8-28.97	44.5	35.0	6.4	44.5	42.0	6.1gpm with 42psi to start
11/19/2108 11:03	B12	30.2-31.37	44.5	40.0	8.9	44.5	40.0	6.6gpm with 40psi to start
11/19/2108 11:11	B12	32.5-33.67	44.5	42.0	8.9	44.5	48.0	8.3gpm with 48psi to start
11/19/2108 11:19	B12	34.8-35.97	44.5	42.0	8.9	44.5	48.0	8.5gpm with 48psi to start
11/19/2108 12:31	B13	18.5-19.67	44.5	40.0	5.6	44.5	40.0	5.9gpm with 40psi to start
11/19/2108 12:44	B13	20.8-21.97	44.5	42.0	7.4	44.5	54.0	4.9gpm with 54psi to start
11/19/2108 12:53	B13	23.2-24.37	44.5	35.0	7.4	44.5	38.0	7gpm with 38psi to start
11/19/2108 13:03	B13	25.5-26.67	44.5	36.0	8.9	44.5	42.0	6.6gpm with 42psi to start
11/19/2108 13:11	B13	27.8-28.97	44.5	48.0	8.9	44.5	60.0	7.8gpm with 60psi to start
11/19/2108 13:20	B13	30.2-31.37	44.5	54.0	8.9	44.5	58.0	8.5gpm with 58psi to start
11/19/2108 13:28	B13	32.5-33.67	44.5	56.0	8.9	44.5	62.0	8.9gpm with 62psi to start
11/19/2108 13:36	B13	34.8-35.97	44.5	54.0	8.9	44.5	58.0	8.9gpm with 58psi to start
11/19/2108 14:32	B14A	16.2-17.37	39.6	28.0	6.6	39.6	30.0	5.4gpm with 30psi to start
11/19/2108 14:42	B14A	18.5-19.67	39.6	36.0	6.6	39.6	40.0	5.7gpm with 40psi to start
11/19/2108 14:49	B14A	20.8-21.97	39.6	46.0	9.9	39.6	50.0	8.7gpm with 50psi to start
11/19/2108 14:57	B14A	23.2-24.37	30.0	44.0	10	30	50.0	8.8gpm with 50psi to start. Stop injecting after 30gal due to daylighting from B3.
11/19/2108 15:08	B14A	27.8-28.97	21.0	30.0	5.3	21	38.0	3.8gpm with 38psi to start. Skipped two intervals and tried to inject at this interval but again saw daylighting up same adjacent borehole after 21gal injected.
11/20/2018 08:09	B14B	25.5-26.67	46.6	48.0	6.7	46.6	50.0	Grouted up location 14 and pushed rods down location 3 and regrouted old borehole to try and get a better seal. Moved over to reset tooling at new location, 14B, to finish injecting remaining mixed reagent. 5.4gpm with 50psi to start
11/20/2018 08:18	B14B	30.2-31.37	46.6	48.0	7.8	46.6	48.0	6.6gpm with 48psi to start
11/20/2018 08:26	B14B	32.5-33.67	46.6	50.0	7.8	46.6	50.0	6.8gpm with 50psi to start
11/20/2018 08:34	B14B	34.8-35.97	46.6	50.0	7.8	46.6	50.0	6.4gpm with 50psi to start

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
11/20/2018 09:09	B15	18.5-19.67	44.5	46.0	6.4	44.5	50.0	5.3gpm with 50psi to start
11/20/2018 09:17	B15	20.8-21.97	44.5	47.0	8.9	44.5	52.0	6.7gpm with 52psi to start
11/20/2018 09:24	B15	23.2-24.37	44.5	44.0	8.9	44.5	50.0	8gpm wit 50psi to start
11/20/2018 09:32	B15	25.5-26.67	44.5	48.0	8.9	44.5	50.0	7.3gpm with 50psi to start
11/20/2018 09:40	B15	27.8-28.97	44.5	52.0	8.9	44.5	60.0	7.1gpm with 60psi to start
11/20/2018 09:48	B15	30.2-31.37	44.5	54.0	8.9	44.5	56.0	7.5gpm with 56psi to start
11/20/2018 09:55	B15	32.5-33.67	44.5	56.0	8.9	44.5	60.0	7.3gpm with 60psi to start
11/20/2018 10:05	B15	34.8-35.97	44.5	54.0	8.9	44.5	60.0	7.4gpm with 60psi to start
11/20/2018 10:26	B16	18.5-19.67	44.5	48.0	7.4	44.5	52.0	5.8gpm with 52psi to start
11/20/2018 10:34	B16	20.8-21.97	44.5	46.0	8.9	44.5	52.0	7.9gpm with 52psi to start
11/20/2018 10:41	B16	23.2-24.37	44.5	45.0	8.9	44.5	50.0	8.8gpm with 50psi to start
11/20/2018 10:46	B16	25.5-26.67	44.5	48.0	8.9	44.5	52.0	8.6gpm with 52psi to start
11/20/2018 10:54	B16	27.8-28.97	44.5	51.0	8.9	44.5	60.0	7.5gpm with 60psi to start
11/20/2018 11:02	B16	30.2-31.37	44.5	52.0	8.9	44.5	54.0	8.0gpm with 54psi to start
11/20/2018 11:11	B16	32.5-33.67	44.5	55.0	8.9	44.5	58.0	7.8gpm with 58psi to start
11/20/2018 11:18	B16	34.8-35.97	44.5	51.0	8.9	44.5	56.0	8.1gpm with 56psi to start
11/20/2018 11:43	B17	18.5-19.67	44.5	48.0	6.4	44.5	52.0	5.5gpm with 52psi to start
11/20/2018 11:52	B17	20.8-21.97	44.5	46.0	7.4	44.5	52.0	5.8gpm with 52psi to start
11/20/2018 12:02	B17	23.2-24.37	44.5	45.0	8.9	44.5	50.0	8gpm with 50psi to start
11/20/2018 12:09	B17	25.5-26.67	44.5	46.0	8.9	44.5	52.0	8gpm with 52psi to start
11/20/2018 12:17	B17	27.8-28.97	44.5	48.0	8.9	44.5	56.0	7.6gpm with 56psi to start
11/20/2018 12:25	B17	30.2-31.37	44.5	48.0	8.9	44.5	54.0	7.8gpm with 54psi to start
11/20/2018 12:32	B17	32.5-33.67	44.5	52.0	8.9	44.5	56.0	7.5gpm with 56psi to start
11/20/2018 12:41	B17	34.8-35.97	44.5	52.0	8.9	44.5	60.0	7gpm with 60psi to start
12/27/18 10:41	B23	15.6-16.8	39.6	55	5.9	--	65	65psi with 4.6gpm
12/27/18 10:50	B23	17.9-19.1	39.6	55	7.2	--	60	60psi with 5.3gpm
12/27/18 10:59	B23	20.3-21.4	39.6	55	8.9	--	60	60psi with 6.4gpm
12/27/18 11:06	B23	22.6-23.8	39.6	55	8.9	--	55	55psi with 8.9gpm
12/27/18 11:12	B23	24.9-26.1	39.6	40	8.9	--	45	45psi with 7.6gpm
12/27/18 11:21	B23	27.3-28.4	39.6	50	8.9	--	55	55psi with 7.5gpm
12/27/18 11:29	B23	29.6-30.8	39.6	60	8.9	--	60	60psi with 8.7gpm
12/27/18 11:34	B23	31.9-33.1	39.6	55	8.9	--	60	60psi with 8.6gpm
12/27/18 11:40	B23	34.3-35.4	39.6	60	8.9	--	65	65psi with 8.7gpm
12/27/18 13:03	B22	15.6-16.8	39.6	60	7.2	--	65	65psi with 5.8gpm
12/27/18 13:10	B22	17.9-19.1	39.6	55	7.2	--	60	60psi with 5.9gpm
12/27/18 13:18	B22	20.3-21.4	39.6	55	7.2	--	60	60psi with 7.2gpm
12/27/18 13:25	B22	22.6-23.8	39.6	45	8.9	--	50	50psi with 8.2gpm
12/27/18 13:31	B22	24.9-26.1	39.6	40	8.9	--	50	50psi with 8.2gpm
12/27/18 13:36	B22	27.3-28.4	39.6	50	8.9	--	55	55psi with 8.4gpm
12/27/18 13:42	B22	29.6-30.8	39.6	50	8.9	--	50	50psi with 8.6gpm
12/27/18 13:47	B22	31.9-33.1	39.6	50	8.9	--	55	55psi with 8.4gpm
12/27/18 13:54	B22	34.3-35.4	39.6	45	8.9	--	50	50psi with 8.7gpm

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
12/27/18 14:11	B18	17.9-19.1	44.5	55	5.6	--	60	60psi with 5.2gpm
12/27/18 14:23	B18	20.3-21.4	44.5	50	8.9	--	55	55psi with 6.8gpm
12/27/18 14:31	B18	22.6-23.8	44.5	45	8.9	--	50	50psi with 8gpm
12/27/18 14:39	B18	24.9-26.1	44.5	45	8.9	--	50	50psi with 7.8gpm
12/27/18 14:47	B18	27.3-28.4	44.5	55	8.9	--	60	60psi with 7.7gpm
12/27/18 14:55	B18	29.6-30.8	44.5	55	8.9	--	65	65psi with 8.9gpm
12/27/18 15:02	B18	31.9-33.1	44.5	50	8.9	--	60	60psi with 7.9gpm
12/27/18 15:11	B18	34.3-35.4	44.5	55	8.9	--	60	60psi with 8.2gpm
12/28/18 7:46	B20	17.9-19.1	44.5	50	6.3	--	55	55psi with 5.6gpm
12/28/18 7:57	B20	20.3-21.4	44.5	50	7.4	--	55	55psi with 7.2gpm
12/28/18 8:07	B20	22.6-23.8	44.5	45	8.9	--	50	50psi with 7.7gpm
12/28/18 8:15	B20	24.9-26.1	44.5	55	8.9	--	55	55psi with 8.4gpm
12/28/18 8:23	B20	27.3-28.4	44.5	50	11.1	--	45	45psi with 8.7gpm
12/28/18 8:30	B20	29.6-30.8	44.5	50	8.9	--	55	55psi with 7.2gpm
12/28/18 8:40	B20	31.9-33.1	44.5	60	11.1	--	60	60psi with 8.6gpm
12/28/18 8:47	B20	34.3-35.4	44.5	65	11.1	--	65	65psi with 8.9gpm
12/28/18 9:03	B19	17.9-19.1	44.5	55	7.4	--	60	60psi with 6.9gpm
12/28/18 9:12	B19	20.3-21.4	44.5	50	7.4	--	55	55psi with 7.2gpm
12/28/18 9:21	B19	22.6-23.8	44.5	55	8.9	--	60	60psi with 8.2gpm. Surfacing from crack adjacent to borehole upon completion of third interval. Moved to next location.
12/28/18 9:44	B21	17.9-19.1	44.5	45	7.4	--	55	55psi with 5.9gpm
12/28/18 9:52	B21	20.3-21.4	44.5	50	6.3	--	55	55psi with 6.2gpm
12/28/18 10:02	B21	22.6-23.8	44.5	50	7.4	--	50	50psi with 6.9gpm
12/28/18 10:09	B21	24.9-26.1	44.5	45	7.4	--	50	50psi with 7.3gpm
12/28/18 10:19	B21	27.3-28.4	44.5	55	8.9	--	60	60psi with 6.7gpm
12/28/18 10:27	B21	29.6-30.8	30	50	6	--	55	55psi with 6.6gpm.
12/28/18 12:22	B24	17.9-19.1	44.5	50	7.4	--	55	55psi with 5.1gpm
12/28/18 12:32	B24	20.3-21.4	44.5	50	6.3	--	55	55psi with 6.1gpm
12/28/18 12:42	B24	22.6-23.8	44.5	45	8.9	--	55	55psi with 7.3gpm
12/28/18 12:49	B24	24.9-26.1	60	50	8.6	--	55	55psi with 7.3gpm. Inject extra 15.5gal that was left over from B21
12/28/18 13:00	B24	27.3-28.4	44.5	45	7.4	--	50	50psi with 6.4gpm
12/28/18 13:09	B24	29.6-30.8	44.5	50	7.4	--	55	55psi with 7.1gpm
12/28/18 13:16	B24	31.9-33.1	44.5	50	7.4	--	55	55psi with 7.2gpm

APPENDIX B: Laboratory Analytical Report Sheets

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1/4/2019
Mr. Richard Ryan
Ryan Geologic & Environmental Services, Inc.
PO Box 525

McCloud CA 96057

Project Name:
Project #: AR1936
Workorder #: 1812391

Dear Mr. Richard Ryan

The following report includes the data for the above referenced project for sample(s) received on 12/19/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive S.E. WMS are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Sarah Westerman

Project Manager

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WORK ORDER #: 1812391

Work Order Summary

CLIENT:	Mr. Richard Ryan Ryan Geologic & Environmental Services, Inc. PO Box 525 McCloud, CA 96057	**BILL TO:**	Mr. Neil OHara RNC Environmental 151 Nursery St Ashland, OR 97520
PHONE:		**P.O. #**	
FAX:		**PROJECT #**	AR1936
DATE RECEIVED:	12/19/2018	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	01/04/2019		

FRACTION #	NAME	TEST
01A	SG-20	Passive S.E. WMS
02A	BLK1	Passive S.E. WMS
03A	BLK2	Passive S.E. WMS
04A	Lab Blank	Passive S.E. WMS
04B	Lab Blank	Passive S.E. WMS
05A	LCS	Passive S.E. WMS
05AA	LCSD	Passive S.E. WMS
05B	LCS	Passive S.E. WMS
05BB	LCSD	Passive S.E. WMS

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 01/04/19

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
WMS Passive SE by Mod EPA TO-17
Ryan Geologic & Environmental Services, Inc.
Workorder# 1812391

Three WMS-LU samples were received on December 19, 2018. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

Please note that 1,1,2,2-Tetrachloroethane (1,1,2,2-PCA) can degrade into Trichloroethene (TCE) during storage on the charcoal-based sorbent used in the WMS device. Samples containing 1,1,2,2-PCA may yield reduced concentrations of 1,1,2,2-PCA and elevated concentrations of TCE.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

The Chain of Custody (COC) was not relinquished properly. A signature, date and time were not

provided by the field sampler.

Sample identification for samples BLK1 and BLK2 were not provided on the sample tag. Eurofins Air Toxics, LLC Sample Acceptance Policy, which is derived from NELAC Section 5.11.2 (b), requires proper sample labeling to ensure unique identification. The client was informed of this violation of policy and instructions were given to continue analysis. Samples were given unique laboratory identification numbers, but the end user will not be able to determine from which of two identically identified containers the reported results were derived.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks and sample BLK2, a sampling duration of 21,552 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Due to the Method Detection Limit (MDL) study, the reporting limit for Toluene was raised from 0.05ug to 0.10ug.

The recovery for Ethyl Benzene in the LCS and LCSD extracted and analyzed on 12/26/18 was outside the laboratory control limits. All other LCS and LCSD recoveries were within allowed limits.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
VOC BY PASSIVE SAMPLER - GC/MS

Client Sample ID: SG-20

Lab ID#: 1812391-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	13	1.0	65
Toluene	0.10	4.6	5.3	250
Ethyl Benzene	0.050	1.6	16	540
m,p-Xylene	0.050	1.6	31	1000
o-Xylene	0.050	1.5	19	600
Naphthalene	0.050	1.5	0.56	17

Client Sample ID: BLK1

Lab ID#: 1812391-02A

No Detections Were Found.

Client Sample ID: BLK2

Lab ID#: 1812391-03A

No Detections Were Found.

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Client Sample ID: SG-20

Lab ID#: 1812391-01A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18122621sim**	**Date of Collection: 12/18/18 11:20:00 A**
Dil. Factor:	**1.00**	**Date of Analysis: 12/26/18 10:42 PM**
		Date of Extraction: 12/26/18

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	13	1.0	65
Toluene	0.10	4.6	5.3	250
Ethyl Benzene	0.050	1.6	16	540
m,p-Xylene	0.050	1.6	31	1000
o-Xylene	0.050	1.5	19	600
Naphthalene	0.050	1.5	0.56	17

Temperature = 77.0F , duration time = 21552 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	110	70-130

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Client Sample ID: BLK1

Lab ID#: 1812391-02A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18122622sim**	**Date of Collection: 12/18/18 11:20:00 A**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/26/18 11:10 PM**	
		Date of Extraction: 12/26/18	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	270000	Not Detected	Not Detected
Toluene	0.10	100000	Not Detected	Not Detected
Ethyl Benzene	0.050	36000	Not Detected	Not Detected
m,p-Xylene	0.050	36000	Not Detected	Not Detected
o-Xylene	0.050	33000	Not Detected	Not Detected
Naphthalene	0.050	33000	Not Detected	Not Detected

Temperature = 77.0F , duration time = 1 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	112	70-130

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Client Sample ID: BLK2

Lab ID#: 1812391-03A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18122714sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/27/18 03:58 PM**	
		Date of Extraction: 12/27/18	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	13	Not Detected	Not Detected
Toluene	0.10	4.6	Not Detected	Not Detected
Ethyl Benzene	0.050	1.6	Not Detected	Not Detected
m,p-Xylene	0.050	1.6	Not Detected	Not Detected
o-Xylene	0.050	1.5	Not Detected	Not Detected
Naphthalene	0.050	1.5	Not Detected	Not Detected

Temperature = 77.0F , duration time = 21552 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	111	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1812391-04A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18122605sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/26/18 03:06 PM**	
		Date of Extraction: 12/26/18	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	13	Not Detected	Not Detected
Toluene	0.10	4.6	Not Detected	Not Detected
Ethyl Benzene	0.050	1.6	Not Detected	Not Detected
m,p-Xylene	0.050	1.6	Not Detected	Not Detected
o-Xylene	0.050	1.5	Not Detected	Not Detected
Naphthalene	0.050	1.5	Not Detected	Not Detected

Temperature = 77.0F , duration time = 21552 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	112	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1812391-04B

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18122713sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/27/18 03:26 PM**	
		Date of Extraction: 12/27/18	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	13	Not Detected	Not Detected
Toluene	0.10	4.6	Not Detected	Not Detected
Ethyl Benzene	0.050	1.6	Not Detected	Not Detected
m,p-Xylene	0.050	1.6	Not Detected	Not Detected
o-Xylene	0.050	1.5	Not Detected	Not Detected
Naphthalene	0.050	1.5	Not Detected	Not Detected

Temperature = 77.0F , duration time = 21552 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	111	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1812391-05A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18122603sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/26/18 02:09 PM**	
		Date of Extraction: 12/26/18	

Compound	%Recovery	Method Limits
Benzene	118	70-130
Toluene	126	70-130
Ethyl Benzene	131 Q	70-130
m,p-Xylene	122	70-130
o-Xylene	117	70-130
Naphthalene	29	5-80

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	112	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1812391-05AA

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18122604sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/26/18 02:37 PM**	
		Date of Extraction: 12/26/18	

Compound	%Recovery	Method Limits
Benzene	116	70-130
Toluene	126	70-130
Ethyl Benzene	132 Q	70-130
m,p-Xylene	122	70-130
o-Xylene	118	70-130
Naphthalene	30	5-80

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	112	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1812391-05B

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18122711sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/27/18 02:30 PM**	
		Date of Extraction: 12/27/18	

Compound	%Recovery	Method Limits
Benzene	110	70-130
Toluene	121	70-130
Ethyl Benzene	127	70-130
m,p-Xylene	118	70-130
o-Xylene	114	70-130
Naphthalene	28	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	113	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1812391-05BB

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18122712sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/27/18 02:58 PM**	
		Date of Extraction: 12/27/18	

Compound	%Recovery	Method Limits
Benzene	108	70-130
Toluene	121	70-130
Ethyl Benzene	128	70-130
m,p-Xylene	120	70-130
o-Xylene	115	70-130
Naphthalene	28	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	113	70-130

eurofins Air Toxics

Passive Sorbent Chain of Custody

Case Seal #:

WO#: 1812397

Company: RNC ENVIRONMENTAL LLC Project #: AR1936 P.O.#

Project Manager: NEIL O'HARA Project Name:

Contact phone/email: 888 485 3330 Collected by: RICH RYAN 530.925.4932

Sample Matrix (check one): Indoor/Outdoor Air, Soil Gas, Workplace Monitoring, Other( )

Reporting Units (circle): ppbv, ug/m3 (circled), ppmv, mg/m3, ug, ng

Turn Around Time: ☒ Normal ☐ Rush Specify

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other( )	Analysis Requested	Sample Comments:
01A		SG-20	12/3/2018	1208	12/18/18	1120		✓			TO17:	BTEX + NAPH
02A		BLK 1	12/18/2018	1119	12/18/18	1120		✓				
03A		BLK 2	NA	NA	NA	NA		✓				

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
			[signature] SAR	12/19/18	1047	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS UPS

Air bill #: 12W84 33R01 4578 3301

Custody Seals Intact? Yes No None (circled)

Temperature (°C) NA

Sample Condition Upon Receipt: (circle) Good (circled) SDR

Neil O'Hara
RNC Environmental, LLC
151 Nursery St
Ashland, OR 97520
Tel: (888) 485-3330
Email: neil@rnc-enviro.com

RE: AR1936

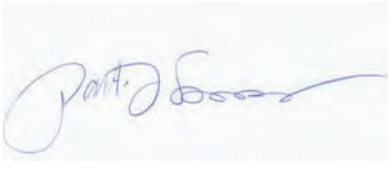
Work Order No.: 1812162

Dear Neil O'Hara:

Torrent Laboratory, Inc. received 5 sample(s) on December 27, 2018 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991 If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.



Patti L Sandrock
QA Officer

January 07, 2019
Date

Date: 1/7/2019

Client: RNC Environmental, LLC

Project: AR1936

Work Order: 1812162

CASE NARRATIVE

Unless otherwise indicated in the following narrative, no issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

Analytical Comments for method 6010B, Sample id 1812162-003A MS/MSD, QC Analytical Preparation ID 1110093, Note:The % recoveries for Barium and Silver are outside of laboratory control limits but % RPD is within limits. The associated LCS/LCSD is within both % Recovery and %RPD limits. No corrective action required.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date Received: 12/27/18
Date Reported: 01/07/19

MW-8 1812162-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	50	0.025	25	95	mg/L

GRAB 1812162-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	500	0.25	250	2100	mg/L
Bromomethane	SW8260B	1	0.21	0.50	1.8	ug/L
Benzene	SW8260B	1	0.16	0.50	26	ug/L
Toluene	SW8260B	1	0.14	0.50	45	ug/L
Ethyl Benzene	SW8260B	1	0.20	0.50	52	ug/L
m,p-Xylene	SW8260B	1	0.39	1.0	83	ug/L
o-Xylene	SW8260B	1	0.15	0.50	55	ug/L
Isopropyl Benzene	SW8260B	1	0.22	0.50	3.9	ug/L
n-Propylbenzene	SW8260B	1	0.30	0.50	10	ug/L
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	14	ug/L
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	51	ug/L
Naphthalene	SW8260B	1	1.2	2.0	13	ug/L

MW-6 1812162-003

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	50	0.025	25	270	mg/L
MTBE	SW8260B	1	0.077	0.50	0.55	ug/L
o-Xylene	SW8260B	1	0.15	0.50	0.80	ug/L
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	1.9	ug/L
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	1.7	ug/L
Naphthalene	SW8260B	1	1.2	2.0	4.6	ug/L

MW-7 1812162-004

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	50	0.025	25	110	mg/L

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date Received: 12/27/18
Date Reported: 01/07/19

DRUM 1812162-005

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	100	4200	9700	155000	ug/Kg
Arsenic	SW6010B	1	0.15	1.30	4.64	mg/Kg
Barium	SW6010B	1	0.055	5.00	185	mg/Kg
Chromium	SW6010B	1	0.075	5.00	53.5	mg/Kg
Cobalt	SW6010B	1	0.070	5.00	13.3	mg/Kg
Copper	SW6010B	1	0.20	5.00	39.5	mg/Kg
Lead	SW6010B	1	0.10	3.00	14.2	mg/Kg
Nickel	SW6010B	1	0.50	5.00	70.0	mg/Kg
Vanadium	SW6010B	1	0.10	5.00	43.2	mg/Kg
Zinc	SW6010B	1	0.30	5.00	84.5	mg/Kg
TPH as Diesel	SW8015B	1	0.85	2.0	17.8	mg/Kg
Toluene	SW8260B	100	180	970	2600	ug/Kg
Ethyl Benzene	SW8260B	100	160	970	1310	ug/Kg
m,p-Xylene	SW8260B	100	310	970	4630	ug/Kg
o-Xylene	SW8260B	100	170	970	3060	ug/Kg
1,3,5-Trimethylbenzene	SW8260B	100	150	970	1550	ug/Kg
1,2,4-Trimethylbenzene	SW8260B	100	130	970	5120	ug/Kg
Naphthalene	SW8260B	100	160	970	1360	ug/Kg
2-Butanone	SW8260B	100	220	970	1700	ug/Kg

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1812162-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 8:54		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	12/27/18	12:30:00PM
Prep Batch ID:	1110093	**Prep Analyst:**	IRNAZ	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	50	0.025	25	**95**		mg/L	12/28/18	12:17	IRNAZ	436410

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1812162-001B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 8:54		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/2/19 8:51:00AM
Prep Batch ID:	1110130	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/02/19	13:39	BP	436441
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	13:39	BP	436441
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	01/02/19	13:39	BP	436441
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	01/02/19	13:39	BP	436441
Diisopropyl ether (DIPE)	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	13:39	BP	436441
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	01/02/19	13:39	BP	436441
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	13:39	BP	436441
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Benzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	13:39	BP	436441
TAME	SW8260B	1	0.072	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	13:39	BP	436441
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/02/19	13:39	BP	436441
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/02/19	13:39	BP	436441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1812162-001B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 8:54		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/2/19 8:51:00AM
Prep Batch ID:	1110130	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Ethyl Benzene	SW8260B	1	0.20	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	01/02/19	13:39	BP	436441
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/02/19	13:39	BP	436441
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	13:39	BP	436441
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/02/19	13:39	BP	436441
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/02/19	13:39	BP	436441
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	13:39	BP	436441
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	13:39	BP	436441
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	01/02/19	13:39	BP	436441
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/02/19	13:39	BP	436441
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/02/19	13:39	BP	436441
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	13:39	BP	436441
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/02/19	13:39	BP	436441
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/02/19	13:39	BP	436441
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/02/19	13:39	BP	436441
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	01/02/19	13:39	BP	436441
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/02/19	13:39	BP	436441
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**113**		%	01/02/19	13:39	BP	436441
(S) Toluene-d8	SW8260B		75.1 - 127		**100**		%	01/02/19	13:39	BP	436441
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**97.2**		%	01/02/19	13:39	BP	436441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	GRAB	**Lab Sample ID:**	1812162-002A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 10:41		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	12/27/18 12:30:00PM
Prep Batch ID:	1110093	**Prep Analyst:**	IRNAZ

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	500	0.25	250	**2100**		mg/L	12/28/18	12:38	IRNAZ	436410

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	GRAB	**Lab Sample ID:**	1812162-002B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 10:41		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/2/19 8:51:00AM
Prep Batch ID:	1110130	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Bromomethane	SW8260B	1	0.21	0.50	**1.8**		ug/L	01/02/19	14:16	BP	436441
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/02/19	14:16	BP	436441
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:16	BP	436441
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	01/02/19	14:16	BP	436441
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	01/02/19	14:16	BP	436441
Diisopropyl ether (DIPE)	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	14:16	BP	436441
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	01/02/19	14:16	BP	436441
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:16	BP	436441
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Benzene	SW8260B	1	0.16	0.50	**26**		ug/L	01/02/19	14:16	BP	436441
TAME	SW8260B	1	0.072	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	14:16	BP	436441
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Toluene	SW8260B	1	0.14	0.50	**45**		ug/L	01/02/19	14:16	BP	436441
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/02/19	14:16	BP	436441
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/02/19	14:16	BP	436441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	GRAB	**Lab Sample ID:**	1812162-002B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 10:41		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/2/19 8:51:00AM
Prep Batch ID:	1110130	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Ethyl Benzene	SW8260B	1	0.20	0.50	**52**		ug/L	01/02/19	14:16	BP	436441
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	01/02/19	14:16	BP	436441
m,p-Xylene	SW8260B	1	0.39	1.0	**83**		ug/L	01/02/19	14:16	BP	436441
o-Xylene	SW8260B	1	0.15	0.50	**55**		ug/L	01/02/19	14:16	BP	436441
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	14:16	BP	436441
Isopropyl Benzene	SW8260B	1	0.22	0.50	**3.9**		ug/L	01/02/19	14:16	BP	436441
n-Propylbenzene	SW8260B	1	0.30	0.50	**10**		ug/L	01/02/19	14:16	BP	436441
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/02/19	14:16	BP	436441
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	**14**		ug/L	01/02/19	14:16	BP	436441
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:16	BP	436441
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	14:16	BP	436441
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	**51**		ug/L	01/02/19	14:16	BP	436441
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/02/19	14:16	BP	436441
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/02/19	14:16	BP	436441
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:16	BP	436441
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/02/19	14:16	BP	436441
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/02/19	14:16	BP	436441
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/02/19	14:16	BP	436441
Naphthalene	SW8260B	1	1.2	2.0	**13**		ug/L	01/02/19	14:16	BP	436441
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/02/19	14:16	BP	436441
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**102**		%	01/02/19	14:16	BP	436441
(S) Toluene-d8	SW8260B		75.1 - 127		**104**		%	01/02/19	14:16	BP	436441
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**95.8**		%	01/02/19	14:16	BP	436441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1812162-003A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 10:56		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	12/27/18	12:30:00PM
Prep Batch ID:	1110093	**Prep Analyst:**	IRNAZ	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	50	0.025	25	**270**		mg/L	12/28/18	12:59	IRNAZ	436410

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1812162-003B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 10:56		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/2/19 8:51:00AM
Prep Batch ID:	1110130	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/02/19	14:46	BP	436441
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:46	BP	436441
MTBE	SW8260B	1	0.077	0.50	**0.55**		ug/L	01/02/19	14:46	BP	436441
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	01/02/19	14:46	BP	436441
Diisopropyl ether (DIPE)	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	14:46	BP	436441
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	01/02/19	14:46	BP	436441
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:46	BP	436441
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Benzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:46	BP	436441
TAME	SW8260B	1	0.072	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	14:46	BP	436441
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/02/19	14:46	BP	436441
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/02/19	14:46	BP	436441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1812162-003B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 10:56		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/2/19 8:51:00AM
Prep Batch ID:	1110130	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Ethyl Benzene	SW8260B	1	0.20	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	01/02/19	14:46	BP	436441
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/02/19	14:46	BP	436441
o-Xylene	SW8260B	1	0.15	0.50	**0.80**		ug/L	01/02/19	14:46	BP	436441
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	14:46	BP	436441
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/02/19	14:46	BP	436441
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/02/19	14:46	BP	436441
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	**1.9**		ug/L	01/02/19	14:46	BP	436441
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	14:46	BP	436441
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	14:46	BP	436441
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	**1.7**		ug/L	01/02/19	14:46	BP	436441
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/02/19	14:46	BP	436441
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/02/19	14:46	BP	436441
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	14:46	BP	436441
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/02/19	14:46	BP	436441
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/02/19	14:46	BP	436441
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/02/19	14:46	BP	436441
Naphthalene	SW8260B	1	1.2	2.0	**4.6**		ug/L	01/02/19	14:46	BP	436441
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/02/19	14:46	BP	436441
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**109**		%	01/02/19	14:46	BP	436441
(S) Toluene-d8	SW8260B		75.1 - 127		**102**		%	01/02/19	14:46	BP	436441
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**93.5**		%	01/02/19	14:46	BP	436441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1812162-004A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 11:11		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	12/27/18	12:30:00PM
Prep Batch ID:	1110093	**Prep Analyst:**	IRNAZ	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	50	0.025	25	**110**		mg/L	12/28/18	13:20	IRNAZ	436410

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1812162-004B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 11:11		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/2/19 8:51:00AM
Prep Batch ID:	1110130	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/02/19	15:15	BP	436441
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	15:15	BP	436441
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	01/02/19	15:15	BP	436441
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	01/02/19	15:15	BP	436441
Diisopropyl ether (DIPE)	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	15:15	BP	436441
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	01/02/19	15:15	BP	436441
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	15:15	BP	436441
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Benzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	15:15	BP	436441
TAME	SW8260B	1	0.072	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	15:15	BP	436441
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/02/19	15:15	BP	436441
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/02/19	15:15	BP	436441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1812162-004B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	12/27/18 / 11:11		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/2/19 8:51:00AM
Prep Batch ID:	1110130	**Prep Analyst:**	BPATEL

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Ethyl Benzene	SW8260B	1	0.20	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	01/02/19	15:15	BP	436441
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/02/19	15:15	BP	436441
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	15:15	BP	436441
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/02/19	15:15	BP	436441
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/02/19	15:15	BP	436441
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/02/19	15:15	BP	436441
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/02/19	15:15	BP	436441
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	01/02/19	15:15	BP	436441
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/02/19	15:15	BP	436441
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/02/19	15:15	BP	436441
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/02/19	15:15	BP	436441
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/02/19	15:15	BP	436441
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/02/19	15:15	BP	436441
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/02/19	15:15	BP	436441
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	01/02/19	15:15	BP	436441
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/02/19	15:15	BP	436441
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**109**		%	01/02/19	15:15	BP	436441
(S) Toluene-d8	SW8260B		75.1 - 127		**102**		%	01/02/19	15:15	BP	436441
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**96.9**		%	01/02/19	15:15	BP	436441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	DRUM	**Lab Sample ID:**	1812162-005A
Project Name/Location:	AR1936	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	12/27/18 / 13:00		
SDG:			

Prep Method:	7471BP	**Prep Batch Date/Time:**	1/2/19	3:15:00PM
Prep Batch ID:	1110122	**Prep Analyst:**	VTSUI	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Mercury	SW7471B	1	0.083	0.50	ND		mg/Kg	01/03/19	10:33	BJAY	436448

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	DRUM	**Lab Sample ID:**	1812162-005A
Project Name/Location:	AR1936	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	12/27/18 / 13:00		
SDG:			

Prep Method:	3050B	**Prep Batch Date/Time:**	1/2/19	3:20:00PM
Prep Batch ID:	1110115	**Prep Analyst:**	VTSUI	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Antimony	SW6010B	1	0.050	5.00	ND		mg/Kg	01/03/19	11:48	PPATEL	436458
Arsenic	SW6010B	1	0.15	1.30	**4.64**		mg/Kg	01/03/19	11:48	PPATEL	436458
Barium	SW6010B	1	0.055	5.00	**185**		mg/Kg	01/03/19	11:48	PPATEL	436458
Beryllium	SW6010B	1	0.055	5.00	ND		mg/Kg	01/03/19	11:48	PPATEL	436458
Cadmium	SW6010B	1	0.10	5.00	ND		mg/Kg	01/03/19	11:48	PPATEL	436458
Chromium	SW6010B	1	0.075	5.00	**53.5**		mg/Kg	01/03/19	11:48	PPATEL	436458
Cobalt	SW6010B	1	0.070	5.00	**13.3**		mg/Kg	01/03/19	11:48	PPATEL	436458
Copper	SW6010B	1	0.20	5.00	**39.5**		mg/Kg	01/03/19	11:48	PPATEL	436458
Lead	SW6010B	1	0.10	3.00	**14.2**		mg/Kg	01/03/19	11:48	PPATEL	436458
Molybdenum	SW6010B	1	0.050	5.00	ND		mg/Kg	01/03/19	11:48	PPATEL	436458
Nickel	SW6010B	1	0.50	5.00	**70.0**		mg/Kg	01/03/19	11:48	PPATEL	436458
Selenium	SW6010B	1	0.22	5.00	ND		mg/Kg	01/03/19	11:48	PPATEL	436458
Silver	SW6010B	1	0.15	5.00	ND		mg/Kg	01/03/19	11:48	PPATEL	436458
Thallium	SW6010B	1	0.20	5.00	ND		mg/Kg	01/03/19	11:48	PPATEL	436458
Vanadium	SW6010B	1	0.10	5.00	**43.2**		mg/Kg	01/03/19	11:48	PPATEL	436458
Zinc	SW6010B	1	0.30	5.00	**84.5**		mg/Kg	01/03/19	11:48	PPATEL	436458

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	DRUM	**Lab Sample ID:**	1812162-005A
Project Name/Location:	AR1936	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	12/27/18 / 13:00		
SDG:			

Prep Method:	3546_TPH	**Prep Batch Date/Time:**	12/27/18	5:58:00PM
Prep Batch ID:	1110079	**Prep Analyst:**	EDORR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel	SW8015B	1	0.85	2.0	**17.8**	x	mg/Kg	12/28/18	2:09	AW	436400
			Acceptance Limits								
Pentacosane (S)	SW8015B		59 - 129		**79.7**		%	12/28/18	2:09	AW	436400

NOTE: x- Chromatographic pattern does not resemble typical diesel reference standard; unknown organics within diesel range lighter than diesel quantified as diesel.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	DRUM	**Lab Sample ID:**	1812162-005B
Project Name/Location:	AR1936	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	12/27/18 / 13:00		
SDG:			

Prep Method:	5035	**Prep Batch Date/Time:**	12/27/18 10:15:00AM
Prep Batch ID:	1110081	**Prep Analyst:**	JFORT

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	100	120	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Chloromethane	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Vinyl Chloride	SW8260B	100	200	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Bromomethane	SW8260B	100	260	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Chloroethane	SW8260B	100	290	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Trichlorofluoromethane	SW8260B	100	200	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,1-Dichloroethene	SW8260B	100	200	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Freon 113	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Methylene Chloride	SW8260B	100	690	970	ND		ug/Kg	12/27/18	18:31	JF	436390
trans-1,2-Dichloroethene	SW8260B	100	200	970	ND		ug/Kg	12/27/18	18:31	JF	436390
MTBE	SW8260B	100	230	970	ND		ug/Kg	12/27/18	18:31	JF	436390
tert-Butanol	SW8260B	100	1100	4800	ND		ug/Kg	12/27/18	18:31	JF	436390
Diisopropyl ether (DIPE)	SW8260B	100	220	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,1-Dichloroethane	SW8260B	100	210	970	ND		ug/Kg	12/27/18	18:31	JF	436390
ETBE	SW8260B	100	220	970	ND		ug/Kg	12/27/18	18:31	JF	436390
cis-1,2-Dichloroethene	SW8260B	100	220	970	ND		ug/Kg	12/27/18	18:31	JF	436390
2,2-Dichloropropane	SW8260B	100	190	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Bromochloromethane	SW8260B	100	230	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Chloroform	SW8260B	100	230	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Carbon Tetrachloride	SW8260B	100	200	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,1,1-Trichloroethane	SW8260B	100	200	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,1-Dichloropropene	SW8260B	100	190	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Benzene	SW8260B	100	220	970	ND		ug/Kg	12/27/18	18:31	JF	436390
TAME	SW8260B	100	220	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,2-Dichloroethane	SW8260B	100	220	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Trichloroethylene	SW8260B	100	170	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Dibromomethane	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,2-Dichloropropane	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Bromodichloromethane	SW8260B	100	190	970	ND		ug/Kg	12/27/18	18:31	JF	436390
cis-1,3-Dichloropropene	SW8260B	100	150	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Toluene	SW8260B	100	180	970	**2600**		ug/Kg	12/27/18	18:31	JF	436390
Tetrachloroethylene	SW8260B	100	160	970	ND		ug/Kg	12/27/18	18:31	JF	436390
trans-1,3-Dichloropropene	SW8260B	100	160	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,1,2-Trichloroethane	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Dibromochloromethane	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	DRUM	**Lab Sample ID:**	1812162-005B
Project Name/Location:	AR1936	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	12/27/18 / 13:00		
SDG:			

Prep Method:	5035	**Prep Batch Date/Time:**	12/27/18 10:15:00AM
Prep Batch ID:	1110081	**Prep Analyst:**	JFORT

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,3-Dichloropropane	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,2-Dibromoethane	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Chlorobenzene	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Ethyl Benzene	SW8260B	100	160	970	**1310**		ug/Kg	12/27/18	18:31	JF	436390
1,1,1,2-Tetrachloroethane	SW8260B	100	190	970	ND		ug/Kg	12/27/18	18:31	JF	436390
m,p-Xylene	SW8260B	100	310	970	**4630**		ug/Kg	12/27/18	18:31	JF	436390
o-Xylene	SW8260B	100	170	970	**3060**		ug/Kg	12/27/18	18:31	JF	436390
Styrene	SW8260B	100	160	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Bromoform	SW8260B	100	160	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Isopropyl Benzene	SW8260B	100	160	970	ND		ug/Kg	12/27/18	18:31	JF	436390
n-Propylbenzene	SW8260B	100	150	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Bromobenzene	SW8260B	100	170	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,1,2,2-Tetrachloroethane	SW8260B	100	190	970	ND		ug/Kg	12/27/18	18:31	JF	436390
2-Chlorotoluene	SW8260B	100	170	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,3,5-Trimethylbenzene	SW8260B	100	150	970	**1550**		ug/Kg	12/27/18	18:31	JF	436390
1,2,3-Trichloropropane	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
4-Chlorotoluene	SW8260B	100	160	970	ND		ug/Kg	12/27/18	18:31	JF	436390
tert-Butylbenzene	SW8260B	100	160	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,2,4-Trimethylbenzene	SW8260B	100	130	970	**5120**		ug/Kg	12/27/18	18:31	JF	436390
sec-Butyl Benzene	SW8260B	100	150	970	ND		ug/Kg	12/27/18	18:31	JF	436390
p-Isopropyltoluene	SW8260B	100	140	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,3-Dichlorobenzene	SW8260B	100	160	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,4-Dichlorobenzene	SW8260B	100	170	970	ND		ug/Kg	12/27/18	18:31	JF	436390
n-Butylbenzene	SW8260B	100	140	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,2-Dichlorobenzene	SW8260B	100	170	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,2-Dibromo-3-Chloropropane	SW8260B	100	180	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Hexachlorobutadiene	SW8260B	100	130	970	ND		ug/Kg	12/27/18	18:31	JF	436390
1,2,4-Trichlorobenzene	SW8260B	100	140	970	ND		ug/Kg	12/27/18	18:31	JF	436390
Naphthalene	SW8260B	100	160	970	**1360**		ug/Kg	12/27/18	18:31	JF	436390
1,2,3-Trichlorobenzene	SW8260B	100	160	970	ND		ug/Kg	12/27/18	18:31	JF	436390
2-Butanone	SW8260B	100	220	970	**1700**		ug/Kg	12/27/18	18:31	JF	436390
(S) Dibromofluoromethane	SW8260B		59.8 - 148		**99.6**		%	12/27/18	18:31	JF	436390
(S) Toluene-d8	SW8260B		55.2 - 133		**108**		%	12/27/18	18:31	JF	436390
(S) 4-Bromofluorobenzene	SW8260B		55.8 - 141		**105**		%	12/27/18	18:31	JF	436390

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 12/27/18, 1:40 pm
Date Reported: 01/07/19

Client Sample ID:	DRUM	**Lab Sample ID:**	1812162-005B
Project Name/Location:	AR1936	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	12/27/18 / 13:00		
SDG:			

Prep Method:	5035GRO	**Prep Batch Date/Time:**	12/27/18	10:15:00AM
Prep Batch ID:	1110082	**Prep Analyst:**	JFORT	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	100	4200	9700	**155000**	x	ug/Kg	12/27/18	19:18	JF	436390
(S) 4-Bromofluorobenzene	8260TPH		43.9 - 127		**99.3**		%	12/27/18	19:18	JF	436390

NOTE: x - Although TPH as Gasoline is present, result is elevated due to presence of non-target compounds within range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1812162	**Prep Method:**	3546_TPH	**Prep Date:**	12/27/18	**Prep Batch:**	1110079
Matrix:	Soil	**Analytical Method:**	SW8015B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436400
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel	0.85	2.0	ND	
TPH as Motor Oil	3.2	10	ND	
Pentacosane (S)			101	

Work Order:	1812162	**Prep Method:**	5035	**Prep Date:**	12/27/18	**Prep Batch:**	1110081
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436390
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	1.2	10	ND	
Chloromethane	1.8	10	ND	
Vinyl Chloride	2.0	10	ND	
Bromomethane	2.7	10	ND	
Chloroethane	3.0	10	ND	
Trichlorofluoromethane	2.1	10	ND	
1,1-Dichloroethene	2.0	10	ND	
Freon 113	1.9	10	ND	
Methylene Chloride	7.1	10	ND	
trans-1,2-Dichloroethene	2.1	10	ND	
MTBE	2.3	10	ND	
tert-Butanol	12	50	ND	
Diisopropyl ether (DIPE)	2.3	10	ND	
1,1-Dichloroethane	2.2	10	ND	
ETBE	2.3	10	ND	
cis-1,2-Dichloroethene	2.2	10	ND	
2,2-Dichloropropane	1.9	10	ND	
Bromochloromethane	2.3	10	ND	
Chloroform	2.4	10	ND	
Carbon Tetrachloride	2.1	10	ND	
1,1,1-Trichloroethane	2.1	10	ND	
1,1-Dichloropropene	2.0	10	ND	
Benzene	2.2	10	ND	
TAME	2.3	10	ND	
1,2-Dichloroethane	2.3	10	ND	
Trichloroethylene	1.8	10	ND	
Dibromomethane	1.8	10	ND	
1,2-Dichloropropane	1.9	10	ND	
Bromodichloromethane	2.0	10	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1812162	**Prep Method:**	5035	**Prep Date:**	12/27/18	**Prep Batch:**	1110081
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436390
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
cis-1,3-Dichloropropene	1.6	10	ND	
Toluene	1.8	10	ND	
Tetrachloroethylene	1.7	10	ND	
trans-1,3-Dichloropropene	1.6	10	ND	
1,1,2-Trichloroethane	1.8	10	ND	
Dibromochloromethane	1.9	10	ND	
1,3-Dichloropropane	1.8	10	ND	
1,2-Dibromoethane	1.8	10	ND	
Chlorobenzene	1.8	10	ND	
Ethyl Benzene	1.7	10	ND	
1,1,1,2-Tetrachloroethane	1.9	10	ND	
m,p-Xylene	3.2	10	ND	
o-Xylene	1.7	10	ND	
Styrene	1.6	10	1.8	
Bromoform	1.7	10	ND	
Isopropyl Benzene	1.6	10	ND	
n-Propylbenzene	1.6	10	ND	
Bromobenzene	1.8	10	ND	
1,1,2,2-Tetrachloroethane	1.9	10	ND	
2-Chlorotoluene	1.8	10	ND	
1,3,5-Trimethylbenzene	1.6	10	2.0	
1,2,3-Trichloropropane	1.9	10	2.4	
4-Chlorotoluene	1.6	10	ND	
tert-Butylbenzene	1.6	10	1.8	
1,2,4-Trimethylbenzene	1.4	10	2.4	
sec-Butyl Benzene	1.6	10	2.0	
p-Isopropyltoluene	1.5	10	3.0	
1,3-Dichlorobenzene	1.7	10	ND	
1,4-Dichlorobenzene	1.7	10	ND	
n-Butylbenzene	1.5	10	4.1	
1,2-Dichlorobenzene	1.8	10	1.9	
1,2-Dibromo-3-Chloropropane	1.8	10	3.9	
Hexachlorobutadiene	1.4	10	3.9	
1,2,4-Trichlorobenzene	1.5	10	5.3	
Naphthalene	1.7	10	6.8	
1,2,3-Trichlorobenzene	1.7	10	6.1	
2-Butanone	1.7	10	ND	
(S) Dibromofluoromethane			104	
(S) Toluene-d8			105	
(S) 4-Bromofluorobenzene			113	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1812162	**Prep Method:**	5035	**Prep Date:**	12/27/18	**Prep Batch:**	1110081
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436390
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	120	1000	ND	
Chloromethane	180	1000	ND	
Vinyl Chloride	200	1000	ND	
Bromomethane	270	1000	ND	
Chloroethane	300	1000	ND	
Trichlorofluoromethane	210	1000	ND	
1,1-Dichloroethene	200	1000	ND	
Freon 113	190	1000	ND	
Methylene Chloride	710	1000	ND	
trans-1,2-Dichloroethene	210	1000	ND	
MTBE	230	1000	ND	
tert-Butanol	1200	5000	ND	
Diisopropyl ether (DIPE)	230	1000	ND	
1,1-Dichloroethane	220	1000	ND	
ETBE	230	1000	ND	
cis-1,2-Dichloroethene	220	1000	ND	
2,2-Dichloropropane	190	1000	ND	
Bromochloromethane	230	1000	ND	
Chloroform	240	1000	ND	
Carbon Tetrachloride	210	1000	ND	
1,1,1-Trichloroethane	210	1000	ND	
1,1-Dichloropropene	200	1000	ND	
Benzene	220	1000	ND	
TAME	230	1000	ND	
1,2-Dichloroethane	230	1000	ND	
Trichloroethylene	180	1000	ND	
Dibromomethane	180	1000	ND	
1,2-Dichloropropane	190	1000	ND	
Bromodichloromethane	200	1000	ND	
cis-1,3-Dichloropropene	160	1000	ND	
Toluene	180	1000	ND	
Tetrachloroethylene	170	1000	ND	
trans-1,3-Dichloropropene	160	1000	ND	
1,1,2-Trichloroethane	180	1000	ND	
Dibromochloromethane	190	1000	ND	
1,3-Dichloropropane	180	1000	ND	
1,2-Dibromoethane	180	1000	ND	
Chlorobenzene	180	1000	ND	
Ethyl Benzene	170	1000	ND	
1,1,1,2-Tetrachloroethane	190	1000	ND	
m,p-Xylene	320	1000	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1812162	**Prep Method:**	5035	**Prep Date:**	12/27/18	**Prep Batch:**	1110081
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436390
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
o-Xylene	170	1000	ND	
Styrene	160	1000	ND	
Bromoform	170	1000	ND	
Isopropyl Benzene	160	1000	ND	
n-Propylbenzene	160	1000	ND	
Bromobenzene	180	1000	ND	
1,1,2,2-Tetrachloroethane	190	1000	ND	
2-Chlorotoluene	180	1000	ND	
1,3,5-Trimethylbenzene	160	1000	ND	
1,2,3-Trichloropropane	190	1000	ND	
4-Chlorotoluene	160	1000	ND	
tert-Butylbenzene	160	1000	ND	
1,2,4-Trimethylbenzene	140	1000	ND	
sec-Butyl Benzene	160	1000	ND	
p-Isopropyltoluene	150	1000	200	
1,3-Dichlorobenzene	170	1000	ND	
1,4-Dichlorobenzene	170	1000	ND	
n-Butylbenzene	150	1000	270	
1,2-Dichlorobenzene	180	1000	ND	
1,2-Dibromo-3-Chloropropane	180	1000	ND	
Hexachlorobutadiene	140	1000	270	
1,2,4-Trichlorobenzene	150	1000	330	
Naphthalene	170	1000	420	
1,2,3-Trichlorobenzene	170	1000	370	
2-Butanone	170	1000	ND	
(S) Dibromofluoromethane			98.8	
(S) Toluene-d8			104	
(S) 4-Bromofluorobenzene			106	

Work Order:	1812162	**Prep Method:**	5035GRO	**Prep Date:**	12/27/18	**Prep Batch:**	1110082
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436390
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	43	100	59	
(S) 4-Bromofluorobenzene			100	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1812162	**Prep Method:**	5035GRO	**Prep Date:**	12/27/18	**Prep Batch:**	1110082
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436390
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	4300	10000	ND	
(S) 4-Bromofluorobenzene			101	

Work Order:	1812162	**Prep Method:**	300.0P	**Prep Date:**	12/27/18	**Prep Batch:**	1110093
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436410
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Sulfate	0.00050	0.50	0.0094	

Work Order:	1812162	**Prep Method:**	3050B	**Prep Date:**	01/02/19	**Prep Batch:**	1110115
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	1/3/2019	**Analytical Batch:**	436458
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Antimony	0.050	5.00	ND	
Arsenic	0.15	1.30	ND	
Barium	0.055	5.00	ND	
Beryllium	0.055	5.00	ND	
Cadmium	0.10	5.00	ND	
Chromium	0.075	5.00	0.095	
Cobalt	0.070	5.00	ND	
Copper	0.20	5.00	ND	
Lead	0.10	1.30	0.70	
Molybdenum	0.050	5.00	ND	
Nickel	0.50	5.00	ND	
Selenium	0.22	5.00	ND	
Silver	0.15	5.00	ND	
Thallium	0.20	5.00	ND	
Vanadium	0.10	5.00	ND	
Zinc	0.30	5.00	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1812162	**Prep Method:**	7471BP	**Prep Date:**	01/02/19	**Prep Batch:**	1110122
Matrix:	Soil	**Analytical Method:**	SW7471B	**Analyzed Date:**	1/3/2019	**Analytical Batch:**	436448
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Mercury	0.083	0.50	ND		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1812162	**Prep Method:**	5030VOC	**Prep Date:**	01/02/19	**Prep Batch:**	1110130
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/2/2019	**Analytical Batch:**	436441
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.26	0.50	ND	
Chloromethane	0.17	0.50	ND	
Vinyl Chloride	0.21	0.50	ND	
Bromomethane	0.21	0.50	ND	
Chloroethane	0.11	0.50	ND	
Trichlorofluoromethane	0.19	0.50	ND	
1,1-Dichloroethene	0.14	0.50	ND	
Freon 113	0.34	0.50	ND	
Methylene Chloride	0.13	1.0	ND	
trans-1,2-Dichloroethene	0.16	0.50	ND	
MTBE	0.077	0.50	ND	
tert-Butanol	7.4	10	ND	
Diisopropyl ether (DIPE)	0.12	0.50	ND	
1,1-Dichloroethane	0.12	0.50	ND	
ETBE	0.064	0.50	ND	
cis-1,2-Dichloroethene	0.15	0.50	ND	
2,2-Dichloropropane	0.094	0.50	ND	
Bromochloromethane	0.15	0.50	ND	
Chloroform	0.12	0.50	ND	
Carbon Tetrachloride	0.16	0.50	ND	
1,1,1-Trichloroethane	0.16	0.50	ND	
1,1-Dichloropropene	0.19	0.50	ND	
Benzene	0.16	0.50	ND	
TAME	0.072	0.50	ND	
1,2-Dichloroethane	0.11	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
Dibromomethane	0.11	0.50	ND	
1,2-Dichloropropane	0.089	0.50	ND	
Bromodichloromethane	0.076	0.50	ND	
cis-1,3-Dichloropropene	0.078	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.24	0.50	ND	
trans-1,3-Dichloropropene	0.22	0.50	ND	
1,1,2-Trichloroethane	0.076	0.50	ND	
Dibromochloromethane	0.18	0.50	ND	
1,3-Dichloropropane	0.22	0.50	ND	
1,2-Dibromoethane	0.079	0.50	ND	
Chlorobenzene	0.16	0.50	ND	
Ethyl Benzene	0.20	0.50	ND	
1,1,1,2-Tetrachloroethane	0.087	0.50	ND	
m,p-Xylene	0.39	1.0	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1812162	**Prep Method:**	5030VOC	**Prep Date:**	01/02/19	**Prep Batch:**	1110130
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/2/2019	**Analytical Batch:**	436441
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
o-Xylene	0.15	0.50	ND	
Styrene	0.11	0.50	ND	
Bromoform	0.076	0.50	ND	
Isopropyl Benzene	0.22	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.079	0.50	ND	
2-Chlorotoluene	0.25	0.50	ND	
1,3,5-Trimethylbenzene	0.24	0.50	ND	
1,2,3-Trichloropropane	0.15	0.50	ND	
4-Chlorotoluene	0.22	0.50	ND	
tert-Butylbenzene	0.26	0.50	ND	
1,2,4-Trimethylbenzene	0.23	0.50	ND	
sec-Butyl Benzene	0.30	0.50	ND	
p-Isopropyltoluene	0.27	0.50	ND	
1,3-Dichlorobenzene	0.17	0.50	ND	
1,4-Dichlorobenzene	0.18	0.50	ND	
n-Butylbenzene	0.27	0.50	ND	
1,2-Dichlorobenzene	0.16	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.76	2.0	ND	
Hexachlorobutadiene	0.62	2.0	ND	
1,2,4-Trichlorobenzene	0.93	2.0	ND	
Naphthalene	1.2	2.0	ND	
1,2,3-Trichlorobenzene	1.2	2.0	ND	
(S) Dibromofluoromethane			126	
(S) Toluene-d8			101	
(S) 4-Bromofluorobenzene			102	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1812162	**Prep Method:**	3546_TPH	**Prep Date:**	12/27/18	**Prep Batch:**	1110079
Matrix:	Soil	**Analytical Method:**	SW8015B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436400
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel	0.85	2.0	ND	25.0	86.9	87.6	0.917	52 - 115	30	
Pentacosane (S)				200	105	105		59 - 129		

Work Order:	1812162	**Prep Method:**	5035	**Prep Date:**	12/27/18	**Prep Batch:**	1110081
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436390
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	2.0	10	ND	50.0	131	129	1.85	53.7 - 139	30	
Benzene	2.2	10	ND	50.0	113	111	2.14	66.5 - 135	30	
Trichloroethylene	1.8	10	ND	50.0	108	106	2.25	57.5 - 150	30	
Toluene	1.8	10	ND	50.0	109	105	4.30	56.8 - 134	30	
Chlorobenzene	1.8	10	ND	50.0	105	103	1.73	57.4 - 134	30	
(S) Dibromofluoromethane				50.0	106	105		59.8 - 148		
(S) Toluene-d8				50.0	104	102		55.2 - 133		
(S) 4-Bromofluorobenzene				50.0	108	104		55.8 - 141		

Work Order:	1812162	**Prep Method:**	5035GRO	**Prep Date:**	12/27/18	**Prep Batch:**	1110082
Matrix:	Soil	**Analytical Method:**	SW8260B	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436390
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	43	100	59	1000	91.8	95.3	3.74	48.2 - 132	30	
(S) 4-Bromofluorobenzene				50	100	105		43.9 - 127		

Work Order:	1812162	**Prep Method:**	300.0P	**Prep Date:**	12/27/18	**Prep Batch:**	1110093
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	12/27/2018	**Analytical Batch:**	436410
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Sulfate	0.00050	0.50	0.0094	2.5	97.3	96.2	0.826	80 - 120	20	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1812162	**Prep Method:**	3050B	**Prep Date:**	01/02/19	**Prep Batch:**	1110115
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	1/3/2019	**Analytical Batch:**	436458
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Antimony	0.050	5.00	ND	50	101	97.7	3.22	80 - 120	30	
Arsenic	0.15	1.30	ND	50	100	97.9	2.02	80 - 120	30	
Barium	0.055	5.00	ND	50	106	104	1.90	80 - 120	30	
Beryllium	0.055	5.00	ND	50	106	104	1.90	80 - 120	30	
Cadmium	0.10	5.00	ND	50	104	101	2.93	80 - 120	30	
Chromium	0.075	5.00	0.095	50	108	106	1.87	80 - 120	30	
Cobalt	0.070	5.00	ND	50	106	103	2.87	80 - 120	30	
Copper	0.20	5.00	ND	50	109	106	2.79	80 - 120	30	
Lead	0.10	3.00	0.70	50	102	99.4	2.58	80 - 120	30	
Molybdenum	0.050	5.00	ND	50	109	106	2.79	80 - 120	30	
Nickel	0.50	5.00	ND	50	105	103	1.92	80 - 120	30	
Selenium	0.22	5.00	ND	50	90.5	87.1	3.82	80 - 120	30	
Silver	0.15	5.00	ND	50	103	100	2.96	80 - 120	30	
Thallium	0.20	5.00	ND	50	103	99.5	3.36	80 - 120	30	
Vanadium	0.10	5.00	ND	50	109	106	2.79	80 - 120	30	
Zinc	0.30	5.00	ND	50	101	97.6	3.42	80 - 120	30	

Work Order:	1812162	**Prep Method:**	7471BP	**Prep Date:**	01/02/19	**Prep Batch:**	1110122
Matrix:	Soil	**Analytical Method:**	SW7471B	**Analyzed Date:**	1/3/2019	**Analytical Batch:**	436448
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Mercury	0.047	0.50	ND	1.25	106	107	0.749	80 - 120	30	

Work Order:	1812162	**Prep Method:**	5030VOC	**Prep Date:**	01/02/19	**Prep Batch:**	1110130
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/2/2019	**Analytical Batch:**	436441
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.9	107	99.2	8.13	61.4 - 129	30	
Benzene	0.16	0.50	ND	17.9	99.2	93.1	6.41	66.9 - 140	30	
Trichloroethylene	0.15	0.50	ND	17.9	102	97.9	3.92	69.3 - 144	30	
Toluene	0.14	0.50	ND	17.9	107	99.1	7.61	76.6 - 123	30	
Chlorobenzene	0.16	0.50	ND	17.9	102	92.8	9.20	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	104	97.8		61.2 - 131		
(S) Toluene-d8				17.9	106	98.5		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	97.8	94.1		64.1 - 120		

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MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1812162	**Prep Method:**	300.0P	**Prep Date:**	12/27/18	**Prep Batch:**	1110093
Matrix:	**Water**	**Analytical Method:**	E300.0	**Analyzed Date:**	28-Dec-2018	**Analytical Batch:**	436410
Spiked Sample:	1812162-003A						
Units:	mg/L						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Sulfate	0.025	25	270	130	87.4	90.1	1.05	75 - 125	20	

Work Order:	1812162	**Prep Method:**	3050B	**Prep Date:**	01/02/19	**Prep Batch:**	1110115
Matrix:	**Soil**	**Analytical Method:**	SW6010B	**Analyzed Date:**	01/03/2019	**Analytical Batch:**	436458
Spiked Sample:	1812162-005A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Antimony	0.050	5.00	ND	50	69.0	66.4	3.71	30.7 - 130	30	
Arsenic	0.15	1.30	4.64	50	110	99.7	8.77	71.0 - 121	30	
Barium	0.055	5.00	185	50	127	62.0	14.2	70.2 - 130	30	S
Beryllium	0.055	5.00	ND	50	103	95.1	7.79	73.3 - 115	30	
Cadmium	0.10	5.00	ND	50	96.8	88.6	8.75	80.0 - 110	30	
Chromium	0.075	5.00	53.5	50	114	85.0	14.5	76.0 - 116	30	
Cobalt	0.070	5.00	13.3	50	99.4	85.4	11.8	57.4 - 122	30	
Copper	0.20	5.00	39.5	50	116	92.0	13.1	74.8 - 119	30	
Lead	0.10	3.00	14.2	50	97.6	81.6	13.6	57.9 - 118	30	
Molybdenum	0.050	5.00	ND	50	100	92.8	7.47	62.9 - 123	30	
Nickel	0.50	5.00	70.0	50	105	69.0	15.8	61.5 - 122	30	
Selenium	0.22	5.00	ND	50	86.7	81.3	6.42	62.0 - 111	30	
Silver	0.15	5.00	ND	50	112	103	8.37	81.1 - 109	30	S
Thallium	0.20	5.00	ND	50	88.9	81.8	8.13	39.2 - 125	30	
Vanadium	0.10	5.00	43.2	50	116	92.6	12.1	65.8 - 122	30	
Zinc	0.30	5.00	84.5	50	106	86.0	7.52	59.9 - 122	30	

Work Order:	1812162	**Prep Method:**	7471BP	**Prep Date:**	01/02/19	**Prep Batch:**	1110122
Matrix:	**Soil**	**Analytical Method:**	SW7471B	**Analyzed Date:**	1/3/2019	**Analytical Batch:**	436448
Spiked Sample:	1812162-005A						
Units:	mg/Kg						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Mercury	0.047	0.50	ND	1.25	101	100	0.755	75 - 125	30	

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg/m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the analyte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: RNC Environmental, LLC

Project Name: AR1936

Work Order No.: 1812162

Date and Time Received: 12/27/2018 1:40:00PM

Received By: Helena Ueng

Physically Logged By: Helena Ueng

Checklist Completed By: Helena Ueng

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	Yes	Temperature:	3.0	°C
Water-VOA vials have zero headspace?	No VOA vials submitted			
Water-pH acceptable upon receipt?	N/A			

pH Checked by: N/A

pH Adjusted by: N/A

Comments:

Torrent LABORATORY, INC.

Login Summary Report

Client ID:	TL6321	RNC Environmental, LLC	**QC Level:**	II
Project Name:	AR1936		**TAT Requested:**	5+ day:5
Project # :			**Date Received:**	12/27/2018
Report Due Date:	1/7/2019		**Time Received:**	1:40 pm

Comments:

Work Order # : ***1812162***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1812162-001A	MW-8	12/27/18 8:54	Water	02/10/19			Anion_W_300.0	
Sample Note:	Sulfate							
1812162-001B	MW-8	12/27/18 8:54	Water	02/10/19			VOC_W_8260B	
Sample Note:	8260-VOCs							
1812162-002A	GRAB	12/27/18 10:41	Water	02/10/19			Anion_W_300.0	
1812162-002B	GRAB	12/27/18 10:41	Water	02/10/19			VOC_W_8260B	
1812162-003A	MW-6	12/27/18 10:56	Water	02/10/19			Anion_W_300.0	
1812162-003B	MW-6	12/27/18 10:56	Water	02/10/19			VOC_W_8260B	
1812162-004A	MW-7	12/27/18 11:11	Water	02/10/19			Anion_W_300.0	
1812162-004B	MW-7	12/27/18 11:11	Water	02/10/19			VOC_W_8260B	
1812162-005A	DRUM	12/27/18 13:00	Soil	06/25/19			Hg_S_7471B Met_S_6010B CAM17 TPHDO_S_8015(Mod)	
Sample Note:	TPHd; CAM17							
1812162-005B	DRUM	12/27/18 13:00	Soil	06/25/19			EN_VOC_8260B VOC_S_GRO	
Sample Note:	VOCs & TPHg - Only 2 EnCores rec'd per sample (25g samplers)							

Torrent LABORATORY, INC.

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483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
FAX: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 1812162

Company Name: RNC ENVIRONMENTAL LLC | ☒ Env. ☐ DOD ☐ Food ☐ Special | Project Name:

Address: 151 NURSERY ST | Project # AR1936

City: ASHLAND | State: OR | Zip Code: 97520 | Comments:

Telephone: 888 485 3330 | Cell: | Email: NEIL@RNC-ENVIRO.COM RICH@RYANGES.COM

REPORT TO: NEIL OHANA | SAMPLER: RICH RYAN 530.925.4932 | P.O. # | QUOTE #

TURNAROUND TIME:
☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day
☒ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day
☐ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE:
☐ Storm Water ☐ Air
☐ Waste Water ☐ Wipe
☒ Ground Water ☐ Other
☐ Soil

REPORT FORMAT:
☐ Excel/ EDD
☐ EDF
☐ QC Level III
☐ QC Level IV

ANALYSIS REQUESTED

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	PRES.	SULFATE EPA 300	VOCs 8260	TPH GAS	TPH DIESEL	CAM 17				REMARKS
001A/B		MW-8	12/27/18 0854	GW	5	4 VOA 1 POLY		✓	✓							
002A/B		GRAB	1041					✓	✓							
003A/B		MW-6	1056					✓	✓							
004A/B		MW-7	1111					✓	✓							
005A/B		DRUM	1300	SOIL	4	2 8oz 2 250g			✓	✓	✓	✓				

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1	Rich Ryan	RICH RYAN	12-27-2018	1349		Helena Alley	12/27/18	1340
2	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:

Were Samples Received in Good Condition? ☒ Yes ☐ NO Samples on Ice? ☒ Yes ☐ NO Method of Shipment FDX Sample seals intact? ☐ Yes ☐ NO ☒ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made. Temp. Gun # 2 Temp 3 °C Page ____ of ____

Log In By: _____ Date: _____ Labeled By: _____ Date: _____ Log In Reviewed By: _____ Date: _____

Rev 3.

Remedial Action Status Report #3
ISCO Event #4: January 21-22, 2019
1936 Alum Rock Avenue; San Jose, CA 95116

February 26, 2019

Prepared for
Santa Clara County Department of Environmental Health
Hazardous Materials Compliance Division – Site Mitigation Program
1555 Berger Drive #300
San Jose, CA 95112

On Behalf of
Pacific West Communities, Inc
430 East State Street, Suite 100
Eagle, ID 83616

Prepared by
Ryan Geologic & Environmental Services, Inc.
P.O. Box 525
McCloud, California 96057

and

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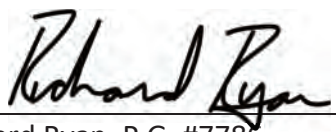
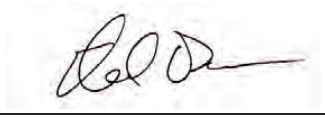
Ashland, Oregon 97520



Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.



Neil O'Hara
RNC Environmental, LLC

Statement of Accuracy

I am the primary author of this document and have either performed all field activities documented herein or been present as a field supervised while the activities were performed. I declare under penalty of perjury that the information, interpretations, and recommendations contained in this document are true and correct to the best of my knowledge and my professional experience.

Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

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Acronyms

AMSL	Above mean sea level
BGL	Below ground level
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CaDWR	California Department of Water Resources
Cond	Conductivity
DTW	Depth to water
ESLs	Environmental Screening Levels
ISCO	In-Situ Chemical Oxidation
MiHPT	Membrane interface probe and hydraulic profiling tool
mg/L	Milligrams per Liter
µg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per cubic meter
MTBE	Methyl-tert-butyl-ether
PID	Photo Ionization Detector
ppmV	Parts per million by volume
ORP	Oxygen/Reduction Potential
OVM	Organic Vapor Meter
SCCDEH	Santa Clara County Dept. of Environmental Health
SCVWD	Santa Clara Valley Water District
SFBay RWQCB	San Francisco Bay Regional Water Quality Control Board
TDS	Total dissolved solids
TPH_{gas}	Total petroleum hydrocarbons in the gasoline range
UST	Underground storage tank
VOCs	Volatile organic compounds
WMS-LU	Waterloo Membrane Sampler – Low Uptake

1.0 Introduction

During an August 10, 2018 meeting with SCCDEH, in-situ chemical oxidation was selected as the best remedial option to address gasoline remaining in the subsurface. Subsequent correspondence from SCCDEH dated September 11, 2018, required submittal of technical reports documenting each injection event within 45 days after completion of the event.

The purpose of this report is to document the fourth of five planned pressure injection events. That event included specific activities as follows:

- Pressure injection of 2136 gallons of PersulfOx solution into the subsurface target area,
- Collection and laboratory analysis of one soil vapor sample,
- Collection and laboratory analysis of four groundwater samples,
- Inspection of a continuous soil core collected from a boring near the center of the target area.

2.0 Pressure Injection Event #4

The fourth pressure injection event occurred over a two-day period (Jan. 21st – Jan. 22nd). Gregg Drilling performed mixing, drilling, and injection services. A delivery of 4,848.8 lbs of PersulfOx (88 bags) was received on Feb. 18, 2019 in preparation for the event.

The goal of the event was to evenly distribute 356 gallons of PersulfOx solution into the subsurface target area at each of six locations (B25 through B30). That goal was significantly met with only minor variations which were implemented to control solution surfacing problems. **Figure 1** is a site map showing injection point locations.

2.1 Pressure Injection Activities

The injection tool consisted of a short section of perforated steel pipe 1.5-inches in diameter by 14-inches long with 30 evenly distributed 0.125-inch diameter holes. The top of the tool was attached to the bottom end of the drilling string (1.5-inch diameter) and pushed to either 16.2 or 18.5 feet BGL before pressure injection began. The shallower starting depth was used when the injection point was in the proximity of the former source area. Ideally, either 50.9 or 59.3 gallons of solution was pressure injected at the initial depth before driving the top of the tool 28-inches deeper and repeating the process until injection had been completed with the top of the tool at the maximum depth of 30.2 feet BGL. The injection pipe generally remained in the boring until the end of the day when it was replaced with a tremie pipe that was used to fill each boring with cement grout. **Figure 2** is a cross-section showing the injection depth intervals in relation to the petroleum mass in the subsurface.

A total of 2136 gallons of PersulfOx solution (2424.4 lbs PersulfOx mixed with 2016 gallons of potable water) was consumed during the event. The mixing trailer operator recorded pump pressure, flow rate, and total volume for each injection depth interval at each location. **Table 1** is a summary listing

of the injection depths intervals, pressures, and volumes at each location during the fourth event. **Appendix A** contains a cumulative listing of injection depth intervals, pressures, and volumes for all events to date.

At the conclusion of the fourth injection event:

- A cumulative total of 10,413.9 lbs (189 bags) of the design total 13,224 lbs of PersulfOx have been placed in the subsurface,
- There was sufficient PersulfOx (44 bags) remaining in the secure, placarded, and ventilated conex storage container at the site to supply the fifth pressure injection event,
- A fifth and final injection event is scheduled to occur on Feb. 26th and 27th,
- A total of 12,839.5 lbs of PersulfOx is projected to be in the subsurface after completing the fifth event (97% of the design total).

2.2 Solution Surfacing Problems

Solution surfacing problems occurred primarily during injection at B29 and was attributed to the existence of tank pit excavation backfill material replacing natural clay layers at depth up to 14 feet BGL. Immediately after the first signs of solution at the surface were noticed, injection was terminated at the current depth interval, and the injection tool was advanced to a deeper interval before injection was resumed at decreased pressures and flow rates. The extra volume of solution was injected at deeper depths.

Surfacing also occurred during injection in the deeper intervals at B30. B30 was the last boring of the event, so injection was terminated at that location and the remaining solution was injected at B27 where the injection tool string remained in place at the deepest interval.

2.3 Digital Pressure and Flow Monitoring

Gregg Drilling provided a digital monitoring device to continuously record and document subsurface pressure and flow relationships during injection. That device was present on Jan. 21st, but it was not functional during the fourth event.

2.4 Waste Management

Two significant waste streams were generated during the fourth pressure injection event. First, waste soil from a soil boring was containerized in a 55-gallon steel drum for subsequent disposal at a licensed facility.

Second, empty PersulfOx bags are classified as a hazardous waste unless properly managed. According to "22CCR 66261.7 Contaminated Containers", empty and then rinsed containers of 5-gallons or less are exempt from regulation and may be disposed in any municipal solid waste landfill provided all rinse water is containerized and re-used in ISCO process make-up water. Further, the empty and rinsed bags

should be exempt from any transportation regulation under the "49CFR 173.4b De minimis Exception" provided they are double bagged in heavy duty garbage bags.

PersulfOx is a dry, crystalline powder with an average density of 13.8 pounds per gallon and is delivered in multi-walled sacks weighing 55.1-pounds (4-gallon containers). Immediately after use, the bags were accumulated in a plastic garbage bag, and at the end of the day were stored in the on-site Conex container for subsequent processing. Seventy-five of the accumulated sacks were processed for final disposal during the fourth event. The sacks were emptied in accordance with 22CCR66261.7(b), rinsed in accordance with 22CCR66261.7(c), and packaged for transport as follows:

- Corners at the open end of the bag were sliced with a razor knife to completely remove any folds or crenulations,
- The bag was fully expanded and up-ended into a 55-gallon open-top steel drum to empty any remaining product,
- The bag was triple rinsed using a garden hose equipped with a wide-spay shower nozzle;
    - The bag received a first rinse while laying horizontally on a table with the open end of the bag extending over the open drum,
    - The bag received a second rinse while inverted and suspended on a holder directly over the drum,
    - The bag received a third rinse after being rotated 180 degrees on the holder,
    - Any staining or evidence of product on the exterior of the bag was rinsed while suspended on the holder,
    - The rinsed bag remained inverted over the drum and was allowed to drain while the next bag was initially processed,
- Emptied and rinsed bags were bundled in groups of twenty-five and double bagged in heavy duty plastic garbage bags. The bundled bags will be disposed as ordinary waste in a municipal landfill.

3.0 Soil, Soil Vapor, and Groundwater Sampling

One soil vapor sample, four groundwater samples, and one 35-foot soil core were collected as part of the fourth pressure injection event. The purpose of these samples is to help evaluate the effectiveness of PersulfOx in reducing the concentration of petroleum in the subsurface. Copies of all laboratory analytical report sheets are included as **Appendix B**.

3.1 Methods and Procedures

A soil boring (GRAB02, see **Figure 1**) was installed to 35 feet deep near the center of the target area prior to beginning injection activities on Jan. 21st. The primary purpose of the boring was to collect a grab groundwater sample at that location, but a secondary purpose was to collect and inspect a soil core sample. The soil boring was installed using a dual-wall macro-core drill string and produced 2-inch diameter soil cores encased in 5-foot long clear plastic tubes after every 5 feet the boring was

advanced. The clear plastic tubes containing soil cores were labeled and capped at both ends as they were retrieved. After sitting in the sun for about four hours, the end caps were removed and an OVM was attached to one end of the tube. The concentration of VOCs in each 5-foot tube, as measured by the OVM, were recorded in a field log. The plastic tubes were then cut open lengthwise and the soil cores inspected by a geologist.

After reaching a final boring depth of 35 feet BGL, 35 feet of temporary well pipe (10 feet of 10-slot well screen attached to 25 feet of 0.75-inch diameter flush thread PVC well pipe) was inserted into the boring. The outer wall of the dual-wall tool string was then withdrawn to 20 feet BGL exposing the primary impact zone from 20 to 30-foot BGL and allowing groundwater to flow into the boring. Sufficient groundwater for sampling accumulated in the well pipe after about 1 hour. A peristaltic pump attached to 35-feet of new 0.25-inch diameter polyethylene tubing was then used to retrieve a groundwater sample from the temporary well. The sample was collected into laboratory supplied containers, the containers were labeled and temporarily stored on ice until being transported to the laboratory later the same day. In addition to the laboratory sample, a hand-held multimeter was used to measure indicator parameters from a portion of recovered groundwater. After sampling was complete, the well pipe was used as a tremie pipe and the boring was filled with grout.

Three groundwater samples were collected from the existing monitoring wells (MW6, MW7, and MW8) on January 21st using Hydra-Sleeve no purge sampling method. The samplers had been deployed on January 8th. Prior to retrieving the Hydra-Sleeve samplers, the wells were gauged for depth to water. After retrieval, groundwater samples were collected from the Hydra-Sleeve samplers directly into laboratory supplied containers, the containers were labeled and temporarily stored on ice until being transported to the laboratory later the same day. A hand-held multimeter was used to measure indicator parameters from a portion of recovered groundwater remaining in the Hydra-Sleeve samplers at each well.

An attempt to deploy a WMS-LU passive soil vapor sampler in SG-20A was made on January 8th, however approximately 1-foot of standing water was observed in SG-20A at that time. That water covered the 6-inch perforated zone in the base of the well making it unsuitable for soil vapor sampling. Approximately the same amount of water was again observed in the well on January 21st, so a replacement well (SG-20B, see **Figure 1**) was installed on January 22nd and the WMS-LU was deployed at that time. The WMS-LU was retrieved from SG-20B on February 6th and delivered to Eurofins Air Toxics laboratory under proper chain of custody for analysis.

3.2 Results of Well Gauging

Monitoring wells were gauged for depth to water prior to collecting groundwater samples on January 21st. A listing of all depth to water gauging data accumulated since May 2017 for the three existing monitoring wells is shown in **Table 3**. A listing of groundwater elevations calculated from the depth to water gauging data is shown in **Table 4.** **Figure 4** is a groundwater elevation potentiometric map for January 21st. The direction of groundwater flow on January 21st is indicated to be toward the north-

northeast under a hydraulic gradient of 0.017 ft/ft. That direction is consistent with that observed during previous sampling events and with regional surface water drainage patterns.

3.3 Results of Groundwater Sampling

Four groundwater samples were collected on January 21st and analyzed for 65 VOCs by SW-846 8260 and for sulfate by EPA-NERL 300.0. **Table 5** is a summary of those results. Note that a total of the 11 VOCs were detected in the four samples, and only 4 VOCs in one sample (GRAB02) exceed Tier 1 ESLs. The GRAB02 was collected from near the center of the impact area and the TPH_{GAS}, benzene, ethylbenzene, and 1,2-dichloroethane are the constituents that exceed Tier 1 ESL concentrations.

Table 6 shows the January 21st groundwater analytical results in comparison to previous sampling results. Results from former MW-3 have been included in **Table 6** for comparison to the GRAB samples (GRAB01 and GRAB02). Note that current concentrations of TPH_{GAS} and BTEX are approximately 3% of what had previously been documented in MW-3. The significantly lower concentrations of VOCs than recorded in MW-3 suggests that PersulfOx injection may be producing favorable results.

The summary (**Table 6**) also shows that petroleum constituents have occasionally been detected in MW-6 more frequently after PersulfOx injection activities began (Oct. 29, 2018). MTBE has been detected in MW-6 during the past three sampling events, and there is an apparent increased concentration of sulfate in MW-6. These trends suggest that injection activities have pushed the dissolved phase plume toward MW-6.

Table 7 shows current and historic results for groundwater indicator parameters measured in the field during groundwater sampling. Note that anomalous values for conductivity, total dissolved solids, and pH occur in the MW7 and GRAB02 samples. Those anomalies may indicate effects of PersulfOx on groundwater quality. The anomalies might also be the result of a malfunctioning multimeter, however the multimeter was calibrated before use on January 21st and the malfunction would have had to occur intermittently because the sampling order was MW8, MW7, MW6, GRAB02.

3.4 Results of Soil Vapor Sampling

A single soil vapor sample was collected from well SG-20B on February 6th and was analyzed for six VOCs using modified method TO-17. That sample represents an average soil vapor concentration over a 14.72-day period between January 22nd and February 6th, and it is the third soil vapor sample collected by passive sampling techniques at the site. A summary of laboratory analytical results for the passive soil vapor samples is shown as **Table 8**.

Note in **Table 8** that (1) the concentrations of benzene and ethylbenzene exceed the screening level of "1000 times the Tier 1 ESL for Indoor Air", and (2) the data do not show a significant decreasing concentration trend, but rather the concentration of benzene is higher compared to previous samples.

3.5 Results of Soil Boring

A soil boring to 35 feet deep (GRAB02) near the center of the impact area was installed primarily to collect a grab groundwater sample, but soil core samples were also recovered and inspected by a geologist for informational purposes. **Figure 2** includes a graphical boring log showing lithology and OVM readings from that boring. A composite photograph of the soil core is shown is **Figure 3.**

Visual inspection of the GRAB02 core indicated there were no visible signs of PersulfOx solution injection in the core (e.g., thin discolored veins or fractures). Also, the sandy zone at 5 to 6 feet BGL and the core below 20 feet BGL were wet while the top 5 feet was moist. The most highly impacted zone (stained black) occurred at 25 feet BGL although lesser impact (dark gray staining) was noticeable between 23 to 27 feet BGL. OVM readings are consistent with soil staining observation with values between 5 and 200 ppmV from cores 0 to 20 feet BGL, the highest value of 488 ppmV from the core at 20 to 25 feet BGL, and values less than 100 ppmV below 25 feet BGL. The primary water producing zones occurred between 24 and 31 feet BGL. All of these observations are essentially identical to the GRAB01 core sample collected during the 3rd injection event (Dec. 27, 2018).

4.0 Disscussion

The primary route of exposure at the site has been identified as VOCs in groundwater impacting indoor air quality. A Tier 3 evaluation of the vapor intrusion pathway is therefore warranted especially due to the very unique condition of gasoline being trapped below the water table in fine grained sediments.

4.1 Literature Review – Vapor Intrusion to Indoor Air

Current regulatory guidance relies on the use of 'attenuation factors' for Tier 1 Vapor Intrusion screening levels. Attenuation factors are a simple ratio used to predicted indoor air quality from subsurface groundwater or soil vapor concentrations. As an example, an AF=0.1 would predict indoor air quality to be one tenth of a documented soil vapor concentration. Additionally, attenuation factors can be broken down into componant parts. AF=0.1 may be appropriate for describing volatilization of VOCs from groundwater into soil gas, AF=0.1 may be appropriate for describing soil vapor migrating through the soil to the surface, and AF=0.1 may be appropriate for describing soil vapor mixing with ventilated indoor air. The resulting attenuation factor for the complete pathway would be AF = 0.1 x 0.1 x 0.1 = 0.001.

Current California guidance[1, 2] indicates attenuation factors of 0.001 and/or 0.002 are appropriate as Tier 1 predictors of indoor air quality from soil gas samples collected where future buildings are anticipated. However, new guidance from SFBay RWQCB is likely to update those attenuation factors.

[1] SFBay RWQCB, February 2016. "User's Guide: Derivation and Application of Environmental Screening Levels", 237p.
[2] CalEPA/DTSC, October 2011. "Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air – Final", 117p.

Those revisions were anticipated for release in February 2019 but were unavailable at the time of this report.

Current USEPA guidance[3] indicates three attenuation factors which could be used to predict indoor air quality at the subject property as follows:

- AF = 0.03 for generic soil vapor and sub-slab vapor samples,
- AF = 0.001 generic groundwater samples,
- AF = 0.0005 specific for groundwater samples at sites underlain by clay rich sediments.

These attenuation factors were derived as a statistical upper limit of measured pairs of indoor air and subsurface VOC concentrations. This was a very thorough study that documented large variation in observed indoor air quality for a given subsurface concentration (large variation in AF for individual sample pairs).

All three of the referenced guidance documents indicate a complexity of factors control vapor intrusion and therefore stress the need for developing multiple lines of evidence to avoid an overly conservative or inaccurate prediction of vapor intrusion. Multiple lines of evidence would include comparing predictions from both groundwater and soil vapor concentrations, and considering adjustments for biodegradation, climate zone, chemical species, and hydrogeologic conditions.

USEPA recommends use of the computer model *PVIScreen* [4] for petroleum constituents at UST sites to derive site-specific Tier 3 attenuation factors for the groundwater to indoor air exposure pathway. Features of *PVIScreen* are (1) it associates a specific probability with a specific screening level concentration, (2) it treats model input parameters as a statistically variable range of values, and (3) it accounts for biodegradation of petroleum products within the vadose zone.

4.2 Soil Vapor Sampling Issues

OVM scanning results for both the GRAB01 and GRAB02 soil borings show elevated values at the 0 to 5-foot depth compared to the 5 to 10-foot depth. That is opposite of the anticipated pattern for a deep source of VOCs, and it suggests that a shallow source of VOCs may therefore exist. Shallow impacted soil adjacent to the UST pit excavation but beneath the foundation may have been left in place during excavation. The sandy zone widely distributed across the site at about 3 and 6 feet BGL would likely contain soil vapors from the shallow impacted soil. Consequently, soil vapor samples collected from above 6 feet BGL may not be representative of the primary impact zone at 24 to 31 feet BGL.

Soil vapor samples from 7 to 10 feet may be more representative of VOCs emanating from the primary impact zone at 24 to 31 feet BGL, but those sample are unlikely to quickly reach equilibrium with

[3] USEPA OSWER, March 16, 2012. "EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings", EPA 530-R-10-002, 188p.
[4] USEPA/OUST, June 2015. "Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites", 129p, EPA 510-R-15-001.

changing conditions at depth. Lithologically, the 7 to 10-foot BGL interval would be the top of the regional confining layer and saturated conditions would exist below that layer. At locations where a VOC source occurs below a dense clay layer:

> "...one can estimate times to reach near-steady conditions of a few hours to a few days for shallow sites (< 1 m depth to the vapor source); a few months to a few years for intermediate-depth sites (up to 3 m depth to the vapor source); and as much as a year to decades for deeper vapor sources (> 10 m depth)."[5]

A final soil vapor monitoring event has been scheduled for mid-2019, or as late as possible without interfering with construction. A soil vapor sample collected during that event has the best chance of being in equilibrium with documented reduction of benzene concentration in groundwater at 24 to 31 feet BGL.

4.3 Plans for the Next Event

The scope of the fifth and final pressure injection event is being modified to target the most highly impacted areas and depth intervals remaining at the site. The last three injection events have been limited to 6 injection borings distributed evenly throughout the target area with 356 gallons of solution injected at each boring for a total of 2136 gallons of solution during each event.

The goal of the final event will be to inject 194 gallons of solution at each of 11 borings around the former UST excavation distributed for a total of 2136 gallons of solution. The greater number of borings will require considerably more time, so the soil boring to collect a grab groundwater sample will be omitted and the injection tool will be modified to allow for fewer injection intervals in each boring.

5.0 Summary and Conclusions

To date, a total of 10,413.9 lbs (189 bags) of PersulfOx have been placed in the subsurface. That amounts to 79% of the design total 13,224 lbs. One additional injection event is scheduled to occur February 26-27, 2019. Groundwater samples from MW6, MW7, and MW8 and one soil gas sample from SG-20B will be collected at that time. A status report will be compiled to document Feb. 26-27 injection event, and a final remediation report is to be compiled after a mid-2019 soil vapor and groundwater monitoring event.

Inspection of the GRAB01 and GRAB02 soil cores showed essentially identical information. The primary zone of petroleum impact in the target area is centered at 24-25 feet BGL with lessor but significant signs of impact extending between 23 to 27 feet BGL. Soil gas samples collected from above 6 feet BGL may not be representative of remediation occurring at 23 to 27 feet BGL.

[5] American Petroleum Institute, November 2005. "A Practical Strategy for Assessing the Subsurface Vapor-to-Indoor Air Migration Pathway at Petroleum Hydrocarbon Sites", 106p., Pub#4741.

Two rounds of grab groundwater samples from near the center of the impact area indicate a significant decrease of petroleum constituents in groundwater occurred as a result of PersulfOx placement in the subsurface. Current concentrations of TPH_{GAS}, benzene, and BTEX are all approximately 3% of what had previously been documented in MW-3. Even at 3% of previous values, some current groundwater concentrations remain above Tier 1 ESLs.

Benzene and ethylbenzene in soil vapor remain elevated above the screening level of 1000 times the Tier 1 ESL for Indoor Air (AF=0.001). For remediation to be 100% successful, either the measured soil vapor concentrations must decrease to below the Tier 1 screening levels, OR a significant decreasing concentration trend must be observed over time in subsequent samples. A potential third method for achieving 100% success would be to perform a Tier 3 re-evaluation of the Tier 1 screening levels under the assumption that current benzene and ethylbenzene in soil vapor might be below the derived Tier 3 screening levels.

A literature review of guidance documents for evaluating Tier 3 vapor intrusion impact to indoor air was conducted. That review indicates the following:

(1) Soil vapor sampling data are prone to significant variation, therefore numerous soil gas samples should be collected for accurately predicting indoor air concentrations,
(2) It may take months or years of time for vapors originating from VOCs in groundwater to equilibrate with VOCs in soil gas above a plume in a clay rich aquifer,
(3) The USEPA computer model *'PVISrceen'* may be best suited model for a Tier 3 re-evaluation of soil vapor screening levels at the site.

A modification of project scope is appropriate at this time. The modified scope will include (1) Tier 3 re-evaluation of screening levels, and (2) implementing a monthly soil vapor sampling program. The soil vapor sampling program will be used to monitor remedial progress and accumulate enough sampling data to conduct the best possible Tier 3 re-evaluation of screening levels.

Little or no valuable additional information can be obtained from the remaining groundwater monitoring wells MW6, MW7, and MW8. The direction of groundwater flow is consistent, and the hydraulic gradient is well documented. Groundwater quality in MW-6 has been marginally affected by injection activities but is of little concern overall. Therefore, pending SCCDEH concurrence, the three monitoring wells should be properly abandoned under permit with SCVWD.

TABLES

TABLE 1: Summary of Pressure Injection Depths, Volumes, and Locations

BORING	DATE	NaS_2O_8 USED (lbs/gal)	COMMENTS
B25	01/21	401/356	6 intervals between 18.5 and 31.4 ft BGL @ 59.3 gallons each interval.
B26	01/21	401/356	6 intervals between 18.5 and 31.4 ft BGL @ 59.3 gallons each interval.
B27	01/22	482/408	6 intervals between 18.5 and 31.4 ft BGL @ 59.3 gallons in top 5 intervals and 111.3 gal in bottom interval from excess of B30 batch.
B28	01/22	401/356	6 intervals between 18.5 and 31.3 ft BGL @ 59.3 gallons each interval.
B29	01/22	401/356	Target 7 intervals but inject at 5 intervals between 16.2 and 31.3 ft BGL. Surfacing problems occur at multiple depths, skip 2 intervals to manage surfacing and inject extra solution at bottom depth.
B30	01/22	355/304	6 intervals between 18.5 and 31.3 ft BGL @ 50.9 gal in top 3 intervals, 93 gal in 5th interval and 7 gal in bottom interval. Surfacing occurs at bottom interval, so remainder of solution injected at B27.

NOTES:

(1) A total of 2424.4 lbs (44 bags) of PersulfOx was consumed during the event.

TABLE 2: Summary of Monitoring Well Construction

Well ID	Status	TOC Elev (ft AMSL)	Casing Diameter (in)	Screen Length (ft)	Top Scrn (ft)	Bot. Scrn (ft)	Boring TD (ft)
MW-1	Removed	95.46	2	15.0	15.0	30.0	30.0
MW-2	Removed	95.19	2	10.0	20.0	30.0	30.0
MW-3	Removed	95.45	2	10.0	19.5	29.5	29.5
MW-4	Removed	95.45	2	10.0	18.0	28.0	28.0
MW-5	Removed	95.38	2	15.0	12.0	17.0	17.0
MW-6	Active	95.73	2	10.0	20.0	30.0	30.0
MW-7	Active	94.97	2	10.0	18.0	28.0	28.0
MW-8	Active	95.02	2	10.0	18.0	28.0	28.0
SG-20A	Inactive	--	0.75	0.5	4.5	5.0	5.0
SG-20B	Active	--	0.75	0.5	4.5	5.0	5.0

NOTES:

(1) The bottom 8 to 12 inches of soil vapor monitoring well SG-20A was found to flooded with water. A replacement well (SG-20B) was installed on Jan. 22nd.

TABLE 3: Historic Depth to Water Data for MW6, MW7, and MW8

DATE	MW-6	MW-7	MW-8
05/04/17	8.67	6.99	7.38
05/10/17	8.72	7.30	7.65
05/17/17	8.91	7.46	7.77
06/08/17	9.23	7.81	8.09
06/13/17	9.14	7.82	8.03
06/21/17	9.15	7.83	8.00
07/07/17	9.50	8.19	8.35
07/19/17	9.83	8.42	8.61
08/31/17	10.24	8.89	9.00
09/07/17	10.36	9.08	9.19
12/21/17	9.93	8.94	8.99
01/10/18	9.04	4.31	5.32
04/11/18	8.07	5.11	6.48
11/13/18	10.73	9.01	9.35
11/19/18	10.58	8.87	9.22
12/03/18	9.06	6.42	7.89
12/27/18	9.10	7.08	7.84
01/08/19	8.99	6.21	7.03
01/21/19	8.63	5.00	6.31

NOTES:

(1) All values are in units of feet below top of well casing.

(2) Only values collected since May 2017 are shown.

TABLE 4: Historic Groundwater Potentiometric Elevations for MW6, MW7, and MW8

Ref. Elev.	95.73	94.97	95.02
Date	**MW-6**	**MW-7**	**MW-8**
05/04/17	87.06	87.98	87.64
05/10/17	87.01	87.67	87.37
05/17/17	86.82	87.51	87.25
06/08/17	86.50	87.16	86.93
06/13/17	86.59	87.15	86.99
06/21/17	86.58	87.14	87.02
07/07/17	86.23	86.78	86.67
07/19/17	85.90	86.55	86.41
08/31/17	85.49	86.08	86.02
09/07/17	85.37	85.89	85.83
12/21/17	85.80	86.03	86.03
01/10/18	86.69	90.66	89.70
04/11/18	87.66	89.86	88.54
11/13/18	85.00	85.96	85.67
11/19/18	85.15	86.10	85.80
12/03/18	86.67	88.55	87.13
12/27/18	86.63	87.89	87.18
01/08/19	86.74	88.76	87.99
01/21/19	87.10	89.97	88.71

NOTES:

(1) All values are in units of feet above mean sea level.

(2) Only values collected since May 2017 are shown.

TABLE 5: Summary of Groundwater Analytical Results for January 21, 2019

Sample ID	TPH_{GAS}	Benzene	Toluene	Ethylbenzene	o-Xylene	m,p-Xylene	MTBE	Sulfate	1,2-Dichloroethane	Bromomethane	Isopropyl Benzene	n-Propylbenzene
GRAB02	**666 x**	**130**	**28**	**28**	**4**	**2.6**	**2.2**	**8,700,000**	**34**	**5**	**1.7**	**3.6**
MW-6	**54.3 x**	<0.5	<0.5	<0.5	<0.5	<1	**0.65**	**350,000**	<0.5	<0.5	<0.5	<0.5
MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	**65,000**	<0.5	<0.5	<0.5	<0.5
MW-8	**54.8 x**	<0.5	<0.5	<0.5	<0.5	<1	<0.5	**90,000**	<0.5	<0.5	<0.5	<0.5
Tier 1 ESLs:	100	0.421	40	3.51	20	20	5	--	0.5	7.55	--	--

NOTES:

(1) All values are in units of µg/L. Only constituents detected in at least one sample are shown.
(2) "<" indicates the constituent was not detected, the associated value is the reporting limit.
(3) "x" indicates a non-typical chromatograph for gasoline.
(4) Samples were analyzed for 65 VOCs by SW-846 8260 and for sulfate by EPA-NERL 300.0.
(5) Tier 1 ESLs are from SF Bay RWQCB, Jan. 2019. The values listed for o-xylene and m,p-xylene are for total xylenes.

TABLE 6: Historic Groundwater Analytical Results for MW6, MW7, MW8, and GRAB

Date	Sample ID	TPH_{GAS}	Benzene	Toluene	Ethyl Benzene	o-Xylene	m,p-Xylene	MTBE	Naphthalene	Sulfate	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene
09/07/17	MW-6	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
01/10/18	MW-6	<50	**2.6**	**9.6**	**0.96**	**1.4**	**1.3**	<0.5	<2	--	<0.5	<0.5
04/11/18	MW-6	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
11/19/18	MW-6	--	<0.5	<0.5	<0.5	<0.5	<1	**0.66**	**2.6**	**270,000**	<0.5	<0.5
12/27/18	MW-6	--	<0.5	<0.5	<0.5	**0.8**	<1	**0.55**	**4.6**	**270,000**	**1.7**	**1.9**
01/21/19	MW-6	**54.3 x**	<0.5	<0.5	<0.5	<0.5	<1	**0.65**	<2	**350,000**	<0.5	<0.24
09/07/17	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
01/10/18	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
04/11/18	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
11/19/18	MW-7	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**280,000**	**1.3**	**1.5**
12/27/18	MW-7	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**110,000**	<0.5	<0.5
01/21/19	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**65,000**	<0.5	<0.24
09/07/17	MW-8	<50	<0.5	<0.5	**0.61**	**0.7**	**2.3**	<0.5	<2	--	<0.5	<0.5
01/10/18	MW-8	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
04/11/18	MW-8	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5	<0.5
11/19/18	MW-8	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**98,000**	<0.5	<0.5
12/27/18	MW-8	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**95,000**	<0.5	<0.5
01/21/19	MW-8	**54.8 x**	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**90,000**	<0.5	<0.24
09/07/17	(MW-3)*	**23300**	**2900**	**190**	**2800**	**1100**	**1300**	<21	**360**	--	**1400**	**100**
01/10/18	(MW-3)*	**23100**	**1200**	**100**	**2300**	**550**	**1100**	<21	**370**	--	**1400**	**120**
04/11/18	(MW-3)*	**20600**	**3500**	**360**	**2800**	**1300**	**1600**	<21	**420**	--	**1300**	**140**
11/19/18	--	--	--	--	--	--	--	--	--	--	--	--
12/27/18	GRAB01	--	**26**	**45**	**52**	**55**	**83**	<0.5	**13**	**2,100,000**	**51**	**14**
01/21/19	GRAB02	**666 x**	**130**	**28**	**28**	**4**	**2.6**	**2.2**	<4.2	**8,700,000**	<1.1	<1.1
Tier 1 ESLs:		100	0.421	40	3.51	20	20	5	0.17	--	--	--

…continued on next page

TABLE 6: Historic Groundwater Analytical Results for MW6, MW7, MW8, and GRAB (continued)

Date	Sample ID	Bromomethane	Isopropyl Benzene	n-Propylbenzene	n-Butylbenzene	sec-Butyl Benzene	p-Isopropyltoluene	1,2-Dichloroethane	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	Bromoform
09/07/17	MW-6	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	<0.5	<2	<2	<0.5
01/10/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
04/11/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
11/19/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.65**	<2	<2	<0.5
12/27/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/21/19	MW-6	<0.5	<0.5	<0.3	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
09/07/17	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/10/18	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
04/11/18	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	**1.5**	<0.5	<2	<2	<0.5
11/19/18	MW-7	<0.5	<0.5	<0.5	**2.2**	**1.1**	<0.5	<0.5	**6.2**	**3.4**	<0.5
12/27/18	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/21/19	MW-7	<0.5	<0.5	<0.3	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
09/07/17	MW-8	<0.5	<0.5	<0.5	**0.57**	<0.5	<0.5	<0.5	<2	<2	<0.5
01/10/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	**0.89**
04/11/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
11/19/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
12/27/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/21/19	MW-8	<0.5	<0.5	<0.3	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
09/07/17	(MW-3*)	<21	**110**	**280**	**50**	<21	<21	<21	<84	<84	<21
01/10/18	(MW-3*)	<21	**130**	**360**	**40**	**25**	<21	<21	<84	<84	<21
04/11/18	(MW-3*)	<21	**150**	**350**	**30**	<21	<21	<21	<84	<84	<21
11/19/18	--	--	--	--	--	--	--	--	--	--	--
12/27/18	GRAB01	**1.8**	**3.9**	**10**	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/21/19	GRAB02	**5**	**1.7**	**3.6**	<1.1	<1.1	<1.1	**34**	<4.2	<4.2	<1.1
	Tier 1 ESLs:	7.55	--	--	--	--	--	0.5	--	5	80

NOTES:

(1) All values are in units of µg/L. Only constituents detected in at least one sample are shown.

(2) "<" indicates the constituent was not detected, the associated value is the reporting limit.

(3) "(MW-3*)" - results for MW-3 are included for comparative purposes only. The "GRAB" and "GRAB02" samples are from a location and depth comparable to former MW-3. Monitoring well MW-3 was destroyed in Oct 2018 under permit with SCVWD.

(4) Tier 1 ESLs are from SFBay RWQCB, Jan. 2019. The values listed for o-xylene and m,p-xylene are for total xylenes.

Table 7: Historic Groundwater Indicator Parameters for MW6, MW7, MW8, and GRAB

Date	Well	DTW (ft)	Cond. (µS)	TDS (ppm)	ORP	pH	Temp. (°F)
09/07/17	MW-6	10.36	2234	1650	-77	7.44	66.92
01/10/18	MW-6	9.04	2273	1722	-22	7.28	65.84
04/11/18	MW-6	8.07	2256	1704	-3	7.35	67.46
11/19/18	MW-6	10.58	2275	1718	-19	7.19	65.66
12/27/18	MW-6	9.10	2312	1749	132	7.61	66.20
01/21/19	MW-6	8.63	2308	1757	-12	7.62	64.58
09/07/17	MW-7	9.08	2157	1590	-22	7.57	66.74
01/10/18	MW-7	4.31	2351	1787	163	7.41	65.12
04/11/18	MW-7	5.11	2147	1615	185	7.57	66.56
11/19/18	MW-7	8.87	2021	1522	-169	7.75	69.08
12/27/18	MW-7	7.08	1247	901.5	71	7.96	66.20
01/21/19	MW-7	5.00	**518.9**	**367.8**	171	**8.24**	64.22
09/07/17	MW-8	9.19	1628	1177	158	8.25	66.56
01/10/18	MW-8	5.32	1378	1014	177	8.02	63.86
04/11/18	MW-8	6.48	1341	976.3	143	8.16	66.38
11/19/18	MW-8	9.22	1521	1136	162	8.29	64.58
12/27/18	MW-8	7.84	1512	1110	120	8.28	64.04
01/21/19	MW-8	6.31	1307	954.4	186	8.30	64.22
09/07/17	(MW-3*)	--	3120	2356	-136	7.32	67.64
01/10/18	(MW-3*)	--	2934	2254	-144	7.23	66.20
04/11/18	(MW-3*)	--	--	--	--	--	--
11/19/18	--	--	--	--	--	--	--
12/27/18	GRAB01	--	4765	3825	173	7.26	65.12
01/21/19	GRAB02	--	**10.32**	**899.6**	226	**6.63**	66.92

NOTES:

(1) Indicator parameters were measured with a handheld multimeter in the field during sample collection.

(2) Apparently anomalous values have been highlighted in bold.

TABLE 8: Passive Soil Vapor Sample Laboratory Analytical Results for SG-20

Date	Sample ID	Benzene	Toluene	Ethyl Benzene	o-Xylene	m,p-Xylene	Naph-thalene
11/20/18	SG-20A	**590**	2400 B	**4600**	4300	8400	**170**
12/18/18	SG-20A	65	250	540	600	1000	17
02/06/19	SG-20B	**1600**	2200	**3000**	10000	6600	12
Tier 1 ESL SubSlab Air:		3.2	10428.5	37.4	--	3476.2	2.8
Tier 1 ESL Indoor Air:		0.097	312.9	1.1	--	104.3	0.083
Tier 1 ESL Indoor Air / AF = 0.001 Screening Level:		96.8	312857.1	1123.1	104285.7*		82.6

NOTES:

(1) All values are in units of µg/m^3.

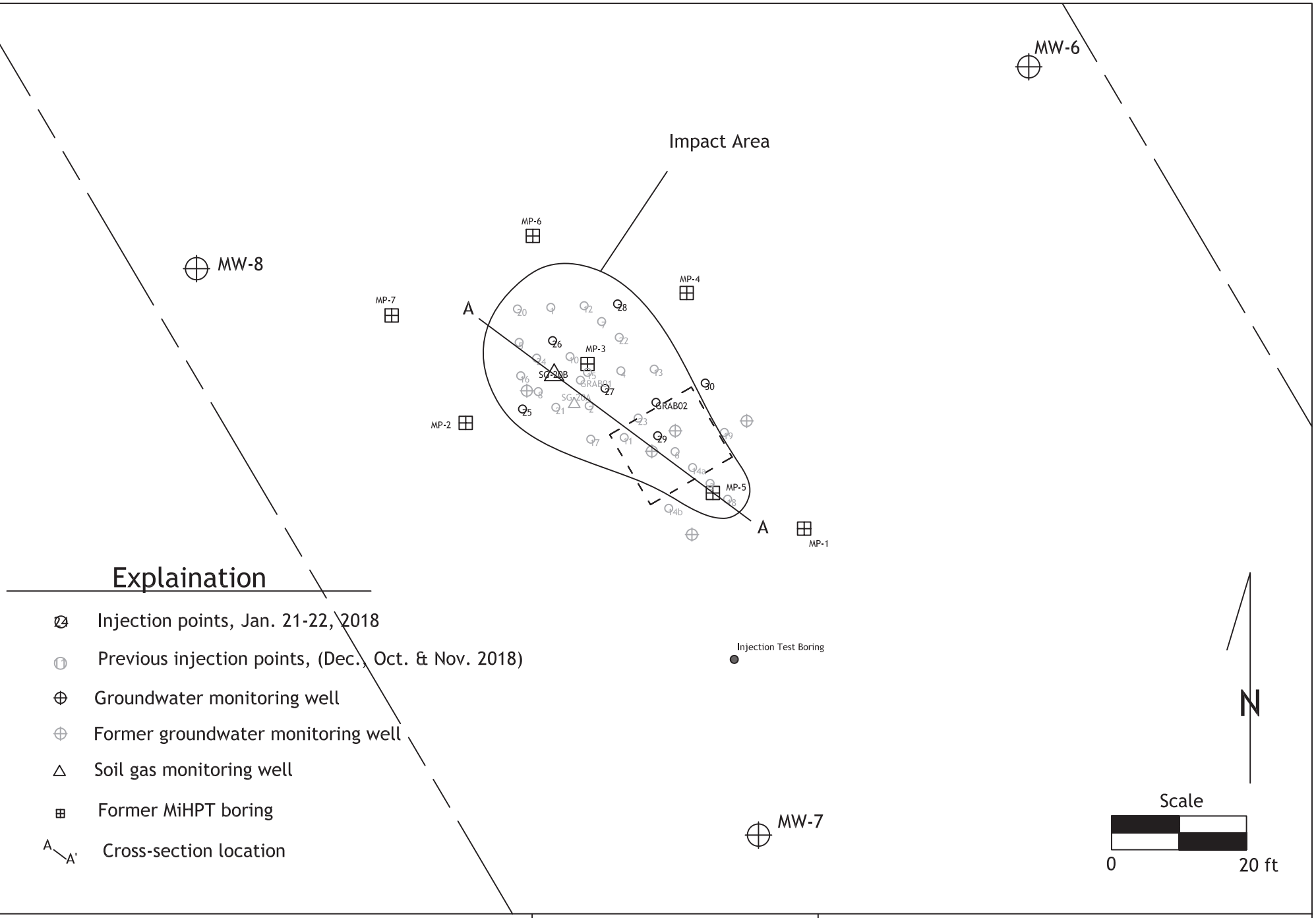
(2) Samples were analyzed for 6 constituents by modified method TO-17.

(3) "B" – indicates analyte was detected at a concentration below the practical quantitation limit.

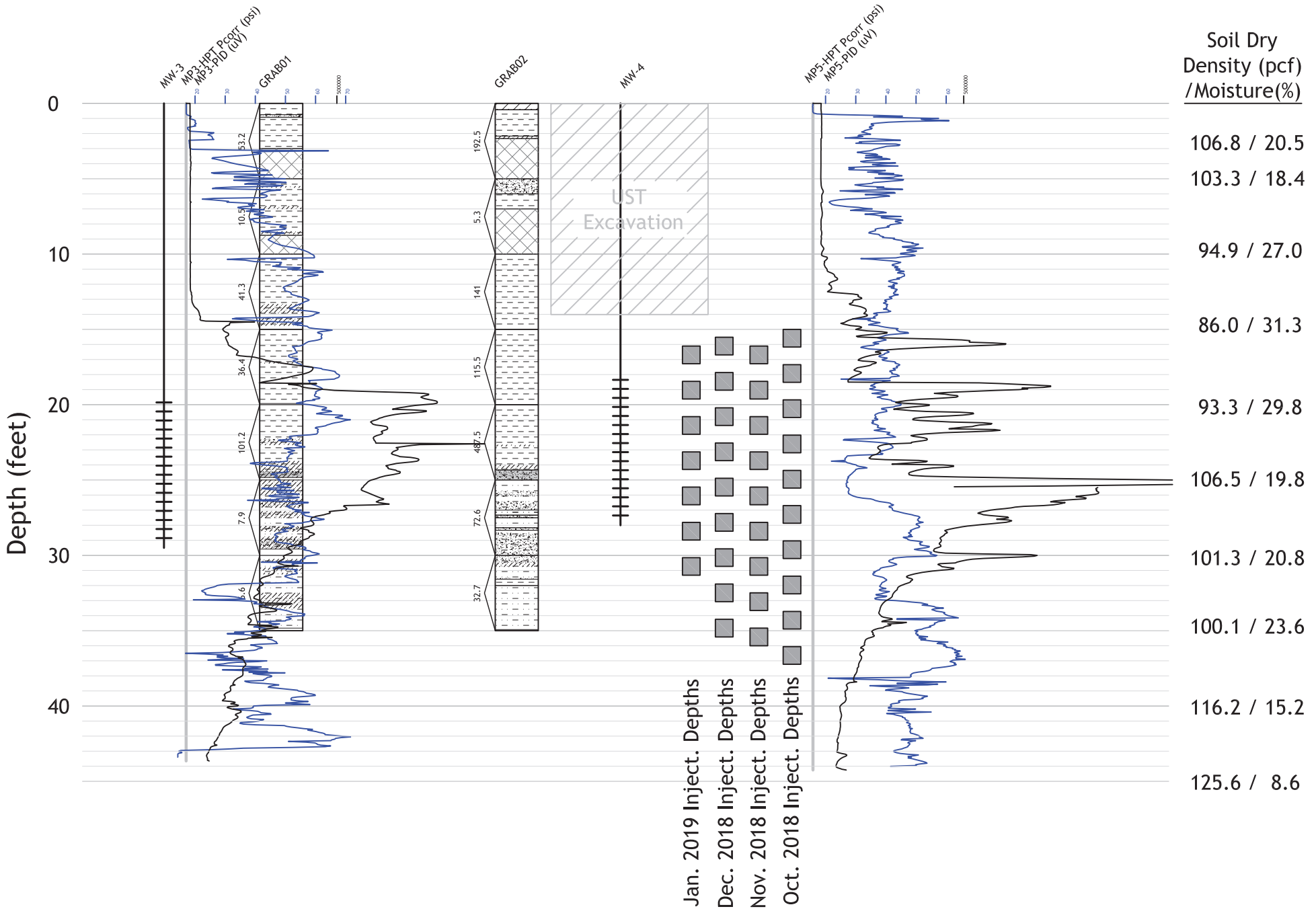
(4) A screening level value of calculated as '**Tier 1 Indoor Air ESL /0.001'** is used to evaluate potential vapor intrusion problems at sites where future buildings may be constructed.

(5) ESLs are from SF Bay RWQCB, Jan. 25, 2019. "*" – indicates ESL value for total xylenes.

FIGURES



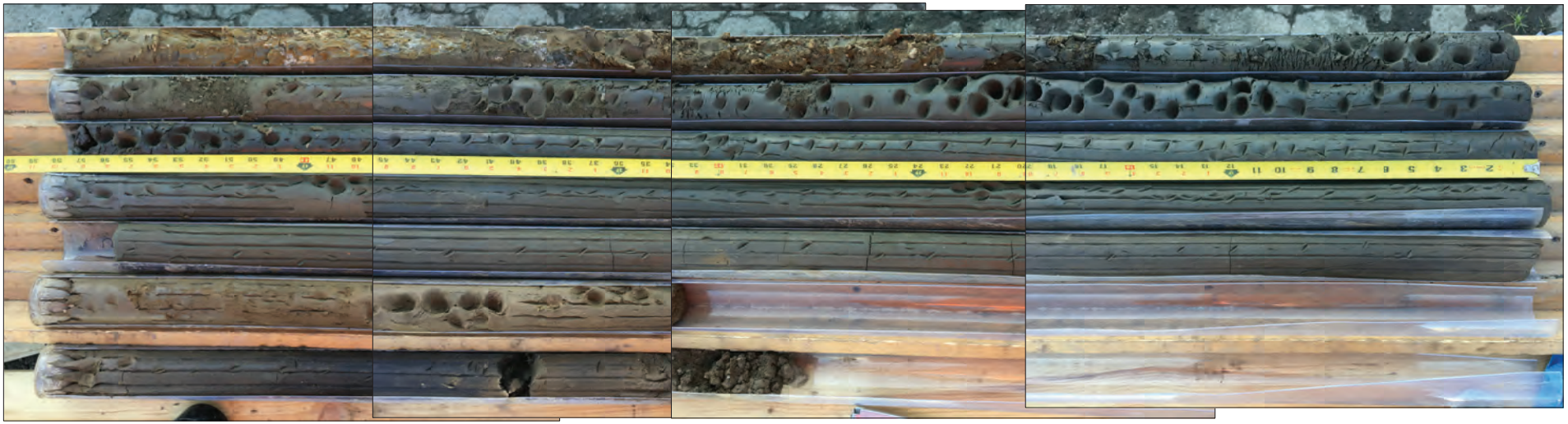
Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 1: Site Map



Ryan Geologic & Environmental Services, Inc.
PO Box 525; McCloud, California 96057
530.925.4932

1936 Alum Rock Ave
San Jose, CA

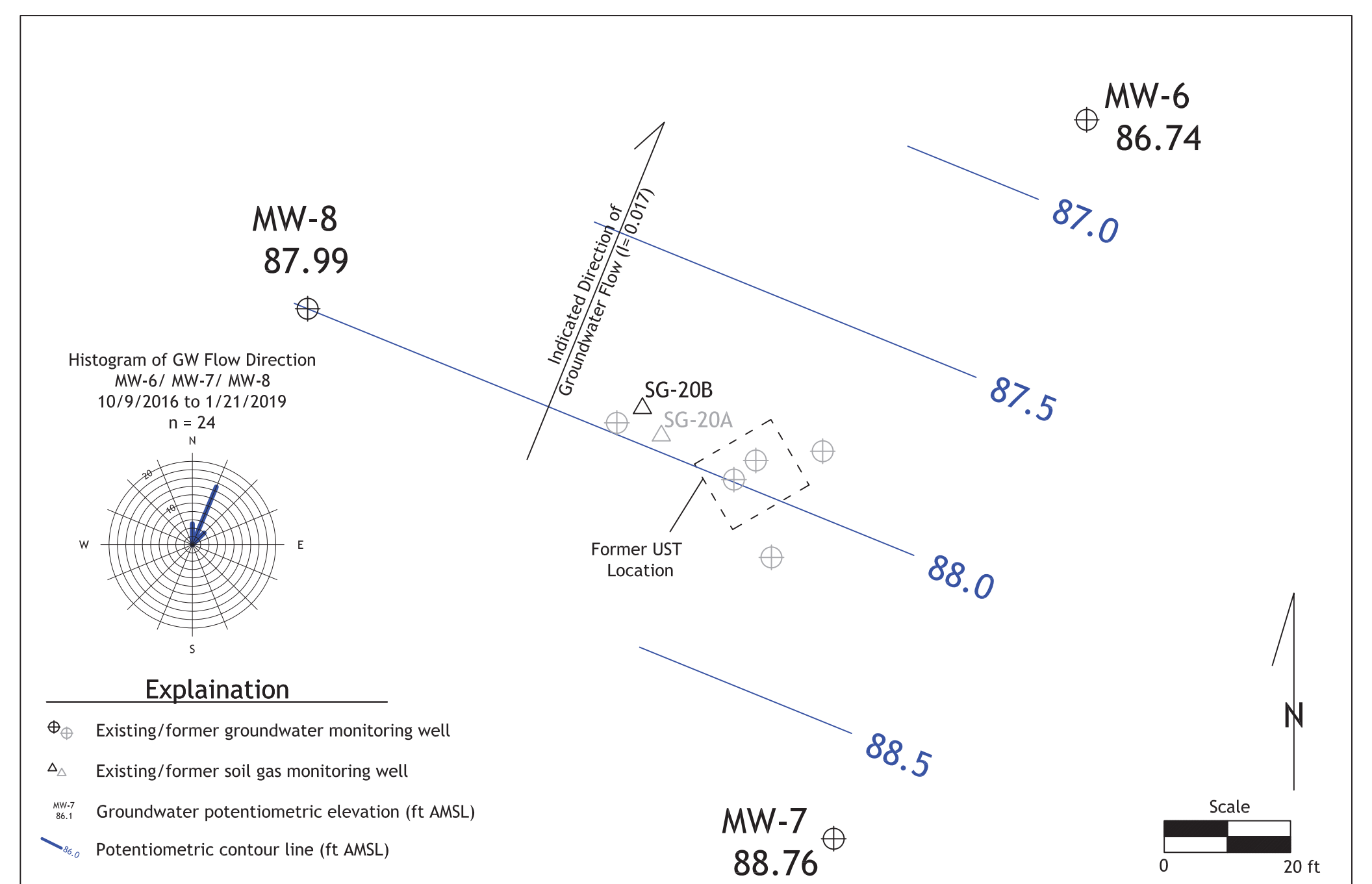
Figure 2:
Cross-Section thorough Impact Area and ISCO Injection Intervals



NOTE:

(1) Five foot core tubes are arrange from shallowest in lower right to deepest in the upper left.
(2) Sandier zones are evident by their softness (deeper indentations).
(3) Partially filled core tubes are due to poor recovery and is evident in the top 2 core samples.

Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 3: Photograph of the January 21, 2019 Soil Boring



Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 4: Direction of Groundwater Flow January 21, 2019

APPENDIX A: Cumulative Injection Depths, Pressures, and Volumes

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
10/29/18 1250	Test	18.0-19.2	0	50	6.9	0		RAS not functional
10/29/18 1251	Test	18.0-19.2	0	85	14.5	0		RAS not functional
10/29/18 1252	Test	18.0-19.2	0	105	18.5	0		RAS not functional
10/29/18 1301	Test	25.0-26.2	0	40	7.5	0		RAS not functional
10/29/18 1302	Test	25.0-26.2	0	100	19	0		RAS not functional
10/29/18 1303	Test	25.0-26.2	0	115	21	0		RAS not functional
10/29/18 1408	B1	17.3-18.5	39.6	110	13.2	39.6		RAS not functional
10/29/18 1413	B1	19.7-20.9	39.6	120	13.2	39.6		RAS not functional
10/29/18 1420	B1	22.0-23.2	39.6	9	13.2	39.6		RAS not functional
10/29/18 1428	B1	24.3-25.5	39.6	100	13.2	39.6		RAS not functional
10/29/18 1437	B1	26.7-27.9	39.6	10	13.2	39.6		RAS not functional
10/29/18 1445	B1	29.0-30.2	39.6	8	9.9	39.6		RAS not functional
10/29/18 1455	B1	31.3-32.5	39.6	90	9.9	39.6		RAS not functional
10/29/18 1503	B1	33.7-34.9	39.6	90	13.2	39.6		RAS not functional
10/29/18 1510	B1	36.0-37.2	39.6	9	13.2	39.6		RAS not functional
10/30/18 0829	B2	17.3-18.5	39.6	115	11.8	39.6		RAS not functional
10/30/18 0840	B2	19.7-20.9	39.6	115	11.2	39.6		RAS not functional
10/30/18 0934	B2	26.7-27.9	39.6	85	9.1	39.6		RAS not functional
10/30/18 0939	B2	22.0-23.2	39.6	100	10.9	39.6		RAS not functional
10/30/18 0948	B2	24.3-25.5	39.6	90	9.5	39.6		RAS not functional
10/30/18 1001	B2	29.0-30.2	39.6	110	11.5	39.6		RAS not functional
10/30/18 1008	B2	31.3-32.5	39.6	105	10.4	39.6		RAS not functional
10/30/18 1017	B2	33.7-34.9	39.6	115	11.5	39.6		RAS not functional
10/30/18 1024	B2	36.0-37.2	39.6	115	10.2	39.6		RAS not functional
10/30/18 1047	B3	15.0-16.2	35.6	116	11.7	35.6		RAS not functional
10/30/18 1050	B3	17.3-18.5	35.6	120	11.9	35.6		RAS not functional
10/30/18 1058	B3	19.7-20.9	35.6	110	11.4	35.6		RAS not functional
10/30/18 1104	B3	22.0-23.2	35.6	120	11.9	35.6		RAS not functional
10/30/18 1111	B3	24.3-25.5	35.6	115	12.2	35.6		RAS not functional
10/30/18 1116	B3	26.7-27.9	35.6	120	12.2	35.6		RAS not functional
10/30/18 1124	B3	29.0-30.2	35.6	120	12.4	35.6		RAS not functional
10/30/18 1130	B3	31.3-32.5	35.6	115	12	35.6		RAS not functional
10/30/18 1140	B3	33.7-34.9	35.6	120	11.3	35.6		RAS not functional
10/30/18 1152	B3	36.0-37.2	35.6	120	12.6	35.6		RAS not functional
10/30/18 1202	B4	17.3-18.5	39.6	120	13.2	39.77	79.08	Typical pres/flow
10/30/18 1223	B4	19.7-20.9	39.6	115	13.2	40.65	66.24	Typical pres/flow
10/30/18 1230	B4	22.0-23.2	39.6	115	13.2	29	77.4	Typical pres/flow
10/30/18 1237	B4	24.3-25.5	39.6	110	13.2	30.09	59.85	Typical pres/flow
10/30/18 1245	B4	26.7-27.9	39.6	115	13.2	40.53	80.65	Typical pres/flow
10/30/18 1254	B4	29.0-30.2	39.6	115	13.2	40.98	88.03	Typical pres/flow
10/30/18 1302	B4	31.3-32.5	39.6	120	13.2	40.41	80.65	Typical pres/flow
10/30/18 1310	B4	33.7-34.9	39.6	125	13.2	32.09	83.04	Typical pres/flow
10/30/18 1316	B4	36.0-37.2	39.6	120	13.2	31.31	100.04	Typical pres/flow (+end of mix?)

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
10/30/18 1409	B5	17.3-18.5	39.6	120	13.2	39.58	70.58	Typical pres/flow
10/30/18 1416	B5	19.7-20.9	39.6	100	13.2	40.9	72.13	Typical pres/flow
10/30/18 1423	B5	22.0-23.2	39.6	110	13.2	40.54	77	Typical pres/flow
10/30/18 1431	B5	24.3-25.5	39.6	100	13.2	40.23	73.01	Typical pres/flow
10/30/18 1440	B5	26.7-27.9	39.6	110	13.2	40.77	90.88	Typical pres/flow
10/30/18 1448	B5	29.0-30.2	39.6	110	13.2	40.88	77.26	Typical pres/flow
10/30/18 1455	B5	31.3-32.5	39.6	120	13.2	40.6	73.32	Typical pres/flow
10/30/18 1508	B5	33.7-34.9	39.6	125	13.2	41.25	75.05	Typical pres/flow + tool string leak
10/30/18 1515	B5	36.0-37.2	39.6	125	13.2	37.76	107.11	Typical pres/flow (+end of mix?)
10/31/18 0904	B6	19.7-20.9	35.6	110	11.9	36.11	68.88	Kerfuffle at start
10/31/18 0912	B6	15.0-16.2	35.6	110	11.9	36.99	63.36	Kerfuffle at start
10/31/18 0918	B6	17.3-18.5	35.6	115	11.9	39.53	69.26	Typical pres/flow
10/31/18 0925	B6	22.0-23.2	35.6	110	11.9	40.44	66.55	Kerfuffle at start
10/31/18 0932	B6	24.3-25.5	35.6	115	11.9	35.73	91.25	Typical pres/flow almost
10/31/18 0937	B6	26.7-27.9	35.6	120	11.9	38.8	88.79	Typical pres/flow
10/31/18 0943	B6	29.0-30.2	35.6	125	11.9	39.85	85.04	Typical pres/flow
10/31/18 0948	B6	31.3-32.5	35.6	120	11.9	39.08	94.85	Typical pres/flow
10/31/18 0954	B6	33.7-34.9	35.6	125	11.9	1.35	98.95	Typical pres/flow + flow meter non-functional
10/31/18 1001	B6	36.0-37.2	35.6	120	11.9	32.7	97.89	Typical pres/flow (+end of mix?)
10/31/18 1026	B7	17.3-18.5	39.6	115	13.2	28.42	73.32	Zero flow + hi press at start
10/31/18 1032	B7	19.7-20.9	39.6	105	13.2	41.06	66.28	Typical pres/flow
10/31/18 1039	B7	22.0-23.2	39.6	105	13.2	42.56	66.7	Typical pres/flow
10/31/18 1047	B7	24.3-25.5	39.6	120	13.2	42.33	74.12	Typical pres/flow
10/31/18 1055	B7	26.7-27.9	39.6	105	13.2	36.19	64.14	Zero flow + hi press in middle; Surfacing occurs in crack between B7 and B4 during early injection
10/31/18 1112	B7	29.0-30.2	10	105	13.2	11.54	90.15	Typical pres/flow
10/31/18 1325	B8	22.0-23.2	37	60	7.4	41.06	45.27	Zero flow + hi press at start; B4 - End of mix flow decrease
10/31/18 1334	B8	24.3-25.5	37	55	7.4	49.24	44.57	Kerfuffle at start
10/31/18 1345	B8	26.7-27.9	37	55	7.4	42.2	46.74	Typical pres/flow
10/31/18 1357	B8	29.0-30.2	37	50	5.3	39.6	46.14	Zero flow + hi press in middle
11/01/18 1004	B11	15.0-16.2	35.6	55	5.9	33.63	46.5	Zero flow + hi press at start
11/01/18 1015	B11	17.3-18.5	35.6	50	5.8	37	45.42	Kerfuffle at start
11/01/18 1026	B11	19.7-20.9	35.6	50	5.5	42.15	42.25	Kerfuffle at start
11/01/18 1034	B11	22.0-23.2	35.6	60	6	40.4	40.87	Kerfuffle at start
11/01/18 1043	B11	24.3-25.5	35.6	50	5	28.76	41.29	Typical pres/flow (+end of mix?); End of mix signature (Surfacing at B3?)
11/01/18 1052	B11	26.7-27.9	20	60	6.6	21.24	49.36	Typical pres/flow
11/01/18 1121	B10	19.7-20.9	39.6	50	5.2	42.02	56.48	Typical pres/flow; Partial boring completed; Inject remaining mix into main depth and quit event 1
11/01/18 1132	B10	22.0-23.2	39.6	50	5.9	43.17	48.19	Kerfuffle at start
11/01/18 1143	B10	24.3-25.5	39.6	50	6.5	42.19	39.78	Zero flow + hi press at end
11/01/18 1151	B10	26.7-27.9	39.6	50	5.6	29.77	44.15	Typical pres/flow (+end of mix?)

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
11/19/08 1012	B12	18.5-19.67	44.5	40	6.4	44.5	46	5 gpm with 46psi to start
11/19/08 1024	B12	20.8-21.97	44.5	35	8.9	44.5	40	6.2gpm with 40psi to start
11/19/08 1034	B12	23.2-24.37	44.5	32	7.4	44.5	35	7.3gpm with 35psi to start
11/19/08 1042	B12	25.5-26.67	44.5	34	7.4	44.5	40	6.4gpm with 40psi to start
11/19/08 1053	B12	27.8-28.97	44.5	35	6.4	44.5	42	6.1gpm with 42psi to start
11/19/08 1103	B12	30.2-31.37	44.5	40	8.9	44.5	40	6.6gpm with 40psi to start
11/19/08 1111	B12	32.5-33.67	44.5	42	8.9	44.5	48	8.3gpm with 48psi to start
11/19/08 1119	B12	34.8-35.97	44.5	42	8.9	44.5	48	8.5gpm with 48psi to start
11/19/08 1231	B13	18.5-19.67	44.5	40	5.6	44.5	40	5.9gpm with 40psi to start
11/19/08 1244	B13	20.8-21.97	44.5	42	7.4	44.5	54	4.9gpm with 54psi to start
11/19/08 1253	B13	23.2-24.37	44.5	35	7.4	44.5	38	7gpm with 38psi to start
11/19/08 1303	B13	25.5-26.67	44.5	36	8.9	44.5	42	6.6gpm with 42psi to start
11/19/08 1311	B13	27.8-28.97	44.5	48	8.9	44.5	60	7.8gpm with 60psi to start
11/19/08 1320	B13	30.2-31.37	44.5	54	8.9	44.5	58	8.5gpm with 58psi to start
11/19/08 1328	B13	32.5-33.67	44.5	56	8.9	44.5	62	8.9gpm with 62psi to start
11/19/08 1336	B13	34.8-35.97	44.5	54	8.9	44.5	58	8.9gpm with 58psi to start
11/19/08 1432	B14A	16.2-17.37	39.6	28	6.6	39.6	30	5.4gpm with 30psi to start
11/19/08 1442	B14A	18.5-19.67	39.6	36	6.6	39.6	40	5.7gpm with 40psi to start
11/19/08 1449	B14A	20.8-21.97	39.6	46	9.9	39.6	50	8.7gpm with 50psi to start
11/19/08 1457	B14A	23.2-24.37	30	44	10	30	50	8.8gpm with 50psi to start. Stop injecting after 30gal due to daylighting from B3.
11/19/08 1508	B14A	27.8-28.97	21	30	5.3	21	38	3.8gpm with 38psi to start. Skipped two intervals and tried to inject at this interval but again saw daylighting up same adjacent borehole after 21gal injected.
11/20/18 0809	B14B	25.5-26.67	46.6	48	6.7	46.6	50	Grouted up location 14 and pushed rods down location 3 and regrouted old borehole to try and get a better seal. Moved over to reset tooling at new location, 14B, to finish injecting remaining mixed reagent. 5.4gpm with 50psi to start
11/20/18 0818	B14B	30.2-31.37	46.6	48	7.8	46.6	48	6.6gpm with 48psi to start
11/20/18 0826	B14B	32.5-33.67	46.6	50	7.8	46.6	50	6.8gpm with 50psi to start
11/20/18 0834	B14B	34.8-35.97	46.6	50	7.8	46.6	50	6.4gpm with 50psi to start
11/20/18 0909	B15	18.5-19.67	44.5	46	6.4	44.5	50	5.3gpm with 50psi to start
11/20/18 0917	B15	20.8-21.97	44.5	47	8.9	44.5	52	6.7gpm with 52psi to start
11/20/18 0924	B15	23.2-24.37	44.5	44	8.9	44.5	50	8gpm wit 50psi to start
11/20/18 0932	B15	25.5-26.67	44.5	48	8.9	44.5	50	7.3gpm with 50psi to start
11/20/18 0940	B15	27.8-28.97	44.5	52	8.9	44.5	60	7.1gpm with 60psi to start
11/20/18 0948	B15	30.2-31.37	44.5	54	8.9	44.5	56	7.5gpm with 56psi to start
11/20/18 0955	B15	32.5-33.67	44.5	56	8.9	44.5	60	7.3gpm with 60psi to start
11/20/18 1005	B15	34.8-35.97	44.5	54	8.9	44.5	60	7.4gpm with 60psi to start

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
11/20/18 1026	B16	18.5-19.67	44.5	48	7.4	44.5	52	5.8gpm with 52psi to start
11/20/18 1034	B16	20.8-21.97	44.5	46	8.9	44.5	52	7.9gpm with 52psi to start
11/20/18 1041	B16	23.2-24.37	44.5	45	8.9	44.5	50	8.8gpm with 50psi to start
11/20/18 1046	B16	25.5-26.67	44.5	48	8.9	44.5	52	8.6gpm with 52psi to start
11/20/18 1054	B16	27.8-28.97	44.5	51	8.9	44.5	60	7.5gpm with 60psi to start
11/20/18 1102	B16	30.2-31.37	44.5	52	8.9	44.5	54	8.0gpm with 54psi to start
11/20/18 1111	B16	32.5-33.67	44.5	55	8.9	44.5	58	7.8gpm with 58psi to start
11/20/18 1118	B16	34.8-35.97	44.5	51	8.9	44.5	56	8.1gpm with 56psi to start
11/20/18 1143	B17	18.5-19.67	44.5	48	6.4	44.5	52	5.5gpm with 52psi to start
11/20/18 1152	B17	20.8-21.97	44.5	46	7.4	44.5	52	5.8gpm with 52psi to start
11/20/18 1202	B17	23.2-24.37	44.5	45	8.9	44.5	50	8gpm with 50psi to start
11/20/18 1209	B17	25.5-26.67	44.5	46	8.9	44.5	52	8gpm with 52psi to start
11/20/18 1217	B17	27.8-28.97	44.5	48	8.9	44.5	56	7.6gpm with 56psi to start
11/20/18 1225	B17	30.2-31.37	44.5	48	8.9	44.5	54	7.8gpm with 54psi to start
11/20/18 1232	B17	32.5-33.67	44.5	52	8.9	44.5	56	7.5gpm with 56psi to start
11/20/18 1241	B17	34.8-35.97	44.5	52	8.9	44.5	60	7gpm with 60psi to start
12/27/18 1041	B18	15.6-16.8	39.6	55	5.9	--	65	65psi with 4.6gpm
12/27/18 1050	B18	17.9-19.1	39.6	55	7.2	--	60	60psi with 5.3gpm
12/27/18 1059	B18	20.3-21.4	39.6	55	8.9	--	60	60psi with 6.4gpm
12/27/18 1106	B18	22.6-23.8	39.6	55	8.9	--	55	55psi with 8.9gpm
12/27/18 1112	B18	24.9-26.1	39.6	40	8.9	--	45	45psi with 7.6gpm
12/27/18 1121	B18	27.3-28.4	39.6	50	8.9	--	55	55psi with 7.5gpm
12/27/18 1129	B18	29.6-30.8	39.6	60	8.9	--	60	60psi with 8.7gpm
12/27/18 1134	B18	31.9-33.1	39.6	55	8.9	--	60	60psi with 8.6gpm
12/27/18 1140	B18	34.3-35.4	39.6	60	8.9	--	65	65psi with 8.7gpm
12/27/18 1303	B19	15.6-16.8	39.6	60	7.2	--	65	65psi with 5.8gpm
12/27/18 1310	B19	17.9-19.1	39.6	55	7.2	--	60	60psi with 5.9gpm
12/27/18 1318	B19	20.3-21.4	39.6	55	7.2	--	60	60psi with 7.2gpm
12/27/18 1325	B19	22.6-23.8	39.6	45	8.9	--	50	50psi with 8.2gpm
12/27/18 1331	B19	24.9-26.1	39.6	40	8.9	--	50	50psi with 8.2gpm
12/27/18 1336	B19	27.3-28.4	39.6	50	8.9	--	55	55psi with 8.4gpm
12/27/18 1342	B19	29.6-30.8	39.6	50	8.9	--	50	50psi with 8.6gpm
12/27/18 1347	B19	31.9-33.1	39.6	50	8.9	--	55	55psi with 8.4gpm
12/27/18 1354	B19	34.3-35.4	39.6	45	8.9	--	50	50psi with 8.7gpm
12/27/18 1411	B20	17.9-19.1	44.5	55	5.6	--	60	60psi with 5.2gpm
12/27/18 1423	B20	20.3-21.4	44.5	50	8.9	--	55	55psi with 6.8gpm
12/27/18 1431	B20	22.6-23.8	44.5	45	8.9	--	50	50psi with 8gpm
12/27/18 1439	B20	24.9-26.1	44.5	45	8.9	--	50	50psi with 7.8gpm
12/27/18 1447	B20	27.3-28.4	44.5	55	8.9	--	60	60psi with 7.7gpm
12/27/18 1455	B20	29.6-30.8	44.5	55	8.9	--	65	65psi with 8.9gpm
12/27/18 1502	B20	31.9-33.1	44.5	50	8.9	--	60	60psi with 7.9gpm
12/27/18 1511	B20	34.3-35.4	44.5	55	8.9	--	60	60psi with 8.2gpm

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
12/28/18 0746	B21	17.9-19.1	44.5	50	6.3	--	55	55psi with 5.6gpm
12/28/18 0757	B21	20.3-21.4	44.5	50	7.4	--	55	55psi with 7.2gpm
12/28/18 0807	B21	22.6-23.8	44.5	45	8.9	--	50	50psi with 7.7gpm
12/28/18 0815	B21	24.9-26.1	44.5	55	8.9	--	55	55psi with 8.4gpm
12/28/18 0823	B21	27.3-28.4	44.5	50	11.1	--	45	45psi with 8.7gpm
12/28/18 0830	B21	29.6-30.8	44.5	50	8.9	--	55	55psi with 7.2gpm
12/28/18 0840	B21	31.9-33.1	44.5	60	11.1	--	60	60psi with 8.6gpm
12/28/18 0847	B21	34.3-35.4	44.5	65	11.1	--	65	65psi with 8.9gpm
12/28/18 0903	B22	17.9-19.1	44.5	55	7.4	--	60	60psi with 6.9gpm
12/28/18 0912	B22	20.3-21.4	44.5	50	7.4	--	55	55psi with 7.2gpm
12/28/18 0921	B22	22.6-23.8	44.5	55	8.9	--	60	60psi with 8.2gpm. Surfacing from crack adjacent to borehole upon completion of third interval. Moved to next location.
12/28/18 0944	B23	17.9-19.1	44.5	45	7.4	--	55	55psi with 5.9gpm
12/28/18 0952	B23	20.3-21.4	44.5	50	6.3	--	55	55psi with 6.2gpm
12/28/18 1002	B23	22.6-23.8	44.5	50	7.4	--	50	50psi with 6.9gpm
12/28/18 1009	B23	24.9-26.1	44.5	45	7.4	--	50	50psi with 7.3gpm
12/28/18 1019	B23	27.3-28.4	44.5	55	8.9	--	60	60psi with 6.7gpm
12/28/18 1027	B23	29.6-30.8	30	50	6	--	55	55psi with 6.6gpm.
12/28/18 1222	B24	17.9-19.1	44.5	50	7.4	--	55	55psi with 5.1gpm
12/28/18 1232	B24	20.3-21.4	44.5	50	6.3	--	55	55psi with 6.1gpm
12/28/18 1242	B24	22.6-23.8	44.5	45	8.9	--	55	55psi with 7.3gpm
12/28/18 1249	B24	24.9-26.1	60	50	8.6	--	55	55psi with 7.3gpm. Inject extra 15.5gal that was left over from B21
12/28/18 1300	B24	27.3-28.4	44.5	45	7.4	--	50	50psi with 6.4gpm
12/28/18 1309	B24	29.6-30.8	44.5	50	7.4	--	55	55psi with 7.1gpm
12/28/18 1316	B24	31.9-33.1	44.5	50	7.4	--	55	55psi with 7.2gpm
01/21/19 1057	B25	18.5-19.7	59.3	55	5.0	--	60	
01/21/19 1114	B25	20.9-22	59.3	55	5.5	--	55	
01/21/19 1127	B25	23.2-24.4	59.3	45	5.8	--	55	
01/21/19 1142	B25	25.5-26.7	59.3	50	5.5	--	50	
01/21/19 1154	B25	27.9-29	59.3	50	5.5	--	55	
01/21/19 1206	B25	30.2-31.4	59.3	55	5.2	--	55	
01/21/19 1325	B26	18.5-19.7	59.3	55	5.5	--	60	
01/21/19 1343	B26	20.9-22	59.3	50	5.5	--	55	
01/21/19 1357	B26	23.2-24.4	59.3	45	5.5	--	55	
01/21/19 1411	B26	25.5-26.7	59.3	50	6.4	--	50	
01/21/19 1423	B26	27.9-29	59.3	55	6.0	--	55	
01/21/19 1434	B26	30.2-31.4	59.3	50	6.0	--	50	
01/22/19 0755	B27	18.5-19.7	59.3	40	5.0	--	45	
01/22/19 0814	B27	20.9-22	59.3	40	5.0	--	45	
01/22/19 0834	B27	23.2-24.4	59.3	40	5.0	--	40	
01/22/19 0847	B27	25.5-26.7	59.3	40	5.0	--	40	
01/22/19 0902	B27	27.9-29	59.3	40	5.0	--	40	
01/22/19 0920	B27	30.2-31.4	59.3	40	5.0	--	40	
01/22/19 1600	B27	30.2-31.4	52	43	5.0	--	81	Add remnants from B30 batch

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
01/22/19 0945	B28	18.5-19.7	59.3	45	5.0	--	50	
01/22/19 0958	B28	20.8-22	59.3	45	5.0	--	45	
01/22/19 1014	B28	23.2-24.3	59.3	40	5.5	--	45	
01/22/19 1027	B28	25.5-26.7	59.3	40	5.5	--	45	
01/22/19 1041	B28	27.8-29	59.3	40	5.5	--	45	
01/22/19 1055	B28	30.2-31.3	59.3	40	5.5	--	45	
01/22/19 1121	B29	16.2-17.4	50.9	40	5.8	--	45	Surfacing after 47 gallons
--	B29	18.5-19.7	--	--	--	--	--	Skip interval due to surfacing
01/22/19 1153	B29	20.8-22	67.6	35	3.8	--	40	Try 40psi/3gpm
01/22/19 1217	B29	23.2-24.3	60	30	4.0	--	40	Inj at 40psi/3gpm surfacing after 60 gallons
01/22/19 1243	B29	25.5-26.7	25	35	3.0	--	35	Surfacing after 25 gallons
--	B29	27.8-29	--	--	--	--	--	Skip interval due to surfacing
01/22/19 1308	B29	30.2-31.3	152	35	2.0	--	30	Try 35psi/2gpm
01/22/19 1425	B30	18.5-19.7	50.9	40	5.5	--	45	
01/22/19 1439	B30	20.8-22	50.9	40	5.5	--	45	
01/22/19 1454	B30	23.2-24.3	50.9	40	6.0	--	50	
01/22/19 1509	B30	25.5-26.7	50.9	40	6.0	--	45	
01/22/19 1521	B30	27.8-29	93	40	5.0	--	45	Surfacing after 90 gallons
01/22/19 1540	B30	30.2-31.3	7	40	5.0	--	45	Still surfacing pump 7 gallons

NOTES:

(1) Injection borings installed during the 3rd pressure injection event (B18 – B24) have been re-numbered from that originally reported. The re-numbering reflects the order they were actually installed. The re-numbering is also reflected on updated maps.

APPENDIX B: Laboratory Analytical Report Sheets

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2/19/2019
Mr. Richard Ryan
Ryan Geologic & Environmental Services, Inc.
PO Box 525

McCloud CA 96057

Project Name:
Project #: AR1936
Workorder #: 1902079

Dear Mr. Richard Ryan

The following report includes the data for the above referenced project for sample(s) received on 2/6/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive S.E. WMS are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Sarah Westerman

Project Manager

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WORK ORDER #: 1902079

Work Order Summary

CLIENT:	Mr. Richard Ryan Ryan Geologic & Environmental Services, Inc. PO Box 525 McCloud, CA 96057	**BILL TO:**	Mr. Neil OHara RNC Environmental 151 Nursery St Ashland, OR 97520
PHONE:		**P.O. #**	
FAX:		**PROJECT #**	AR1936
DATE RECEIVED:	02/06/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	02/19/2019		

FRACTION #	NAME	TEST
01A	SG20B	Passive S.E. WMS
02A	BLK	Passive S.E. WMS
03A	Lab Blank	Passive S.E. WMS
04A	LCS	Passive S.E. WMS
04AA	LCSD	Passive S.E. WMS

CERTIFIED BY: Heidi Hayes DATE: 02/19/19

Technical Director

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
WMS Passive SE by Mod EPA TO-17
Ryan Geologic & Environmental Services, Inc.
Workorder# 1902079

Two WMS-LU samples were received on February 06, 2019. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank and in sample BLK, a sampling duration of 21190 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If

the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
VOC BY PASSIVE SAMPLER - GC/MS

Client Sample ID: SG20B

Lab ID#: 1902079-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	13	24	1600
Toluene	0.050	2.4	46	2200
Ethyl Benzene	0.050	1.7	91	3000
m,p-Xylene	0.050	1.7	200	6600
o-Xylene	0.12	3.9	320	10000
Naphthalene	0.050	1.6	0.37	12

Client Sample ID: BLK

Lab ID#: 1902079-02A

No Detections Were Found.

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Client Sample ID: SG20B

Lab ID#: 1902079-01A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c021406sim**	**Date of Collection: 2/6/19 10:40:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 2/14/19 11:01 AM**
		Date of Extraction: 2/14/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	13	24	1600
Toluene	0.050	2.4	46	2200
Ethyl Benzene	0.050	1.7	91	3000
m,p-Xylene	0.050	1.7	200	6600
o-Xylene	0.12	3.9	320	10000
Naphthalene	0.050	1.6	0.37	12

o-Xylene was reported from file # c021409sim analyzed on 2/14/2019 at a dilution factor of 2.50.
Temperature = 77.0F , duration time = 21190 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130

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Client Sample ID: BLK

Lab ID#: 1902079-02A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c021407sim**	**Date of Collection: 2/6/19 10:49:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 2/14/19 11:26 AM**
		Date of Extraction: 2/14/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	13	Not Detected	Not Detected
Toluene	0.050	2.4	Not Detected	Not Detected
Ethyl Benzene	0.050	1.7	Not Detected	Not Detected
m,p-Xylene	0.050	1.7	Not Detected	Not Detected
o-Xylene	0.050	1.6	Not Detected	Not Detected
Naphthalene	0.050	1.6	Not Detected	Not Detected

Temperature = 77.0F , duration time = 21190 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	91	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1902079-03A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c021405sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/14/19 10:27 AM**	
		Date of Extraction: 2/14/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	13	Not Detected	Not Detected
Toluene	0.050	2.4	Not Detected	Not Detected
Ethyl Benzene	0.050	1.7	Not Detected	Not Detected
m,p-Xylene	0.050	1.7	Not Detected	Not Detected
o-Xylene	0.050	1.6	Not Detected	Not Detected
Naphthalene	0.050	1.6	Not Detected	Not Detected

Temperature = 77.0F , duration time = 21190 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130

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Client Sample ID: LCS

Lab ID#: 1902079-04A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c021403sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/14/19 09:35 AM**	
		Date of Extraction: 2/14/19	

Compound	%Recovery	Method Limits
Benzene	80	70-130
Toluene	87	70-130
Ethyl Benzene	90	70-130
m,p-Xylene	89	70-130
o-Xylene	83	70-130
Naphthalene	17	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130

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Client Sample ID: LCSD

Lab ID#: 1902079-04AA

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c021404sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/14/19 10:01 AM**	
		Date of Extraction: 2/14/19	

Compound	%Recovery	Method Limits
Benzene	81	70-130
Toluene	87	70-130
Ethyl Benzene	92	70-130
m,p-Xylene	89	70-130
o-Xylene	84	70-130
Naphthalene	18	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130

Neil O'Hara
RNC Environmental, LLC
151 Nursery St
Ashland, OR 97520
Tel: (888) 485-3330
Email: neil@rnc-enviro.com

RE: AR1936

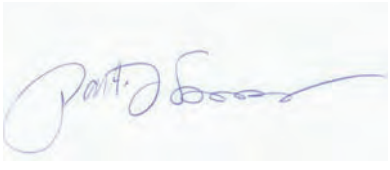
Work Order No.: 1901171 Rev: 1

Dear Neil O'Hara:

Torrent Laboratory, Inc. received 4 sample(s) on January 21, 2019 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991 If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.



Patti L Sandrock
QA Officer

January 28, 2019
Date

Date: 1/28/2019

Client: RNC Environmental, LLC

Project: AR1936

Work Order: 1901171

CASE NARRATIVE

Unless otherwise indicated in the following narrative, no issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

REVISIONS

Report revised to include TPH gasoline data.

Rev. 1 (2/4/19)

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date Received: 01/21/19
Date Reported: 01/28/19

MW-8 1901171-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	1	29	50	54.8	ug/L
Sulfate	E300.0	50	0.025	25	90	mg/L

MW-7 1901171-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	50	0.025	25	65	mg/L

MW-6 1901171-003

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	1	29	50	54.3	ug/L
Sulfate	E300.0	100	0.050	50	350	mg/L
MTBE	SW8260B	1	0.077	0.50	0.65	ug/L

GRAB02 1901171-004

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	1	29	50	666	ug/L
Sulfate	E300.0	2000	1.0	1000	8700	mg/L
Bromomethane	SW8260B	2.1	0.45	1.1	5.0	ug/L
MTBE	SW8260B	2.1	0.16	1.1	2.2	ug/L
Benzene	SW8260B	2.1	0.33	1.1	130	ug/L
1,2-Dichloroethane	SW8260B	2.1	0.23	1.1	34	ug/L
Toluene	SW8260B	2.1	0.30	1.1	28	ug/L
Ethylbenzene	SW8260B	2.1	0.41	1.1	28	ug/L
m,p-Xylene	SW8260B	2.1	0.83	2.1	2.6	ug/L
o-Xylene	SW8260B	2.1	0.32	1.1	4.0	ug/L
Isopropyl Benzene	SW8260B	2.1	0.46	1.1	1.7	ug/L
n-Propylbenzene	SW8260B	2.1	0.62	1.1	3.6	ug/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1901171-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	1/22/19	11:00:00AM	
Prep Batch ID:	1110521	**Prep Analyst:**	IRNAZ		

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	50	0.025	25	**90**		mg/L	01/22/19	13:49	IZ	436793

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1901171-001B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/21/19	9:00:00AM
Prep Batch ID:	1110447	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/21/19	17:39	NP	436725
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	17:39	NP	436725
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	01/21/19	17:39	NP	436725
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	01/21/19	17:39	NP	436725
Diisopropyl ether	SW8260B	1	0.12	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Ethyl tert-Butyl Ether	SW8260B	1	0.064	0.50	ND		ug/L	01/21/19	17:39	NP	436725
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	17:39	NP	436725
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Benzene	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Tert amyl-Methyl Ether	SW8260B	1	0.072	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/21/19	17:39	NP	436725
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/21/19	17:39	NP	436725
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/21/19	17:39	NP	436725

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1901171-001B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/21/19 9:00:00AM
Prep Batch ID:	1110447	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	01/21/19	17:39	NP	436725
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/21/19	17:39	NP	436725
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/21/19	17:39	NP	436725
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/21/19	17:39	NP	436725
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/21/19	17:39	NP	436725
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	17:39	NP	436725
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/21/19	17:39	NP	436725
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	01/21/19	17:39	NP	436725
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/21/19	17:39	NP	436725
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/21/19	17:39	NP	436725
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	17:39	NP	436725
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/21/19	17:39	NP	436725
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/21/19	17:39	NP	436725
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/21/19	17:39	NP	436725
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	01/21/19	17:39	NP	436725
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/21/19	17:39	NP	436725
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**106**		%	01/21/19	17:39	NP	436725
(S) Toluene-d8	SW8260B		75.1 - 127		**101**		%	01/21/19	17:39	NP	436725
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**101**		%	01/21/19	17:39	NP	436725

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1901171-001B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	5030GRO	**Prep Batch Date/Time:**	1/21/19	9:00:00AM
Prep Batch ID:	1110452	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	**54.8**	x	ug/L	01/21/19	17:39	NP	436725
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		**91.5**		%	01/21/19	17:39	NP	436725

NOTE: x - Does not match typical gasoline pattern. TPH value is due to non-target compounds within gasoline quantitative range.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1901171-002A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	1/22/19	11:00:00AM	
Prep Batch ID:	1110521	**Prep Analyst:**	IRNAZ		

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	50	0.025	25	**65**		mg/L	01/22/19	14:10	IZ	436793

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1901171-002B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/21/19	9:00:00AM
Prep Batch ID:	1110447	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/21/19	18:08	NP	436725
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	18:08	NP	436725
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	01/21/19	18:08	NP	436725
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	01/21/19	18:08	NP	436725
Diisopropyl ether	SW8260B	1	0.12	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Ethyl tert-Butyl Ether	SW8260B	1	0.064	0.50	ND		ug/L	01/21/19	18:08	NP	436725
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	18:08	NP	436725
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Benzene	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Tert amyl-Methyl Ether	SW8260B	1	0.072	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/21/19	18:08	NP	436725
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/21/19	18:08	NP	436725
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/21/19	18:08	NP	436725

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1901171-002B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/21/19 9:00:00AM
Prep Batch ID:	1110447	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	01/21/19	18:08	NP	436725
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/21/19	18:08	NP	436725
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/21/19	18:08	NP	436725
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/21/19	18:08	NP	436725
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/21/19	18:08	NP	436725
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/21/19	18:08	NP	436725
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/21/19	18:08	NP	436725
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	01/21/19	18:08	NP	436725
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/21/19	18:08	NP	436725
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/21/19	18:08	NP	436725
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/21/19	18:08	NP	436725
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/21/19	18:08	NP	436725
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/21/19	18:08	NP	436725
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/21/19	18:08	NP	436725
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	01/21/19	18:08	NP	436725
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/21/19	18:08	NP	436725
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**118**		%	01/21/19	18:08	NP	436725
(S) Toluene-d8	SW8260B		75.1 - 127		**105**		%	01/21/19	18:08	NP	436725
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**101**		%	01/21/19	18:08	NP	436725

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1901171-002B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	5030GRO	**Prep Batch Date/Time:**	1/21/19	9:00:00AM
Prep Batch ID:	1110452	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	01/21/19	18:08	NP	436725
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		**87.4**		%	01/21/19	18:08	NP	436725

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1901171-003A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	1/22/19	11:00:00AM	
Prep Batch ID:	1110521	**Prep Analyst:**	IRNAZ		

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	100	0.050	50	**350**		mg/L	01/22/19	16:36	IZ	436793

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1901171-003B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/22/19	9:46:00AM
Prep Batch ID:	1110482	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/22/19	13:22	NP	436750
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/22/19	13:22	NP	436750
MTBE	SW8260B	1	0.077	0.50	**0.65**		ug/L	01/22/19	13:22	NP	436750
tert-Butanol	SW8260B	1	7.4	10	ND		ug/L	01/22/19	13:22	NP	436750
Diisopropyl ether	SW8260B	1	0.12	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Ethyl tert-Butyl Ether	SW8260B	1	0.064	0.50	ND		ug/L	01/22/19	13:22	NP	436750
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/22/19	13:22	NP	436750
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Benzene	SW8260B	1	0.16	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Tert amyl-Methyl Ether	SW8260B	1	0.072	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/22/19	13:22	NP	436750
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/22/19	13:22	NP	436750
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/22/19	13:22	NP	436750

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1901171-003B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/22/19 9:46:00AM
Prep Batch ID:	1110482	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	01/22/19	13:22	NP	436750
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/22/19	13:22	NP	436750
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/22/19	13:22	NP	436750
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/22/19	13:22	NP	436750
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/22/19	13:22	NP	436750
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/22/19	13:22	NP	436750
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/22/19	13:22	NP	436750
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	01/22/19	13:22	NP	436750
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/22/19	13:22	NP	436750
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/22/19	13:22	NP	436750
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/22/19	13:22	NP	436750
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/22/19	13:22	NP	436750
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/22/19	13:22	NP	436750
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/22/19	13:22	NP	436750
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	01/22/19	13:22	NP	436750
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/22/19	13:22	NP	436750
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**110**		%	01/22/19	13:22	NP	436750
(S) Toluene-d8	SW8260B		75.1 - 127		**104**		%	01/22/19	13:22	NP	436750
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**101**		%	01/22/19	13:22	NP	436750

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1901171-003B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 9:59		
SDG:			

Prep Method:	5030GRO	**Prep Batch Date/Time:**	1/22/19	9:46:00AM
Prep Batch ID:	1110483	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	**54.3**	x	ug/L	01/22/19	13:22	NP	436750
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		**83.6**		%	01/22/19	13:22	NP	436750

NOTE: x - Does not match typical gasoline pattern. TPH value includes amount of non-target compounds within gasoline quantitative range.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	GRAB02	**Lab Sample ID:**	1901171-004A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 12:01		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	1/22/19	11:00:00AM	
Prep Batch ID:	1110521	**Prep Analyst:**	IRNAZ		

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	2000	1.0	1000	**8700**		mg/L	01/23/19	13:07	IZ	436793

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	GRAB02	**Lab Sample ID:**	1901171-004B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 12:01		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/25/19	8:28:00AM
Prep Batch ID:	1110553	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	2.1	0.55	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Chloromethane	SW8260B	2.1	0.35	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Vinyl Chloride	SW8260B	2.1	0.44	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Bromomethane	SW8260B	2.1	0.45	1.1	**5.0**		ug/L	01/25/19	14:04	NP	436824
Chloroethane	SW8260B	2.1	0.24	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Trichlorofluoromethane	SW8260B	2.1	0.39	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,1-Dichloroethene	SW8260B	2.1	0.30	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Freon 113	SW8260B	2.1	0.72	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Methylene Chloride	SW8260B	2.1	0.27	2.1	ND		ug/L	01/25/19	14:04	NP	436824
trans-1,2-Dichloroethene	SW8260B	2.1	0.34	1.1	ND		ug/L	01/25/19	14:04	NP	436824
MTBE	SW8260B	2.1	0.16	1.1	**2.2**		ug/L	01/25/19	14:04	NP	436824
tert-Butanol	SW8260B	2.1	15	21	ND		ug/L	01/25/19	14:04	NP	436824
Diisopropyl ether	SW8260B	2.1	0.25	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,1-Dichloroethane	SW8260B	2.1	0.26	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Ethyl tert-Butyl Ether	SW8260B	2.1	0.13	1.1	ND		ug/L	01/25/19	14:04	NP	436824
cis-1,2-Dichloroethene	SW8260B	2.1	0.32	1.1	ND		ug/L	01/25/19	14:04	NP	436824
2,2-Dichloropropane	SW8260B	2.1	0.20	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Bromochloromethane	SW8260B	2.1	0.31	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Chloroform	SW8260B	2.1	0.26	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Carbon Tetrachloride	SW8260B	2.1	0.33	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,1,1-Trichloroethane	SW8260B	2.1	0.34	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,1-Dichloropropene	SW8260B	2.1	0.39	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Benzene	SW8260B	2.1	0.33	1.1	**130**		ug/L	01/25/19	14:04	NP	436824
Tert amyl-Methyl Ether	SW8260B	2.1	0.15	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,2-Dichloroethane	SW8260B	2.1	0.23	1.1	**34**		ug/L	01/25/19	14:04	NP	436824
Trichloroethylene	SW8260B	2.1	0.31	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Dibromomethane	SW8260B	2.1	0.22	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,2-Dichloropropane	SW8260B	2.1	0.19	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Bromodichloromethane	SW8260B	2.1	0.16	1.1	ND		ug/L	01/25/19	14:04	NP	436824
cis-1,3-Dichloropropene	SW8260B	2.1	0.16	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Toluene	SW8260B	2.1	0.30	1.1	**28**		ug/L	01/25/19	14:04	NP	436824
Tetrachloroethylene	SW8260B	2.1	0.50	1.1	ND		ug/L	01/25/19	14:04	NP	436824
trans-1,3-Dichloropropene	SW8260B	2.1	0.45	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,1,2-Trichloroethane	SW8260B	2.1	0.16	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Dibromochloromethane	SW8260B	2.1	0.38	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,3-Dichloropropane	SW8260B	2.1	0.45	1.1	ND		ug/L	01/25/19	14:04	NP	436824

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	GRAB02	**Lab Sample ID:**	1901171-004B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 12:01		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	1/25/19 8:28:00AM
Prep Batch ID:	1110553	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	2.1	0.17	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Chlorobenzene	SW8260B	2.1	0.34	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Ethylbenzene	SW8260B	2.1	0.41	1.1	**28**		ug/L	01/25/19	14:04	NP	436824
1,1,1,2-Tetrachloroethane	SW8260B	2.1	0.18	1.1	ND		ug/L	01/25/19	14:04	NP	436824
m,p-Xylene	SW8260B	2.1	0.83	2.1	**2.6**		ug/L	01/25/19	14:04	NP	436824
o-Xylene	SW8260B	2.1	0.32	1.1	**4.0**		ug/L	01/25/19	14:04	NP	436824
Styrene	SW8260B	2.1	0.23	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Bromoform	SW8260B	2.1	0.16	1.1	ND		ug/L	01/25/19	14:04	NP	436824
Isopropyl Benzene	SW8260B	2.1	0.46	1.1	**1.7**		ug/L	01/25/19	14:04	NP	436824
n-Propylbenzene	SW8260B	2.1	0.62	1.1	**3.6**		ug/L	01/25/19	14:04	NP	436824
Bromobenzene	SW8260B	2.1	0.31	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,1,2,2-Tetrachloroethane	SW8260B	2.1	0.17	1.1	ND		ug/L	01/25/19	14:04	NP	436824
2-Chlorotoluene	SW8260B	2.1	0.53	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,3,5-Trimethylbenzene	SW8260B	2.1	0.51	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,2,3-Trichloropropane	SW8260B	2.1	0.30	1.1	ND		ug/L	01/25/19	14:04	NP	436824
4-Chlorotoluene	SW8260B	2.1	0.45	1.1	ND		ug/L	01/25/19	14:04	NP	436824
tert-Butylbenzene	SW8260B	2.1	0.55	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,2,4-Trimethylbenzene	SW8260B	2.1	0.49	1.1	ND		ug/L	01/25/19	14:04	NP	436824
sec-Butyl Benzene	SW8260B	2.1	0.62	1.1	ND		ug/L	01/25/19	14:04	NP	436824
p-Isopropyltoluene	SW8260B	2.1	0.56	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,3-Dichlorobenzene	SW8260B	2.1	0.35	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,4-Dichlorobenzene	SW8260B	2.1	0.37	1.1	ND		ug/L	01/25/19	14:04	NP	436824
n-Butylbenzene	SW8260B	2.1	0.57	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,2-Dichlorobenzene	SW8260B	2.1	0.34	1.1	ND		ug/L	01/25/19	14:04	NP	436824
1,2-Dibromo-3-Chloropropane	SW8260B	2.1	1.6	4.2	ND		ug/L	01/25/19	14:04	NP	436824
Hexachlorobutadiene	SW8260B	2.1	1.3	4.2	ND		ug/L	01/25/19	14:04	NP	436824
1,2,4-Trichlorobenzene	SW8260B	2.1	2.0	4.2	ND		ug/L	01/25/19	14:04	NP	436824
Naphthalene	SW8260B	2.1	2.5	4.2	ND		ug/L	01/25/19	14:04	NP	436824
1,2,3-Trichlorobenzene	SW8260B	2.1	2.5	4.2	ND		ug/L	01/25/19	14:04	NP	436824
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**103**		%	01/25/19	14:04	NP	436824
(S) Toluene-d8	SW8260B		75.1 - 127		**108**		%	01/25/19	14:04	NP	436824
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**114**		%	01/25/19	14:04	NP	436824

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 01/21/19, 4:05 pm
Date Reported: 01/28/19

Client Sample ID:	GRAB02	**Lab Sample ID:**	1901171-004B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	01/21/19 / 12:01		
SDG:			

Prep Method:	5030GRO	**Prep Batch Date/Time:**	1/21/19	9:00:00AM
Prep Batch ID:	1110452	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	**666**	x	ug/L	01/21/19	19:06	NP	436725
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		**103**		%	01/21/19	19:06	NP	436725

NOTE: x- Although TPH as Gasoline constituents are present, results are elevated due to the presence of non-target compounds within range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1901171	**Prep Method:**	5030VOC	**Prep Date:**	01/21/19	**Prep Batch:**	1110447
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/21/2019	**Analytical Batch:**	436725
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.26	0.50	ND	
Chloromethane	0.17	0.50	ND	
Vinyl Chloride	0.21	0.50	ND	
Bromomethane	0.21	0.50	ND	
Chloroethane	0.11	0.50	ND	
Trichlorofluoromethane	0.19	0.50	ND	
1,1-Dichloroethene	0.14	0.50	ND	
Freon 113	0.34	0.50	ND	
Methylene Chloride	0.13	1.0	ND	
trans-1,2-Dichloroethene	0.16	0.50	ND	
MTBE	0.077	0.50	ND	
tert-Butanol	7.4	10	ND	
Diisopropyl ether	0.12	0.50	ND	
1,1-Dichloroethane	0.12	0.50	ND	
Ethyl tert-Butyl Ether	0.064	0.50	ND	
cis-1,2-Dichloroethene	0.15	0.50	ND	
2,2-Dichloropropane	0.094	0.50	ND	
Bromochloromethane	0.15	0.50	ND	
Chloroform	0.12	0.50	ND	
Carbon Tetrachloride	0.16	0.50	ND	
1,1,1-Trichloroethane	0.16	0.50	ND	
1,1-Dichloropropene	0.19	0.50	ND	
Benzene	0.16	0.50	ND	
Tert amyl-Methyl Ether	0.072	0.50	ND	
1,2-Dichloroethane	0.11	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
Dibromomethane	0.11	0.50	ND	
1,2-Dichloropropane	0.089	0.50	ND	
Bromodichloromethane	0.076	0.50	ND	
cis-1,3-Dichloropropene	0.078	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.24	0.50	ND	
trans-1,3-Dichloropropene	0.22	0.50	ND	
1,1,2-Trichloroethane	0.076	0.50	ND	
Dibromochloromethane	0.18	0.50	ND	
1,3-Dichloropropane	0.22	0.50	ND	
1,2-Dibromoethane	0.079	0.50	ND	
Chlorobenzene	0.16	0.50	ND	
Ethylbenzene	0.20	0.50	ND	
1,1,1,2-Tetrachloroethane	0.087	0.50	ND	
m,p-Xylene	0.39	1.0	ND	
o-Xylene	0.15	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1901171	**Prep Method:**	5030VOC	**Prep Date:**	01/21/19	**Prep Batch:**	1110447
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/21/2019	**Analytical Batch:**	436725
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.11	0.50	ND	
Bromoform	0.076	0.50	ND	
Isopropyl Benzene	0.22	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.079	0.50	ND	
2-Chlorotoluene	0.25	0.50	ND	
1,3,5-Trimethylbenzene	0.24	0.50	ND	
1,2,3-Trichloropropane	0.15	0.50	ND	
4-Chlorotoluene	0.22	0.50	ND	
tert-Butylbenzene	0.26	0.50	ND	
1,2,4-Trimethylbenzene	0.23	0.50	ND	
sec-Butyl Benzene	0.30	0.50	ND	
p-Isopropyltoluene	0.27	0.50	ND	
1,3-Dichlorobenzene	0.17	0.50	ND	
1,4-Dichlorobenzene	0.18	0.50	ND	
n-Butylbenzene	0.27	0.50	ND	
1,2-Dichlorobenzene	0.16	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.76	2.0	ND	
Hexachlorobutadiene	0.62	2.0	ND	
1,2,4-Trichlorobenzene	0.93	2.0	ND	
Naphthalene	1.2	2.0	ND	
1,2,3-Trichlorobenzene	1.2	2.0	ND	
(S) Dibromofluoromethane			106	
(S) Toluene-d8			99.0	
(S) 4-Bromofluorobenzene			97.4	

Work Order:	1901171	**Prep Method:**	5030GRO	**Prep Date:**	01/21/19	**Prep Batch:**	1110452
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/21/2019	**Analytical Batch:**	436725
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	29	50	46	
(S) 4-Bromofluorobenzene			83.0	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1901171	**Prep Method:**	5030VOC	**Prep Date:**	01/22/19	**Prep Batch:**	1110482
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/22/2019	**Analytical Batch:**	436750
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.26	0.50	ND	
Chloromethane	0.17	0.50	ND	
Vinyl Chloride	0.21	0.50	ND	
Bromomethane	0.21	0.50	ND	
Chloroethane	0.11	0.50	ND	
Trichlorofluoromethane	0.19	0.50	ND	
1,1-Dichloroethene	0.14	0.50	ND	
Freon 113	0.34	0.50	ND	
Methylene Chloride	0.13	1.0	ND	
trans-1,2-Dichloroethene	0.16	0.50	ND	
MTBE	0.077	0.50	ND	
tert-Butanol	7.4	10	ND	
Diisopropyl ether	0.12	0.50	ND	
1,1-Dichloroethane	0.12	0.50	ND	
Ethyl tert-Butyl Ether	0.064	0.50	ND	
cis-1,2-Dichloroethene	0.15	0.50	ND	
2,2-Dichloropropane	0.094	0.50	ND	
Bromochloromethane	0.15	0.50	ND	
Chloroform	0.12	0.50	ND	
Carbon Tetrachloride	0.16	0.50	ND	
1,1,1-Trichloroethane	0.16	0.50	ND	
1,1-Dichloropropene	0.19	0.50	0.46	
Benzene	0.16	0.50	ND	
Tert amyl-Methyl Ether	0.072	0.50	ND	
1,2-Dichloroethane	0.11	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
Dibromomethane	0.11	0.50	ND	
1,2-Dichloropropane	0.089	0.50	ND	
Bromodichloromethane	0.076	0.50	ND	
cis-1,3-Dichloropropene	0.078	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.24	0.50	ND	
trans-1,3-Dichloropropene	0.22	0.50	ND	
1,1,2-Trichloroethane	0.076	0.50	ND	
Dibromochloromethane	0.18	0.50	ND	
1,3-Dichloropropane	0.22	0.50	ND	
1,2-Dibromoethane	0.079	0.50	ND	
Chlorobenzene	0.16	0.50	ND	
Ethylbenzene	0.20	0.50	ND	
1,1,1,2-Tetrachloroethane	0.087	0.50	ND	
m,p-Xylene	0.39	1.0	ND	
o-Xylene	0.15	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1901171	**Prep Method:**	5030VOC	**Prep Date:**	01/22/19	**Prep Batch:**	1110482
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/22/2019	**Analytical Batch:**	436750
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.11	0.50	ND	
Bromoform	0.076	0.50	ND	
Isopropyl Benzene	0.22	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.079	0.50	ND	
2-Chlorotoluene	0.25	0.50	ND	
1,3,5-Trimethylbenzene	0.24	0.50	ND	
1,2,3-Trichloropropane	0.15	0.50	ND	
4-Chlorotoluene	0.22	0.50	0.47	
tert-Butylbenzene	0.26	0.50	ND	
1,2,4-Trimethylbenzene	0.23	0.50	ND	
sec-Butyl Benzene	0.30	0.50	ND	
p-Isopropyltoluene	0.27	0.50	ND	
1,3-Dichlorobenzene	0.17	0.50	ND	
1,4-Dichlorobenzene	0.18	0.50	ND	
n-Butylbenzene	0.27	0.50	ND	
1,2-Dichlorobenzene	0.16	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.76	2.0	ND	
Hexachlorobutadiene	0.62	2.0	ND	
1,2,4-Trichlorobenzene	0.93	2.0	ND	
Naphthalene	1.2	2.0	ND	
1,2,3-Trichlorobenzene	1.2	2.0	ND	
(S) Dibromofluoromethane			110	
(S) Toluene-d8			105	
(S) 4-Bromofluorobenzene			98.5	

Work Order:	1901171	**Prep Method:**	5030GRO	**Prep Date:**	01/22/19	**Prep Batch:**	1110483
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/22/2019	**Analytical Batch:**	436750
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	29	50	ND	
(S) 4-Bromofluorobenzene			89.0	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1901171	**Prep Method:**	300.0P	**Prep Date:**	01/22/19	**Prep Batch:**	1110521
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	1/22/2019	**Analytical Batch:**	436793
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Sulfate	0.00050	0.50	0.035		

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1901171	**Prep Method:**	5030VOC	**Prep Date:**	01/25/19	**Prep Batch:**	1110553
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/25/2019	**Analytical Batch:**	436824
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.26	0.50	ND	
Chloromethane	0.17	0.50	ND	
Vinyl Chloride	0.21	0.50	ND	
Bromomethane	0.21	0.50	ND	
Chloroethane	0.11	0.50	ND	
Trichlorofluoromethane	0.19	0.50	ND	
1,1-Dichloroethene	0.14	0.50	ND	
Freon 113	0.34	0.50	ND	
Methylene Chloride	0.13	1.0	ND	
trans-1,2-Dichloroethene	0.16	0.50	ND	
MTBE	0.077	0.50	ND	
tert-Butanol	7.4	10	ND	
Diisopropyl ether	0.12	0.50	ND	
1,1-Dichloroethane	0.12	0.50	ND	
Ethyl tert-Butyl Ether	0.064	0.50	ND	
cis-1,2-Dichloroethene	0.15	0.50	ND	
2,2-Dichloropropane	0.094	0.50	ND	
Bromochloromethane	0.15	0.50	ND	
Chloroform	0.12	0.50	ND	
Carbon Tetrachloride	0.16	0.50	ND	
1,1,1-Trichloroethane	0.16	0.50	ND	
1,1-Dichloropropene	0.19	0.50	ND	
Benzene	0.16	0.50	ND	
Tert amyl-Methyl Ether	0.072	0.50	ND	
1,2-Dichloroethane	0.11	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
Dibromomethane	0.11	0.50	ND	
1,2-Dichloropropane	0.089	0.50	ND	
Bromodichloromethane	0.076	0.50	ND	
cis-1,3-Dichloropropene	0.078	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.24	0.50	ND	
trans-1,3-Dichloropropene	0.22	0.50	ND	
1,1,2-Trichloroethane	0.076	0.50	ND	
Dibromochloromethane	0.18	0.50	ND	
1,3-Dichloropropane	0.22	0.50	ND	
1,2-Dibromoethane	0.079	0.50	ND	
Chlorobenzene	0.16	0.50	ND	
Ethylbenzene	0.20	0.50	ND	
1,1,1,2-Tetrachloroethane	0.087	0.50	ND	
m,p-Xylene	0.39	1.0	ND	
o-Xylene	0.15	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1901171	**Prep Method:**	5030VOC	**Prep Date:**	01/25/19	**Prep Batch:**	1110553
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/25/2019	**Analytical Batch:**	436824
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.11	0.50	ND	
Bromoform	0.076	0.50	ND	
Isopropyl Benzene	0.22	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.079	0.50	ND	
2-Chlorotoluene	0.25	0.50	ND	
1,3,5-Trimethylbenzene	0.24	0.50	ND	
1,2,3-Trichloropropane	0.15	0.50	ND	
4-Chlorotoluene	0.22	0.50	ND	
tert-Butylbenzene	0.26	0.50	ND	
1,2,4-Trimethylbenzene	0.23	0.50	ND	
sec-Butyl Benzene	0.30	0.50	ND	
p-Isopropyltoluene	0.27	0.50	ND	
1,3-Dichlorobenzene	0.17	0.50	ND	
1,4-Dichlorobenzene	0.18	0.50	ND	
n-Butylbenzene	0.27	0.50	ND	
1,2-Dichlorobenzene	0.16	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.76	2.0	ND	
Hexachlorobutadiene	0.62	2.0	ND	
1,2,4-Trichlorobenzene	0.93	2.0	ND	
Naphthalene	1.2	2.0	ND	
1,2,3-Trichlorobenzene	1.2	2.0	ND	
(S) Dibromofluoromethane			116	
(S) Toluene-d8			109	
(S) 4-Bromofluorobenzene			115	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1901171	**Prep Method:**	5030VOC	**Prep Date:**	01/21/19	**Prep Batch:**	1110447
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/21/2019	**Analytical Batch:**	436725
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50		17.9	90.0	101	11.1	61.4 - 129	30	
Benzene	0.16	0.50		17.9	100	109	8.56	66.9 - 140	30	
Trichloroethylene	0.15	0.50		17.9	106	110	4.15	69.3 - 144	30	
Toluene	0.14	0.50		17.9	107	115	8.08	76.6 - 123	30	
Chlorobenzene	0.16	0.50		17.9	101	107	5.38	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	94.4	103		61.2 - 131		
(S) Toluene-d8				17.9	95.6	102		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	96.9	102		64.1 - 120		

Work Order:	1901171	**Prep Method:**	5030GRO	**Prep Date:**	01/21/19	**Prep Batch:**	1110452
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/21/2019	**Analytical Batch:**	436725
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	29	50	46	238	103	93.7	9.40	52.4 - 127	30	
(S) 4-Bromofluorobenzene				11.9	98.2	100		41.5 - 125		

Work Order:	1901171	**Prep Method:**	5030VOC	**Prep Date:**	01/22/19	**Prep Batch:**	1110482
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/22/2019	**Analytical Batch:**	436750
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.9	95.5	95.4	0.587	61.4 - 129	30	
Benzene	0.16	0.50	ND	17.9	104	104	0.000	66.9 - 140	30	
Trichloroethylene	0.15	0.50	ND	17.9	106	105	0.531	69.3 - 144	30	
Toluene	0.14	0.50	ND	17.9	107	109	1.04	76.6 - 123	30	
Chlorobenzene	0.16	0.50	ND	17.9	99.7	104	4.40	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	98.4	98.0		61.2 - 131		
(S) Toluene-d8				17.9	96.6	97.6		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	99.2	96.8		64.1 - 120		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1901171	**Prep Method:**	5030GRO	**Prep Date:**	01/22/19	**Prep Batch:**	1110483
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/22/2019	**Analytical Batch:**	436750
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	29	50	ND	238	100	91.5	9.19	52.4 - 127	30	
(S) 4-Bromofluorobenzene				11.9	104	95.8		41.5 - 125		

Work Order:	1901171	**Prep Method:**	300.0P	**Prep Date:**	01/22/19	**Prep Batch:**	1110521
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	1/22/2019	**Analytical Batch:**	436793
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Sulfate	0.00050	0.50	0.035	2.5	106	109	2.99	80 - 120	20	

Work Order:	1901171	**Prep Method:**	5030VOC	**Prep Date:**	01/25/19	**Prep Batch:**	1110553
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	1/25/2019	**Analytical Batch:**	436824
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.9	88.6	88.0	0.635	61.4 - 129	30	
Benzene	0.16	0.50	ND	17.9	101	100	0.557	66.9 - 140	30	
Trichloroethylene	0.15	0.50	ND	17.9	113	111	1.50	69.3 - 144	30	
Toluene	0.14	0.50	ND	17.9	117	112	3.90	76.6 - 123	30	
Chlorobenzene	0.16	0.50	ND	17.9	109	108	0.517	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	99.7	102		61.2 - 131		
(S) Toluene-d8				17.9	116	114		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	118	119		64.1 - 120		

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MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1901171	**Prep Method:**	300.0P	**Prep Date:**	01/22/19	**Prep Batch:**	1110521
Matrix:	**Water**	**Analytical Method:**	E300.0	**Analyzed Date:**	22-Jan-2019	**Analytical Batch:**	436793
Spiked Sample:	1901171-002A						
Units:	mg/L						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Sulfate	0.025	25	65.0	130	117	118	0.943	75 - 125	20	

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg/m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the analyte is found in the associated method or preparation blank

D - Surrogate is not recoverable due to the necessary dilution of the sample

E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.

H- Indicates that the recommended holding time for the analyte or compound has been exceeded

J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative

NA - Not Analyzed

N/A - Not Applicable

ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.

NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added

R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts

S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative

X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: RNC Environmental, LLC

Project Name: AR1936

Work Order No.: 1901171

Date and Time Received: 1/21/2019 4:05:00PM

Received By: Helena Ueng

Physically Logged By: Helena Ueng

Checklist Completed By: Helena Ueng

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	Yes	Temperature:	5.0	°C
Water-VOA vials have zero headspace?	Yes			
Water-pH acceptable upon receipt?	N/A			

pH Checked by: N/A

pH Adjusted by: N/A

Comments:

Login Summary Report

Client ID:	TL6321	RNC Environmental, LLC	**QC Level:**	II
Project Name:	AR1936		**TAT Requested:**	5+ day:5
Project # :			**Date Received:**	1/21/2019
Report Due Date:	2/4/2019		**Time Received:**	4:05 pm

Comments:

Work Order # : ***1901171***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1901171-001A	MW-8	01/21/19 9:59	Water	03/07/19			Anion_W_300.0	
Sample Note:	Sulfate							
1901171-001B	MW-8	01/21/19 9:59	Water	03/07/19			VOC_W_8260B VOC_W_GRO	
1901171-002A	MW-7	01/21/19 9:59	Water	03/07/19			Anion_W_300.0	
1901171-002B	MW-7	01/21/19 9:59	Water	03/07/19			VOC_W_8260B VOC_W_GRO	
1901171-003A	MW-6	01/21/19 9:59	Water	03/07/19			Anion_W_300.0	
1901171-003B	MW-6	01/21/19 9:59	Water	03/07/19			VOC_W_8260B VOC_W_GRO	
1901171-004A	GRAB02	01/21/19 12:01	Water	03/07/19			Anion_W_300.0	
1901171-004B	GRAB02	01/21/19 12:01	Water	03/07/19			VOC_W_GRO VOC_W_8260B	

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
FAX: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 1901171

Company Name: RNC ENVIRONMENTAL LLC ☐ ☑ Env. ☐ Special		Project #: AR1936	PO #:
Address: 151 NURSERY ST		Project Name:	
City: ASHLAND	State: OREGON Zip Code: 97520	Comments:	
Telephone: 888 485 3330	Cell:	SAMPLER: RICH RYAN	Quote #:
REPORT TO: NEIL O'HARA	BILL TO:	EMAIL: RICH@RYANGES.COM	

TURNAROUND TIME: ☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day ☐ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day ☒ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE: ☐ Storm Water ☐ Air ☐ Waste Water ☐ Wipe ☒ Ground Water ☐ Other ☐ Soil ☐ Product / Bulk

REPORT FORMAT: ☐ Level II - Std. ☐ Excel - EDD ☐ EDF ☐ Std.-EDD ☐ QC Level III ☐ QC Level IV

ANALYSIS REQUESTED

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	SULFATE 300	VOCs 8260	REMARKS
001AB		MW-8	1/21/19 0959	W	5	40mL A Lepoxy	✓	✓	
002AB		MW-7	↓	↓	↓	↓	✓	✓	
003AB		MW-6	↓	↓	↓	↓	✓	✓	
004AB		GRAB02	1201	↓	↓	↓	✓	✓	

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1	[signature]	RICH RYAN	1/21/19	1605	[signature]	[illegible]	1/21/19	1605
2	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:

Were Samples Received in Good Condition? ☑ Yes ☐ NO Samples on Ice? ☑ Yes ☐ NO Method of Shipment D/O Sample seals intact? ☐ Yes ☐ NO ☒ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Log In By: _____ Date: _____ Labeled By: _____ Date: _____ Temp 5 °C #2 Page ___ of ___ Rev. 4

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.

Change Order

Work Order: 1901171 **Serial #:** CO19-0027 **Print Date:** 1/29/2019

Project Name: AR1936

Client: RNC Environmental, LLC **Requested By:** Richard Ryan

	Requested Date	Requested Time	Extended Price
Report TPH gas for samples 001-004B; STD TAT	1/29/2019	10:00:00AM	

483 Sinclair Frontage Rd., Milpitas, CA 95035 | tel: 408.263.5258 | fax: 408.263.8293 | www.torrentlab.com

Remedial Action Status Report - #4
ISCO Event #5: February 26-27, 2019
1936 Alum Rock Avenue; San Jose, CA 95116

May 3, 2019

Prepared for
Santa Clara County Department of Environmental Health
Hazardous Materials Compliance Division – Site Mitigation Program
1555 Berger Drive #300
San Jose, CA 95112

On Behalf of
Pacific West Communities, Inc
430 East State Street, Suite 100
Eagle, ID 83616

Prepared by
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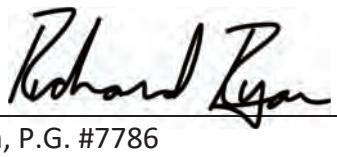

Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

Neil O'Hara
RNC Environmental, LLC

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Statement of Accuracy

I am the primary author of this document and have either performed all field activities documented herein or been present as a field supervisor while the activities were performed. I declare under penalty of perjury that the information, interpretations, and recommendations contained in this document are true and correct to the best of my knowledge and my professional experience.

Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

List of Tables

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Acronyms

AMSL	Above mean sea level
BGL	Below ground level
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CaDWR	California Department of Water Resources
Cond	Conductivity
DPVE	Dual-phase vacuum extraction
DTW	Depth to water
ESLs	Environmental Screening Levels
IECC	International Energy Conservation Council
ISCO	In-Situ Chemical Oxidation
LTCP	Low-Threat Closure Policy
LUST	Leaking underground storage tank
MiHPT	Membrane interface probe and hydraulic profiling tool
mg/L	Milligrams per Liter
µg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per cubic meter
MTBE	Methyl-tert-butyl-ether
PAH	Polynuclear aromatic hydrocarbons
PID	Photo Ionization Detector
ppmV	Parts per million by volume
ORP	Oxygen/Reduction Potential
OVM	Organic Vapor Meter
SCCDEH	Santa Clara County Dept. of Environmental Health
SCVWD	Santa Clara Valley Water District
SFBay RWQCB	San Francisco Bay Regional Water Quality Control Board
TDS	Total dissolved solids
TPH_{gas}	Total petroleum hydrocarbons in the gasoline range
UST	Underground storage tank
VOCs	Volatile organic compounds
WMS-LU	Waterloo Membrane Sampler – Low Uptake

1.0 Introduction

During an August 10, 2018 meeting with SCCDEH, in-situ oxidation was selected as the best remedial option to address a release of gasoline to the subsurface at the site, and pressure injection of PersulfOx solution was selected as the best option to achieve in-situ oxidation. In correspondence dated September 11, 2018, SCCDEH required submittal of technical reports documenting each injection event within 45 days after completion of the event.

The purpose of this report is to (a) document the fifth and final pressure injection event, (b) evaluate post-remediation conditions with respect to the low threat closure policy, and (c) request LUST case closure. As part of case closure, this document includes a request for SCCDEH approval to properly destroy the three remaining groundwater monitoring wells and three soil gas monitoring wells at the site.

The fifth and final pressure injection event included specific activities as follows:

- Pressure injection of 2152 gallons of PersulfOx solution into the subsurface via 11 borings,
- Installation of a third soil vapor monitoring well (SG-20C) to 9 feet BGL,
- Collection and laboratory analysis of two soil vapor samples and three groundwater samples,
- Triple rinsing and disposal of all empty PersulfOx containers (233 bags).

At the conclusion of the fifth injection event:

- A project total of 12,838.3 lbs of PersulfOx had been placed in the subsurface by pressure injection (97% of the design total 13,224 lbs),
- The Conex container used for temporary chemical storage had been removed from the site,
- Six 55-gallon steel drums containing petroleum impacted soil remain on site for subsequent disposal at a permitted facility,

2.0 Pressure Injection Event #5

The fifth pressure injection event occurred over a two-day period, February 26-27, 2019. The goal of the event was to distribute 196 gallons of PersulfOx solution into each of 11 borings (B31 through B42). That goal was different from previous events with respect a greater number of borings and fewer depth intervals in each boring. The goal of the fifth event was successfully met with only minor variations implemented to control solution surfacing problems.

2.1 Pressure Injection Activities

Gregg Drilling performed mixing, drilling, and injection services. The mixing trailer operator recorded pump pressure, flow rate, and total volume at each depth interval in each boring. **Table 1** is a summary listing of that data. **Appendix A** contains a cumulative listing of depths, pressures, and volumes for all five injection events. **Figure 1** is a map showing injection point locations. **Figure 2** is a cross-section showing the injection depth intervals in relation to the petroleum mass in the subsurface.

Approximately 2152 gallons of solution containing 2424.4 lbs of PersulfOx was pressure injected into the subsurface during the fifth event. That material was placed at a rate of 196 gallons of solution in each of eleven borings. PersulfOx solution was mixed in one 196-gallon batch for each boring. Each batch contained 220.4 lbs of PersulfOx mixed with approximately 185 gallons of potable water.

The injection depth intervals during the fifth event were different from previous events, and that difference reflects the use of a different injection tool. The injection tool consisted of a 1.5-inch diameter by 38-inch long perforated steel pipe with 45 @ 0.125-inch diameter holes evenly distributed along its length. The injection tool used during previous events had a 14-inch long perforated section. The longer perforated section resulted in fewer injection depth intervals. Three depth intervals were targeted in each of 11 borings at 18.5-22.0, 24.0-27.5, and 29.5-33.0 ft BGL. The three intervals were targeted to receive 81.5, 81.5 and 33.5 gallons of solution, respectively, for a total of 196 gallons of solution in each boring.

2.2 Solution Surfacing Problems

Solution surfacing problems occurred primarily during injection at B32 and B37. At B32, surfacing was noticed after injecting 65 gallons in the first depth interval (18.5-22.0 ft). In response, pumping was terminated, the injection tool was advanced to the second depth interval (24.0-27.5 ft), and an extra 16 gallons of solution was injected at a reduced flow rate in the second depth interval. At B37, surfacing was noticed after injecting 38 gallons in the first depth interval, it occurred again after injecting 40 gallons at the second depth interval, and was observed again after injecting 36 gallons at the third depth interval. A twelfth boring was added at the end of the event to place the extra solution into the subsurface.

2.3 Waste Management

Empty PersulfOx bags are classified as a hazardous waste unless properly managed. According to “22CCR 66261.7 Contaminated Containers”, empty and then rinsed containers of 5-gallons or less are exempt from regulation and may be disposed in any municipal solid waste landfill provided all rinse water is containerized and re-used in ISCO process make-up water. Further, the empty and rinsed bags should be exempt from any transportation regulation under the

"49CFR 173.4b De minimis Exception" provided they are double bagged in heavy duty garbage bags.

PersulfOx is a dry, crystalline powder with an average density of 13.8 pounds per gallon and is delivered in multi-walled sacks weighing 55.1-pounds (4-gallon containers). Immediately after use, the bags were accumulated in a plastic garbage bag, and at the end of the day were securely stored in the on-site Conex container for subsequent processing. The sacks were emptied in accordance with 22CCR66261.7(b), rinsed in accordance with 22CCR66261.7(c), and packaged for transport as follows:

- Corners at the open end of the bag were sliced with a razor knife to completely remove any folds or crenulations,
- The bag was fully expanded and up-ended into a 55-gallon open-top steel drum to empty any remaining product,
- The bag was triple rinsed using a garden hose equipped with a wide-spay shower nozzle;
    - The bag received a first rinse while laying horizontally on a table with the open end of the bag extending over the open drum,
    - The bag received a second rinse while inverted and suspended on a holder directly over the drum,
    - The bag received a third rinse after being rotated 180 degrees on vertical axis while inverted and suspended on the holder,
    - Any staining or evidence of product on the exterior of the bag was rinsed while suspended on the holder,
    - The rinsed bag remained inverted over the drum and was allowed to drain while the next bag was initially processed,
- Emptied and rinsed bags were bundled in groups of twenty-five and double bagged in heavy duty plastic garbage bags prior to being disposed at a permitted municipal waste facility.

All 233 bags of PersulfOx delivered to the site were processed as described above. Seventy-five of the bags were processed on January 22nd, 125 of the bags were processed on February 26th, and 33 bags were processed on February 27th. All rinse water was used as make-up water for pressure injection activities on the same day it was generated.

3.0 Soil Vapor and Groundwater Sampling

Two soil vapor samples (SG-20B and SG-20C) and three groundwater samples (MW-6, MW-7, and MW-8) were collected as part of the fifth pressure injection event. The purpose of these samples is to help evaluate the effects of PersulfOx in the subsurface. Copies of all laboratory analytical report sheets are included as **Appendix B**.

3.1 Methods and Procedures

Groundwater samples were collected from existing monitoring wells (MW6, MW7, and MW8) on February 26th after the wells had been gauged for depth to water. Samples were retrieved using the Hydra-Sleeve no purge sampling method. The Hydra-Sleeve samplers had been deployed on February 6th. After retrieving a Hydra-Sleeve sampler from a well, groundwater was collected from the sampler into laboratory supplied containers, the containers were labeled and temporarily stored on ice until being transported to the laboratory later the same day. A hand-held multimeter was then used to measure water quality indicator parameters from groundwater remaining in the Hydra-Sleeve sampler.

A WMS-LU passive soil vapor sampler was retrieved from well SG-20C on March 18th. The sampler had been deployed in SG-20C on February 27th. Upon retrieval, the sampler was re-sealed in its shipping containers and returned to Eurofins Air Toxics laboratory for analysis via UPS. The March 18th SG-20C sample was the first to be collected from that well.

The purpose of SG-20C was to collect a soil vapor sample from 9 feet BGL. All previous soil vapor samples had been collected from 5-feet BGL. SG-20C was installed inside in a 9-foot deep boring (3-inch diameter) as the outer casing of a dual-wall macro-core drill string was gradually being removed. The well was constructed with a 9-foot section of 0.75-inch diameter well pipe with a 1-foot perforated interval at the base, 1500 mL of fine drillers sand followed by 600 mL of bentonite chips followed by neat cement grout to the surface, and a 6-inch diameter protective surface cover. **Table 2** is a listing of monitoring well construction specifications for current and former monitoring wells at the site.

Active sampling methods were used in an attempt to collect a soil vapor sample from SG-20B on April 22nd. An air-tight cap was fitted to the top of SG-20B, and a peristaltic pump was used to apply vacuum pressure to the well. The sample was collected into a 2L Tedlar bag, pressure was monitored using a set of magnehelic gauges, and the entire assembly was placed under plastic sheet with an open pan of isopropyl alcohol used as a leak detection gas.

3.2 Results of Well Gauging

Monitoring wells were gauged for depth to water just prior to collecting groundwater samples on February 26th. A listing of all depth to water gauging data accumulated since May 2017 is shown in **Table 3**. A listing of groundwater elevations calculated from the depth to water gauging data is shown in **Table 4.** **Figure 3** is a groundwater elevation potentiometric map for February 26, 2019. The direction of groundwater flow on February 26th is indicated to be toward the north under a hydraulic gradient of 0.018 ft/ft. That direction is only consistent with previous high

groundwater elevation events, and it is consistent with overall regional surface water drainage patterns.

3.3 Results of Groundwater Sampling

Three groundwater samples (MW6, MW7 and MW8) were collected on February 26th and analyzed for 65 VOCs by SW-846 8260 and for sulfate by EPA-NERL 300.0. **Table 5** is a summary of the February 26th results. Note that MTBE and sulfate were the only constituents detected in the samples, and none of the detected values exceeds Tier 1 ESLs.

Table 6 shows a comparison of the February 26th groundwater analytical results to previous sampling results. Note that the February 26th groundwater results from MW6, MW7, and MW8 are consistent with results from previous sampling events. That is, MW6, MW7, and MW8 remain outside the impact area and there are no obvious changes that can be associate with pre-, and post-remediation values.

Table 7 shows current and historic results for groundwater indicator parameters measured in the field during groundwater sampling. Note that there are no obvious changes to indicator parameters that can be associate with pre-, and post-remediation values.

3.4 Results of Soil Vapor Sampling

Two soil vapor samples were collected as part of the final pressure injection event. One sample was collected using passive sampling techniques. Passive samplers cannot be analyzed for oxygen. The other sample was collected using active sampling techniques in an attempt to obtain a sample that could be analyzed for oxygen content.

3.4.1 Passive Soil Vapor Sampling Results

The soil vapor sample from well SG-20C was collected using passive sampling techniques and analyzed for six VOCs using modified method TO-17. That sample is representative of the average soil vapor concentration over the 18.9-day period between February 27th and March 18th.

Table 8 is a summary of laboratory analytical results for the 4 passive soil vapor samples collected to date. Note that the measured concentration of benzene from SG-20B and SG-20C exceeds all ESL values that may be applicable to the site. Ethylbenzene, xylenes, and naphthalene exceed only the Tier 1 ESL but not the ESLs based on AF0.0008 and AF= 0.0002. It is typical that benzene drives unfavorable health risks at petroleum sites.

The concentration of BTEX constituents in the SG-20C sample is slightly lower than those in a sample from SG-20B collected several weeks earlier. However, the deeper sample (SG-20C)

should have a slightly higher concentration than the shallower sample (SG-20B). Well SG-20C is completed at 9 feet BGL and SG-20B is completed at 5 feet BGL.

3.4.2 Soil Vapor Oxygen Sampling Results

A soil vapor sample from SG-20B was collected using active sampling techniques on April 23rd. Isopropyl alcohol was used as a leak detection gas. Laboratory analysis found that oxygen and isopropyl alcohol were the only constituents detected in the SG-20B sample. Therefore, the sample is considered to not be representative of subsurface conditions.

Soil vapor sampling by active sampling techniques are not appropriate for the extreme low flow conditions encountered at the site. **Figure 4** shows a shut-in pressure test conducted during purging SG-20B. Flow rates during purging were approximately 6.5 to 19.5 mL/min at 6.0 to 10.0 psi. Flow rates below 100 to 200 mL/min at pressures ≤ 3.6 psi are considered low for active sampling techniques. The extremely low flow conditions documented during purging SG-20B are representative of subsurface conditions.

4.0 Discussion

In-situ application of PersulfOx can be expected to produce early and late stage remedial effects. Early stage effects of PersulfOx result from a catalyzed reaction producing peroxide free radical molecules. The peroxide radicals are a strong chemical oxidizer which should break chemical bonds between hydrogen and carbon in petroleum hydrocarbon molecules. The concentration of BTEX constituents in groundwater near the center of the impact area is now approximately 5% of what they were in April 2018 (compare GRAB01 and GRAB02 results to MW-3 results, **Table 6**). That improvement in groundwater quality is presumably due to early stage chemical oxidation by PersulfOx.

Late stage effects of PersulfOx should result from increased sulfate content in the subsurface promoting sulfate-phase aerobic biodegradation. The increased concentration of sulfate in groundwater from 61,500 µg/L in May 2017 to 8,700,000 µg/L in January 2019 (compare GRAB01 and GRAB02 results to MW-3 results, **Table 6**) is attributed to the application of PersulfOx. Continued improvement of groundwater quality in the future is anticipated based on late-stage effects of PersufOx.

4.1 Equilibrium between Impacted Groundwater and Soil Vapor

Conceptually, gasoline in soil vapor at the site originates from volatilization of gasoline in groundwater. A reduction in groundwater concentrations should therefore result in a reduction in soil vapor concentrations. However, soil vapor concentrations may not react immediately to

changing groundwater concentrations, and that is especially true for sites underlain by dense clay and a thick partially saturated vadose zone.

Literature review indicates that where a VOC source occurs below a dense clay layer:

> "...one can estimate times to reach near-steady conditions of …. a few months to a few years for intermediate-depth sites (up to 3 m depth to the vapor source)"[1]

The time required for soil vapor to equilibrate with groundwater concentrations can be estimated based on available geotechnical information at the site to be an absolute minimum of 8 months, and a time lag of 6.5 years or more would not be an unreasonable estimation (see **Table 9**). The extremely low soil vapor flow rates documented during active soil vapor sampling are consistent with a prolonged time period for soil vapor to equilibrate with groundwater.

4.2 Vapor Intrusion to Indoor Air

The potential for soil vapor intrusion to indoor air can be evaluated by using a measured subsurface concentration (soil, soil vapor, and/or groundwater) and applying an "attenuation factor". Attenuation factors are a simple ratio between indoor air concentration and subsurface media concentration.

A USEPA database of measured pairs of indoor air and subsurface VOC concentrations[3] indicates three attenuation factors which could be used to predict indoor air quality at the subject property as follows:

- AF = 0.03 for generic soil vapor and sub-slab vapor samples,
- AF = 0.001 for generic groundwater samples,
- AF = 0.0005 for groundwater samples at sites underlain by clay rich sediments.

These attenuation factors were derived as a statistical upper limit of observed attenuation factors which documented large variation and did not include petroleum constituents. The AF=0.03 has apparently been adopted by SF Bay RWQCB as the most recent Tier 1 ESL for the soil vapor to indoor air pathway, however the documentation supporting the most recent Tier 1 ESLs has not yet been released. Tier 1 ESLs are known to be overly conservative values.

An alternative approach (Brewer method) relies on the fact that a building's ventilation rate is positively correlated to soil vapor entry rate, and the ventilation rate can be related to IECC climatic zones which quantify different geographic regions by heating degree days and cooling

[1] American Petroleum Institute, November 2005. "A Practical Strategy for Assessing the Subsurface Vapor-to-Indoor Air Migration Pathway at Petroleum Hydrocarbon Sites", 106p., Pub#4741.

[3] USEPA OSWER, March 16, 2012. "EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings", EPA 530-R-10-002, 188p.

degree days. The attenuation factor can therefore be expressed as a ratio between the rate of soil vapor entry into a building and the rate of fresh air entry into the same building as follows[5]:

$$AF = \frac{\text{Vapor Intrusion Rate}}{\text{Indoor Air Exchange Rate}}$$

where;

Indoor Air Exchange Rate (IAER) – default value: 1.0 exchange per hour for average annual IAER in Mediterranean climate along coastal central California.

Vapor Intrusion Rate (VIR) – default value: 3.4 liters per minute (per 100 m^2 bldg footprint) as a weighted annual average VIR in Mediterranean climate. Studies indicate a variation from 0 to 2 liters per minute (per 100 m^2 footprint) when buildings are being cooled to a maximum of 3 to 5 liters per minute (per 100 m^2 footprint) when buildings are being heated.

Using the Brewer method with default values for vapor intrusion rate and indoor air exchange rate (IAER= 3.4 L/m per 100 m^2 footprint, VIR = 1.0 L/hr), an AF= 0.0008 is appropriate for any building in a Mediterranean climate zone underlain by a continuous vapor source (see **Table 10**). One advantage of calculation of AF by the Brewer method is it provides for adjustment based on a building only partially underlain by a vapor source. **Figure 5** is a map showing that a 5,298 SF multipurpose room is planned to overly the 1,270 SF impact area. Using the Brewer method with the same default values for a Mediterranean climate zone, an AF= 0.0002 is calculated to be appropriate for a 5,298 SF multipurpose room overlying the 1,276 SF impact area (see **Table 10**).

With regard to pre-remediation conditions, an indoor air concentration of 1.75 µg/m^3 benzene is predicted for a building constructed over the impact area. **Table 11** shows predicted indoor air quality for benzene using (a) USEPA groundwater AF=0.0005 applied to 3,500 ug/L groundwater concentration and (b) Brewer's AF=0.0008 applied to a 2,200 µg/m^3 soil vapor concentration. Note that both calculations indicate a 1.75 µg/m^3 indoor air concentration as a result. The fact that both calculations produce the same result is an indication of good predictive ability.

With regard to post-remediation groundwater conditions, an indoor air concentration of 0.065 µg/m^3 benzene is predicted for a building constructed over the impact area using USEPA groundwater AF=0.0005 applied to the 130 ug/L benzene post-remediation groundwater concentration (see **Table 11**). That predicted concentration is below the Tier 1 ESL for indoor air (0.097 µg/m^3).

[5] Brewer, etal, 2014. "Estimation of Generic Sub-slab Attenuation Factors for Vapor Intrusion Investigations", Groundwater Monitoring & Remediation Vol. 34, no. 4, Fall 2014, pp 79-92.

A range of acceptable post-remediation soil vapor concentrations for benzene can be back-calculated from Tier 1 ESL for indoor air (0.097 µg/m^3) using Brewer's method AF= 0.0008 and AF= 0.0002 (see **Table 10**). Using AF= 0.0008 indicates a soil vapor concentration of 121 µg/m^3 benzene must be obtained in order to meet acceptable indoor air quality for a future building at the site. Using AF=0.0002 indicates a soil vapor concentration of 485 µg/m^3 must be obtained in order to meet acceptable indoor air quality for a future building at the site (see **Table 11**). The difference in the values reflects a generic value for AF (0.0008) or one that is adjusted for site specific building plans (0.0002).

4.3 LUST Case Closure Evaluation

Table 12 is a checklist of criteria listed in 'State Water Board Policy for Low-Threat UST Case Closure'. The checklist includes general and media specific requirements that are indicators that a release site qualifies as low-threat to human health and the environment. Review of **Table 12** indicates the site meets the criteria for case closure under the low-threat policy.

4.3.1 Secondary Source Removal

Correspondence from SCCDEH dated August 24, 2018 required that "additional action is necessary to remove secondary source mass", and that an Interim Remedial Action Plan must be implemented to remove the secondary source.

Pressure injection of PersulfOx was implemented in response to SCCDEH's August 24, 2018 directive. Post-remediation groundwater concentrations are currently 5% of those observed in early 2018 (see **Table 6**, compare GRAB01 and GRAB02 with MW-3). Based on grab groundwater samples collected from near the center of the impact area, a significant reduction of the secondary source mass is indicated to have occurred.

4.3.2 LTCP Media Specific Criteria – Groundwater

Compliance with the LTCP groundwater media criteria require that (a) the groundwater plume be stable or decreasing in areal extent and (b) site conditions must meet one of five additional scenarios.

Direct evidence of a stable or decreasing groundwater plume is indicated by recent groundwater sampling data which indicate post-remediation groundwater concentrations are currently 5% of those observed in early 2018. With regard to the additional five scenarios, the site would comply with three of those scenarios except for the proximity of Silver Creek. However, well MW-6 exists between the impact area and Silver Creek and groundwater monitoring results since Oct. 2016 when the well was installed indicate GW concentrations at that location are protective of Silver Creek water quality. Additionally, the fifth scenario specifically allows for analysis of site-specific

conditions to be considered when evaluating potential impact to human health and the environment.

4.3.3 LTCP Media Specific Criteria – Vapor Intrusion Potential

Compliance with the LTCP vapor intrusion criteria require that one of four groups of criteria must be met for case closure. The checklist indicates that one of four groups of criteria is satisfied. Also, a second group of criteria based on site-specific assessment of risk (see **sections 4.1 and 4.2** above) is predicted to be met once soil vapor concentrations equilibrate with post-remediation groundwater concentrations. Those predictions are based on a USEPA statistically significant calculation of an upper limit relating indoor air concentrations for buildings overlying a groundwater plume.

5.0 Summary and Conclusions

Post-remediation groundwater concentrations are approximately 5% of pre-remediation levels. A similar reduction in soil vapor concentrations should logically follow but have not yet been observed. Fate and transport analysis indicate a 7-month to 7-year time lag can be expected before soil vapor concentrations equilibrate with the post-remediation groundwater concentrations. The current post-remediation concentration of dissolved benzene in groundwater is 130 µg/L, down from 3,500 µg/L. The current concentration of benzene in soil vapor is 2,200 $\mu g/m^3$.

Predicting indoor air quality from soil vapor and/or groundwater sample data is a primary concern for the site. Using pre-remediation concentrations for groundwater (3,500 µg/L benzene) and soil vapor (2,200 $\mu g/m^3$ benzene), an indoor air concentration of 1.75 $\mu g/m^3$ benzene is predicted (see **Table 11**). The fact that predictions based on soil vapor samples match the predictions based on groundwater samples indicates that a good predictive ability exists. Using this predictive method with post-remediation groundwater concentrations (130 µg/L benzene), an indoor air concentration of 0.065 $\mu g/m^3$ benzene is predicted for a future building overlying the impact area. That value is below the Tier 1 ESL for indoor air of 0.097 $\mu g/m^3$ for benzene, and it is based on an apparently good predictive ability based on a statistically significant USEPA attenuation factor relating groundwater concentrations to indoor air concentrations at vapor intrusion sites.

The fifth and final PersulfOx pressure injection event occurred on February 26th and 27th. The goal of that event was to distribute 2,152 gallons of solution containing 2424.4 lbs of PersulfOx (44 bags) between 3 depth intervals in each of 11 borings. That goal was met except for some minor changes implemented to address solution surfacing problems. Changes included a redistributing the volume in one boring (B32), a reduced total volume injected at B37, and adding

one extra boring at the end of the event to use remaining solution. A project total of 12,838 lbs of PersulfOx (233 @ 55.1 lbs bags) mixed in approximately 11,398 gallons of total solution have been pressure injected into the subsurface target area. That amounts to 97% of the design total 13,224 lbs for the project.

Evaluation of 'Low-Threat UST Closure Policy' criteria (see **Table 12**) indicates that case closure is warranted. As part of case closure, it is requested at this time that SCCDEH approve destruction and proper abandonment of three groundwater monitoring wells (MW6, MW7, and MW8) and three soil vapor monitoring wells (SG-20A, SG-20B, and SG-20C) remaining at the site. Little or no valuable additional information can be obtained from the remaining groundwater monitoring wells because the direction of groundwater flow and the hydraulic gradient is well documented. Pending SCCDEH concurrence, the six wells will be abandoned under permit with SCVWD.

TABLES

TABLE 1: Summary of Pressure Injection Depths, Volumes, and Locations

BORING ID	DATE	NaS_2O_8 USED (lbs/gal)	COMMENTS
B31	2/26	234/196	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 32.6 gallons per interval, respectively.
B32	2/26	234/196	3 intervals between 18.5 and 33 ft BGL at 65, 98, and 32.6 gallons per interval, respectively. Surfacing after 65 gallons. Reduce pressure to 35psi and 5gpm.
B33	2/26	234/196	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 32.6 gallons per interval, respectively. Some surfacing after 80 gallons. Reduced flow rate of 4gpm and 30psi
B34	2/26	234/196	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 32.6 gallons per interval, respectively.
B35	2/26	234/196	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 32.6 gallons per interval, respectively.
B36	2/26	234/196	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 32.6 gallons per interval, respectively.
B37	2/26	136/114	3 intervals between 18.5 and 33 ft BGL at 38, 40, and 36 gallons per interval, respectively. Low flow rates here due to previous surfacing issues. Surfacing at 18' interval after 38 gallons push on to 24' and try again
B38	2/26	234/196	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 32.6 gallons per interval, respectively.
B39	2/27	234/196	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 32.6 gallons per interval, respectively.
B40	2/27	234/196	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 32.6 gallons per interval, respectively.
B41	2/27	234/196	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 32.6 gallons per interval, respectively.
B42	2/27	221/185	3 intervals between 18.5 and 33 ft BGL at 81.5, 81.5, and 22 gallons per interval, respectively.

NOTES:

(1) A total of 2424.4 lbs (44 bags) of PersulfOx in 2152 gallons of solution were consumed during the event.

TABLE 2: Summary of Monitoring Well Construction

Well ID	Status	TOC Elev (ft AMSL)	Casing Diameter (in)	Screen Length (ft)	Top Scrn (ft)	Bot. Scrn (ft)	Boring TD (ft)
MW-1	Removed	95.46	2	15.0	15.0	30.0	30.0
MW-2	Removed	95.19	2	10.0	20.0	30.0	30.0
MW-3	Removed	95.45	2	10.0	19.5	29.5	29.5
MW-4	Removed	95.45	2	10.0	18.0	28.0	28.0
MW-5	Removed	95.38	2	15.0	12.0	17.0	17.0
MW-6	Active	95.73	2	10.0	20.0	30.0	30.0
MW-7	Active	94.97	2	10.0	18.0	28.0	28.0
MW-8	Active	95.02	2	10.0	18.0	28.0	28.0
SG-20A	Inactive	--	0.75	0.5	4.5	5.0	5.0
SG-20B	Active	--	0.75	0.5	4.5	5.0	5.0
SG-20C	Active	--	0.75	1.0	8.0	9.0	9.0

NOTES:

(1) The bottom 8 to 12 inches of soil vapor monitoring well SG-20A was found to flooded with water. A replacement vapor well (SG-20B) was installed on Jan. 22nd, and a deeper vapor well (SG-20C) was installed on Feb. 27th.

TABLE 3: Historic Depth to Water Data for MW6, MW7, and MW8

DATE	MW-6	MW-7	MW-8
05/04/17	8.67	6.99	7.38
05/10/17	8.72	7.30	7.65
05/17/17	8.91	7.46	7.77
06/08/17	9.23	7.81	8.09
06/13/17	9.14	7.82	8.03
06/21/17	9.15	7.83	8.00
07/07/17	9.50	8.19	8.35
07/19/17	9.83	8.42	8.61
08/31/17	10.24	8.89	9.00
09/07/17	10.36	9.08	9.19
12/21/17	9.93	8.94	8.99
01/10/18	9.04	4.31	5.32
04/11/18	8.07	5.11	6.48
11/13/18	10.73	9.01	9.35
11/19/18	10.58	8.87	9.22
12/03/18	9.06	6.42	7.89
12/27/18	9.10	7.08	7.84
01/08/19	8.99	6.21	7.03
01/21/19	8.63	5.00	6.31
02/26/19	7.45	4.62	6.06

NOTES:

(1) All values are in units of feet below top of well casing.

(2) Only values collected since May 2017 are shown.

TABLE 4: Historic Groundwater Potentiometric Elevations for MW6, MW7, and MW8

Ref. Elev.	**95.73**	**94.97**	**95.02**
Date	**MW-6**	**MW-7**	**MW-8**
05/04/17	87.06	87.98	87.64
05/10/17	87.01	87.67	87.37
05/17/17	86.82	87.51	87.25
06/08/17	86.50	87.16	86.93
06/13/17	86.59	87.15	86.99
06/21/17	86.58	87.14	87.02
07/07/17	86.23	86.78	86.67
07/19/17	85.90	86.55	86.41
08/31/17	85.49	86.08	86.02
09/07/17	85.37	85.89	85.83
12/21/17	85.80	86.03	86.03
01/10/18	86.69	90.66	89.70
04/11/18	87.66	89.86	88.54
11/13/18	85.00	85.96	85.67
11/19/18	85.15	86.10	85.80
12/03/18	86.67	88.55	87.13
12/27/18	86.63	87.89	87.18
01/08/19	86.74	88.76	87.99
01/21/19	87.10	89.97	88.71
02/26/19	88.28	90.35	88.96

NOTES:

(1) All values are in units of feet above mean sea level.

(2) Only values collected since May 2017 are shown.

TABLE 5: Summary of Groundwater Analytical Results for February 26, 2019

Sample ID	MTBE	Sulfate
MW-6	0.64	310000
MW-7	<0.5	170000
MW-8	<0.5	62000
Tier 1 ESLs:	5	--

NOTES:

(1) All values are in units of µg/L. Only constituents detected in at least one sample are shown.
(2) "<" indicates the constituent was not detected, the associated value is the reporting limit.
(3) Samples were analyzed for 65 VOCs by SW-846 8260 and for sulfate by EPA-NERL 300.0.
(4) Tier 1 ESLs are from SF Bay RWQCB, Jan. 2019.

TABLE 6: Historic Groundwater Analytical Results for MW6, MW7, MW8, and GRAB

Date	Sample ID	TPH_{GAS}	Benzene	Toluene	Ethyl Benzene	o-Xylene	m,p-Xylene	MTBE	Naphthalene	Sulfate	1,2,4-Trimethylbenzene
09/07/17	MW-6	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5
01/10/18	MW-6	<50	**2.6**	**9.6**	**0.96**	**1.4**	**1.3**	<0.5	<2	--	<0.5
04/11/18	MW-6	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5
11/19/18	MW-6	--	<0.5	<0.5	<0.5	<0.5	<1	**0.66**	**2.6**	**270,000**	<0.5
12/27/18	MW-6	--	<0.5	<0.5	<0.5	**0.8**	<1	**0.55**	**4.6**	**270,000**	**1.7**
01/21/19	MW-6	**54.3 x**	<0.5	<0.5	<0.5	<0.5	<1	**0.65**	<2	**350,000**	<0.5
02/26/19	MW-6	<50	<0.5	<0.5	<0.5	<0.5	<1	**0.64**	<2	**310,000**	<0.5
09/07/17	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5
01/10/18	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5
04/11/18	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5
11/19/18	MW-7	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**280,000**	**1.3**
12/27/18	MW-7	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**110,000**	<0.5
01/21/19	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**65,000**	<0.5
02/26/19	MW-7	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**170,000**	<0.5
09/07/17	MW-8	<50	<0.5	<0.5	**0.61**	**0.7**	**2.3**	<0.5	<2	--	<0.5
01/10/18	MW-8	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5
04/11/18	MW-8	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	--	<0.5
11/19/18	MW-8	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**98,000**	<0.5
12/27/18	MW-8	--	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**95,000**	<0.5
01/21/19	MW-8	**54.8 x**	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**90,000**	<0.5
02/26/19	MW-8	<50	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<2	**62,000**	<0.5
09/07/17	(MW-3)*	**23300**	**2900**	**190**	**2800**	**1100**	**1300**	<21	**360**	**61,500****	**1400**
01/10/18	(MW-3)*	**23100**	**1200**	**100**	**2300**	**550**	**1100**	<21	**370**	--	**1400**
04/11/18	(MW-3)*	**20600**	**3500**	**360**	**2800**	**1300**	**1600**	<21	**420**	--	**1300**
11/19/18	--	--	--	--	--	--	--	--	--	--	--
12/27/18	GRAB01	--	**26**	**45**	**52**	**55**	**83**	<0.5	**13**	**2,100,000**	**51**
01/21/19	GRAB02	**666 x**	**130**	**28**	**28**	**4**	**2.6**	**2.2**	<4.2	**8,700,000**	<1.1
02/26/19	--	--	--	--	--	--	--	--	--	--	--
Tier 1 ESLs:		100	0.421	40	3.51	20		5	0.17	--	--
Surface Water ESL:		440	46	130	290	--		66000	240	--	--
AF = 0.001 ESLs:		n/a	97	312,857	1,123	104,286		n/a	83	--	--
AF = 0.0005 ESLs:		n/a	194	625,800	2,200	208,600		n/a	166	--	--

Continued …

TABLE 6: Historic Groundwater Analytical Results for MW6, MW7, MW8, and GRAB (continued)

Date	Sample ID	1,3,5-Trimethyl benzene	Bromo methane	Isopropyl Benzene	n-Propyl benzene	n-Butyl benzene	sec-Butyl Benzene	p-Isopropyl toluene	1,2-Dichloro ethane	1,2,3-Trichloro benzene	1,2,4-Trichloro benzene	Bromoform
09/07/17	MW-6	<0.5	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	<0.5	<2	<2	<0.5
01/10/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
04/11/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
11/19/18	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.65**	<2	<2	<0.5
12/27/18	MW-6	**1.9**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/21/19	MW-6	<0.24	<0.5	<0.5	<0.3	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
02/26/19	MW-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
09/07/17	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/10/18	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
04/11/18	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.5**	<0.5	<2	<2	<0.5
11/19/18	MW-7	**1.5**	<0.5	<0.5	<0.5	**2.2**	**1.1**	<0.5	<0.5	**6.2**	**3.4**	<0.5
12/27/18	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/21/19	MW-7	<0.24	<0.5	<0.5	<0.3	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
02/26/19	MW-7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
09/07/17	MW-8	<0.5	<0.5	<0.5	<0.5	**0.57**	<0.5	<0.5	<0.5	<2	<2	<0.5
01/10/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	**0.89**
04/11/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
11/19/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
12/27/18	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/21/19	MW-8	<0.24	<0.5	<0.5	<0.3	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
02/26/19	MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
09/07/17	(MW-3*)	**100**	<21	**110**	**280**	**50**	<21	<21	<21	<84	<84	<21
01/10/18	(MW-3*)	**120**	<21	**130**	**360**	**40**	**25**	<21	<21	<84	<84	<21
04/11/18	(MW-3*)	**140**	<21	**150**	**350**	**30**	<21	<21	<21	<84	<84	<21
11/19/18	--	--	--	--	--	--	--	--	--	--	--	--
12/27/18	GRAB01	**14**	**1.8**	**3.9**	**10**	<0.5	<0.5	<0.5	<0.5	<2	<2	<0.5
01/21/19	GRAB02	<1.1	**5**	**1.7**	**3.6**	<1.1	<1.1	<1.1	**34**	<4.2	<4.2	<1.1
02/26/19	--	--	--	--	--	--	--	--	--	--	--	--
Tier 1 ESLs:		--	7.55	--	--	--	--	--	0.5	--	5	80
Surface Water ESL:		--	160	--	--	--	--	--	10000	--	25	1100
AF = 0.001 ESLs:		--	n/a	--	--	--	--	--	n/a	--	n/a	n/a
AF = 0.0005 ESLs:		--	n/a	--	--	--	--	--	n/a	--	n/a	n/a

NOTES:

(1) All values are in units of µg/L. Only constituents detected in at least one sample are shown.

(2) "<" indicates the constituent was not detected, the associated value is the reporting limit.

(3) "(MW-3*)" - results for MW-3 are included for comparative purposes only. The "GRAB" and "GRAB02" samples are from a comparable location and depth to former MW-3, and those

(4) "**" – result from May 2017 groundwater sampling.

(5) "Tier 1 ESLs" and "Surface Water ESL" are from SFBay RWQCB, Jan. 2019.

(6) "AF=0.001 ESLs", and "AF=0.0005 ESLs" are statistically significant predictor of vapor intrusion potential for generic groundwater, and for groundwater samples at sites underlain by clay rich sediments samples, respectively, without near surface biodegradation effects[6].

[6] USEPA OSWER, March 16, 2012. "EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings", 188p, EPA 530-R-10-002.

Table 7: Historic Groundwater Indicator Parameters for MW6, MW7, MW8, and GRAB

Date	Well	DTW (ft)	Cond. (µS)	TDS (ppm)	ORP	pH	Temp. (°F)
09/07/17	MW-6	10.36	2234	1650	-77	7.44	66.92
01/10/18	MW-6	9.04	2273	1722	-22	7.28	65.84
04/11/18	MW-6	8.07	2256	1704	-3	7.35	67.46
11/19/18	MW-6	10.58	2275	1718	-19	7.19	65.66
12/27/18	MW-6	9.10	2312	1749	132	7.61	66.20
01/21/19	MW-6	8.63	2308	1757	-12	7.62	64.58
02/26/19	MW-6	7.45	2394	1827	213	7.22	62.60
09/07/17	MW-7	9.08	2157	1590	-22	7.57	66.74
01/10/18	MW-7	4.31	2351	1787	163	7.41	65.12
04/11/18	MW-7	5.11	2147	1615	185	7.57	66.56
11/19/18	MW-7	8.87	2021	1522	-169	7.75	69.08
12/27/18	MW-7	7.08	1247	901.5	71	7.96	66.20
01/21/19	MW-7	5.00	**518.9**	**367.8**	171	**8.24**	64.22
02/26/19	MW-7	4.62	1100	804.1	203	7.43	62.06
09/07/17	MW-8	9.19	1628	1177	158	8.25	66.56
01/10/18	MW-8	5.32	1378	1014	177	8.02	63.86
04/11/18	MW-8	6.48	1341	976.3	143	8.16	66.38
11/19/18	MW-8	9.22	1521	1136	162	8.29	64.58
12/27/18	MW-8	7.84	1512	1110	120	8.28	64.04
01/21/19	MW-8	6.31	1307	954.4	186	8.30	64.22
02/26/19	MW-8	6.06	1232	904.9	187	8.29	62.06
09/07/17	(MW-3*)	--	3120	2356	-136	7.32	67.64
01/10/18	(MW-3*)	--	2934	2254	-144	7.23	66.20
04/11/18	(MW-3*)	--	--	--	--	--	--
11/19/18	--	--	--	--	--	--	--
12/27/18	GRAB01	--	4765	3825	173	7.26	65.12
01/21/19	GRAB02	--	**10.32**	**899.6**	226	**6.63**	66.92
02/26/19	--	--	--	--	--	--	--

NOTES:

(1) Indicator parameters were measured with a handheld multimeter in the field during sample collection.

(2) Apparently anomalous values have been highlighted in bold.

TABLE 8: Summary of Laboratory Analytical Results for Passive Soil Vapor Samples

Date	Sample ID	Benzene	Toluene	Ethyl Benzene	o-Xylene	m,p-Xylene	Naph-thalene
11/20/18	SG-20A	**590**	2400 b	4600	4300	8400	170
12/18/18	SG-20A*	65	250	540	600	1000	17
02/06/19	SG-20B	**1600**	2200	3000	10000	6600	12
03/18/19	SG-20C	**1200**	300	2200	4600	6000	44
Tier 1 ESL Indoor Air:		0.097	312.9	1.1	100		0.083
Tier 1 ESL SubSlab Vapor (AF=0.03):		3.2	10,428	37.4	3,500		2.8
AF=0.0008:		121	391,125	1,375	125,000		104
AF=0.0002:		485	1,564,500	5,500	500,000		415

NOTES:

(1) All values are in units of µg/m^3. Samples were analyzed for 6 constituents by modified method TO-17.

(2) "*" – well impacted by grout from nearby injection boreholes. Sample may not be representative.

(3) "b" – indicates analyte was detected at a concentration below the practical quantitation limit.

(4) "Tier 1 ESL SubSlab Vapor" values are calculated as AF=0.03 (see SF Bay RWQCB, Jan. 25, 2019).

(5) "AF=0.0008" is a screening level value appropriate for the Mediterranean climate along central coastal California[7], and AF=0.0002 is appropriate considering the impact area is a fraction of the size of the overlying multipurpose room.

[7] Brewer, etal, 2014. "Estimation of Generic Sub-slab Attenuation Factors for Vapor Intrusion Investigations", Groundwater Monitoring & Remediation Vol. 34, no. 4, Fall 2014, pp 79-92.

Table 9: Time for Soil Vapor to Equilibrate with Groundwater Concentrations

Time for Steady State SV Conditions (T_{SS}) ≈>	**2.04E+07**	**seconds (= R_V*$Ø_V$*(L*100)^2/D^{EFF}_V)**
T_{SS} ≈>	**236.63**	**days**
T_{SS} ≈>	**7.78**	**months**
T_{SS} ≈>	**0.65**	**years**
where;		
Effective diffusion coefficient (D^{EFF}_V) =	0.01	cm2/sec (typically 0.001 to 0.01)
Distance from source to ground surface (L) =	2.25	meters [Gauging Data]
Distance from source to ground surface (L) =	7.38	feet
Vapor phase retardation factor (R_V) =	10	unitless (typically 10 to 100)
Vapor filled void volume ($Ø_V$ = Ø-$Ø_W$) =	0.40	unitless
Water filled void volume ($Ø_W$) =	0.198	unitless [Geotech Rpt]
Total void volume (Ø = ρ_S/ρ_I) =	0.60	unitless
Density of illite (ρ_I) =	2.75	gm/cc (range 2.6 to 2.9)
Density of sediment (ρ_S) =	102.90	lbs/cf [Geotech Rpt]
Density of sediment (ρ_S) =	1.66	gm/cc

Time for Steady State SV Conditions (T_{SS}) ≈>	**2.04E+08**	**seconds (= R_V*$Ø_V$*(L*100)^2/D^{EFF}_V)**
T_{SS} ≈>	**2366.35**	**days**
T_{SS} ≈>	**77.80**	**months**
T_{SS} ≈>	**6.48**	**years**
where;		
Effective diffusion coefficient (D^{EFF}_V) =	0.0045	cm2/sec (typically 0.001 to 0.01)
Distance from source to ground surface (L) =	2.25	meters [Gauging Data]
Distance from source to ground surface (L) =	7.38	feet
Vapor phase retardation factor (R_V) =	45	unitless (typically 10 to 100)
Vapor filled void volume ($Ø_V$ = Ø-$Ø_W$) =	0.40	unitless
Water filled void volume ($Ø_W$) =	0.198	unitless [Geotech Rpt]
Total void volume (Ø = ρ_S/ρ_I) =	0.60	unitless
Density of illite (ρ_I) =	2.75	gm/cc (range 2.6 to 2.9)
Density of sediment (ρ_S) =	102.90	lbs/cf [Geotech Rpt]
Density of sediment (ρ_S) =	1.66	gm/cc

NOTES:

(1) Site specific information for subsurface properties (e.g., moisture, total porosity, etc) was obtained directly from geotechnical information available for the site or calculated from that information.

Table 10: Brewer's Attenuation Factor for Soil Vapor to Indoor Air

A) <u>Building Footprint Area = Vapor Source Area</u>		
Attenuation Factor (VIR / IAER) =	**8.37E-04**	
VIR =	16.7348	L/m
IAER =	20003.0	L/m
Bldg Footprint Area (A) =	492.2	m^2
Building Height (h) =	2.4	m
Building Volume (V) =	1200.2	m^3
Bldg Indoor AirExchange Rate (BIAER) =	1.0	hr^{-1}
Impact Footprint Area (a) =	492.2	m^2
B) <u>Impact Area (1276 SF)/Overlying Room Area (5298 SF))</u>		
Attenuation Factor (VIR / IAER) =	**2.01E-04**	
Vapor Intrusion Rate (VIR) =	4.0305	L/m
Indoor Air Exchange Rate (IAER) =	20003.0	L/m
Bldg Footprint Area (A) =	492.2	m^2
Bldg Height (h) =	2.4	m
Bldg Volume (V) =	1200.2	m^3
Bldg Indoor Air Exchange Rate (BIAER) =	1.0	hr^{-1}
Impact Footprint Area (a) =	118.5	m^2

NOTES:

(1) Default values for Mediterranean climate along coastal central California of IAER = 1.0 exchange per hour (20003 L/m) and VIR = 3.4 liters per minute per 100 m^2 bldg footprint (16.7348 L/m) indicate an AF=0.0008 is appropriate for the climatic zone when (A) the vapor source area is equal to the building footprint area.

(2) An AF=0.0002 is appropriate for the climatic zone when (B) the vapor source area = 1276 SF and the building footprint area = 5298 SF**.**

Table 10: Predicted Indoor Air Quality

Date / Media	Benzene Conc.	Attenuation Factor	Predicted Benzene Indoor Air Conc. (µg/m^3)
Apr. 2018 / Groundwater	3,500 ug/L	0.0005[1]	1.75
Jan. 2019 / Groundwater	130 ug/L	0.0005[1]	0.065
Feb. 2019 / Soil Vapor	2,200 µg/m^3	0.0008[2]	1.76
Feb. 2019 / Soil Vapor	2,200 µg/m^3	0.0002	0.44
(predicted) / Soil Vapor	121 µg/m^3	0.0008	0.097
(predicted) / Soil Vapor	485 µg/m^3	0.0002	0.097
		Tier 1 ESL Indoor Air:	0.097

NOTES:

(1) USEPA 2012 database study found AF=0.0005 to be statistically significant (95th percentile) as the ratio between indoor air concentration and the groundwater source at sites underlain by clay-rich sediments.

(2) Adopted from Brewer 2014 study indicating AF=0.0008 is appropriate for a Mediterranean climatic zone in central coastal California based on that fact that a building's ventilation rate is positively correlated to soil vapor entry rate, and the ventilation rate is related to IECC climatic zones. AF=0.0002 derived from Brewer 2014 calculations for a 1276 SF soil vapor source area overlain by a 5298 SF multi-purpose room.

(3) Note that AF=0.0005 and applied to 3,500 ug/L groundwater source and AF=0.0008 applied to 2,200 µg/m3 predict the same value for indoor air at 1.75 µg/m^3.

(4) Soil vapor concentrations between 121 to 485 µg/m^3 are predicted to result in 0.097 µg/m^3 indoor air concentration.

Table 12: Low-Threat UST Closure Policy Compliance Check List

Site Information	
Site ID:	SCVWDID No. 07S1E03F03f; Farmer's Supply (T10000001657)
Address:	1936 Alum Rock Ave, San Jose, CA
Date:	April 2019

General Criteria – All eight criteria must be satisfied by candidate sites.	Eight of eight criteria below are satisfied.
Criteria	**Site Specific Compliance**
(a) The unauthorized release is located within the service area of a public water system.	OK. Site located within Santa Clara County Water Service District.
(b) The unauthorized release consists only of petroleum.	OK.
(c) The primary source of release has been mitigated (e.g., leaking UST, lines, dispenser).	OK. UST and dispensers removed circa 1984.
(d) Free product has been removed to the maximum extent practicable.	OK.
(e) A conceptual site model that assesses the nature, extent, and mobility of the release has been developed.	OK.
(f) The secondary source (NAPL) in soil or groundwater has been removed to the extent practicable.	OK. Limited excavation, extended DPVE test, and ISCO technologies all applied at the site.
(g) Soil or groundwater has been tested for methyl tert-butyl ether (MTBE) and results reported in accordance with Health and Safety Code section 25296.15.	OK.
(h) Nuisance as defined by Water Code section 13050 does not exist at the site (is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property).	OK. Site specific conditions meet media specific criteria listed below.

Continued….

Table 12: Low-Threat UST Closure Policy Compliance Check List (continued)

Groundwater Specific Criteria – A contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent and meet the criteria in one of five groups.	Current dissolved-phase plume concentration at source area is ~5% of 2017-2018 concentrations, and one of 5 groups of criteria below is satisfied.
Criteria	**Site Specific Compliance**
*1(a) - **Contaminant plume < 100 feet in length:*** *1(b)- There is no free product.* *1(c)- Nearest existing water supply well or surface water body is > 250 feet from plume boundary.*	1(a) OK: MW4 to MW6 = 75 ft 1(b) OK 1(c) NOT OK: 176 ft to Silver Creek, > 2000 ft to supply well
*2(a) - **Contaminant plume < 250 feet in length:*** *2(b) - There is no free product.* *2(c) - Nearest existing water supply well or surface water body is > 1,000 feet from plume boundary.* *2(d) - Dissolved benzene is < 3,000 µg/L, and dissolved MTBE is < 1,000 µg/L.*	2(a) OK 2(b) OK 2(c) NOT OK: 176 ft to Silver Creek, > 2000 ft to supply well 2(d) OK
*3(a) - **Contaminant plume < 250 feet in length:*** *3(b) - Free product has been removed to the extent practicable and does not extend off-site.* *3(c) - The plume has been stable or decreasing for a minimum of five years.* *3(d) - Nearest existing water supply well or surface water body is > 1,000 feet from plume boundary.* *3(e) - The property owner is willing to accept a land use restriction if required by the regulatory agency as a condition for closure.*	3(a) OK 3(b) OK 3(c) OK 3(d) NOT OK: 176 ft to Silver Creek, > 2000 ft to supply well 3(e) NOT OK: Property owner prefers not to accept land use restriction.
*4(a) - **Contaminant plume < 1,000 feet in length:*** *4(b) - There is no free product.* *4(c) - Nearest existing water supply well or surface water body is > 1,000 feet from plume boundary.* *4(d) - Dissolved benzene is < 1,000 µg/L, and dissolved MTBE is < 1,000 µg/L.*	4(a) OK 4(b) OK 4(c) NOT OK: 176 ft to Silver Creek, > 2000 ft to supply well 4(d) OK
*5(a) - **The regulatory agency determines:*** *Based on an analysis of site-specific conditions under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame.*	OK: Criteria in 1, 2, & 4 above all fail due only to proximity of Silver Creek. However, MW6 is located between Silver Creek and the source area, and MW6 groundwater quality is below surface water ESLs.

Continued….

Table 12: Low-Threat UST Closure Policy Compliance Check List (continued)

Vapor Intrusion Potential Criteria – One of four groups of criteria must be met at each site.	One of four groups of criteria below is satisfied.
Criteria	**Site Specific Compliance**
*1(a) - **Un-Weathered LNAPL in Groundwater.** Depth to groundwater is ≥ 30 feet below building foundation and combined TPHG and TPHD in that 30-foot zone is <100 mg/kg.* *1(b) - **Un-Weathered LNAPL in Soil.** Combined TPH_G and TPH_D in soil is <100 mg/kg within a 30-foot radial distance from building foundation.* *1(c) - **Dissolved Benzene in Groundwater**.* • *Dissolved benzene is < 100 µg/L and at least 5-feet of unsaturated soil above water table / below building foundation has combined TPH_G and TPH_D of < 100 mg/kg with oxygen below 4% or not measured.* • *Dissolved benzene is > 100 µg/L but < 1000 µg/L and at least 10-feet of unsaturated soil above water table / below building foundation has combined TPH_G and TPH_D of < 100 mg/kg with oxygen below 4% or not measured.* • *Dissolved benzene is < 1000 µg/L and at least 5-feet of unsaturated soil above water table / below building foundation has combined TPH_G and TPH_D of < 100 mg/kg with oxygen measured above 4%.*	1(a) OK: Un-weathered LNAPL does not exist. 1(b) OK: Un-weathered LNAPL does not exist. 1(c) OK: • dissolved benzene = 130 µg/L • soil TPH_G+TPH_D[8] < 100 mg/kg • oxygen not measured • depth to groundwater ~8 ft BGL
2 - Direct Measurement of Soil Gas Concentrations: *Soil gas samples collected from 5-feet BGL or 5-feet below existing slab must meet criteria as follows:* *Residential Exposure Scenario: Benzene <85 µg/m^3, Ethylbenzene <1,100 µg/m^3, and Naphthalene <93 µg/m^3.* *Commercial Exposure Scenario: Benzene <280 µg/m^3, Ethylbenzene <3,600 µg/m^3, and Naphthalene <310 µg/m^3.*	NOT OK: • benzene = 1200 µg/m^3 • ethylbenzene = 2200 µg/m^3 • naphthalene = 44 µg/m^3 Time lag of 7 months to several years predicted before soil vapor responds to post-remediation groundwater concentrations.
3 - Site specific assessment of risk: *Approved site-specific assessment shows acceptable risk to human health.*	NOT OK: Benzene concentration in soil vapor remain above screening level using AF=0.0002 for Mediterranean climate in central coast CA, but are predicted to fall below screening levels after several years once vapor equilibrates with reduced subsurface concentrations.
***4 - Institutional and/or engineering controls**:* *Exposure is mitigated or controlled by physical means.*	

Continued….

[8] WellTest, Inc., June 3, 2016. "Secondary-Source and Free-Product Removal Documentation Report", 61p, https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1084448277/T10000001657.PDF

Table 12: Low-Threat UST Closure Policy Compliance Check List (continued)

Direct Contact and Outdoor Air Criteria – One of three groups of criteria must be met at each site.	One of three groups of criteria below is satisfied.
Criteria	**Site Specific Compliance**
1 - Maximum concentrations in soil shall be less than those see below simultaneously for both the 0-5 and 5-10 ft BGL intervals under the appropriate exposure scenario.	OK: Source area was over-excavated to 14 ft BGL[9]. Jan 2016 post-excavation samples do not exceed values listed below.
2 - Maximum concentrations of petroleum constituents in soil are below risk-based concentrations for protection of human health.	NOT OK: Two of nine post-excavation samples have 1 or more exceedance of Tier 1 ESLs for either benzene and ethylbenzene, and/or MTBE[7].
3 - The regulatory agency determines petroleum constituents in soil contribute no significant risk due to the results of institutional and/or engineering controls implemented at the site.	NOT APPLICABLE

Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health due to Volatilization to Outdoor Air

	Residential		***Commercial/ Industrial***		***Utility Worker***
	0-5 ft BGL	***5-10 ft BGL***	***0-5 ft BGL***	***5-10 ft BGL***	***0-10 ft BGL***
Benzene	*1.9*	*2.8*	*8.2*	*12*	*14*
Ethylbenzene	*21*	*32*	*89*	*134*	*314*
Naphthalene	*9.7*	*9.7*	*45*	*45*	*219*
PAH[2]	*0.063*	*NA*	*0.68*	*NA*	*4.5*

NOTES:

(1) All values are in units of mg/kg

(2) Based on benzo(a)pyrene toxicity equivalent for seven carcinogenic poly-aromatic hydrocarbons (PAHs). Analysis for PAH is only necessary when waste oil or Bunker C fuel are constituents of concern.

(3) The area of impacted soil where a particular exposure occurs is 25 by 25 meters (approximately 82 by 82 feet) or less.

(4) *NA = not applicable*

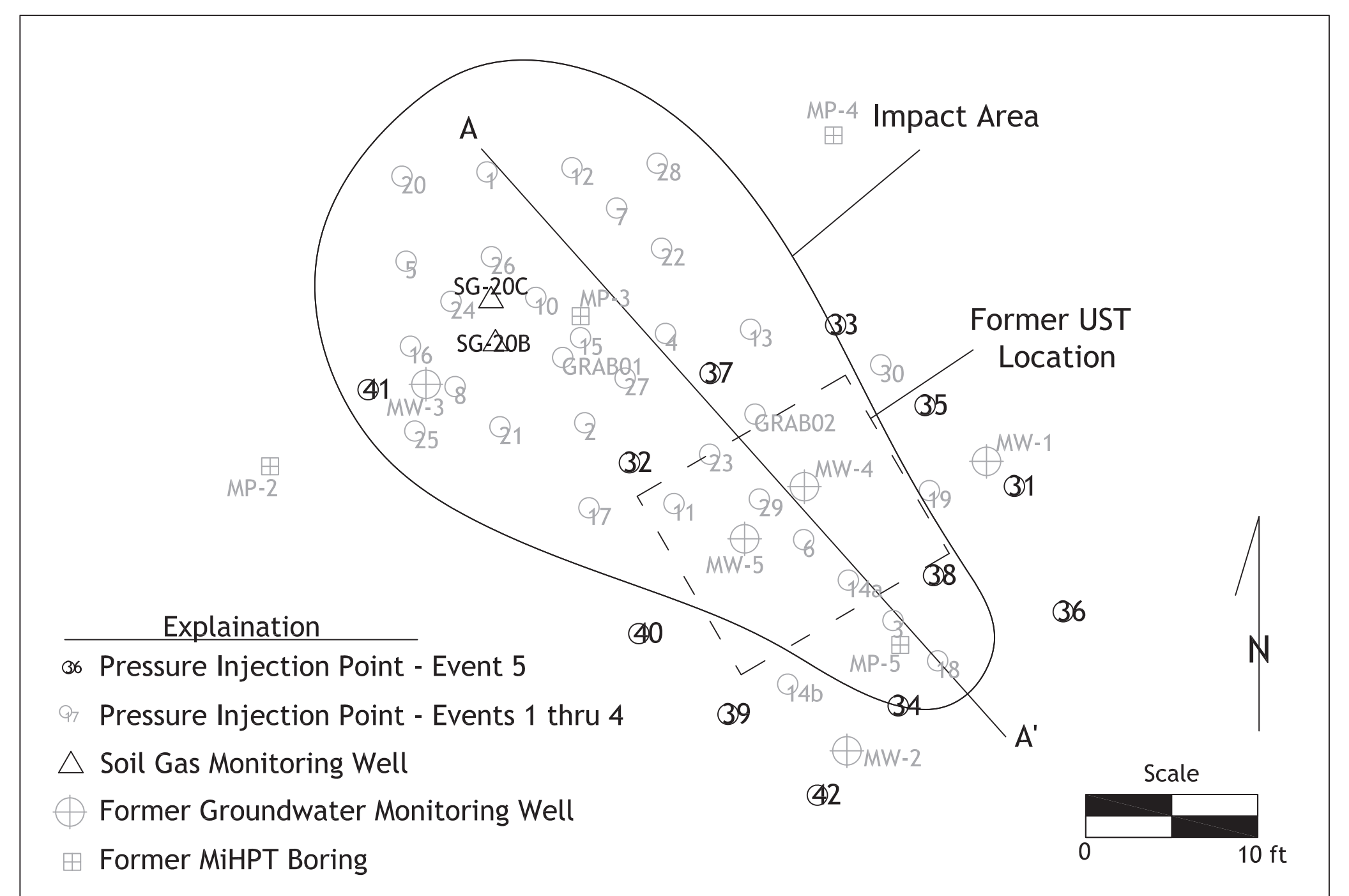
NOTES:

(1) General and media specific criteria are those identified in the *CA State Water Board Policy for Low-Threat Underground Storage Tank (UST) Case Closure*[10].

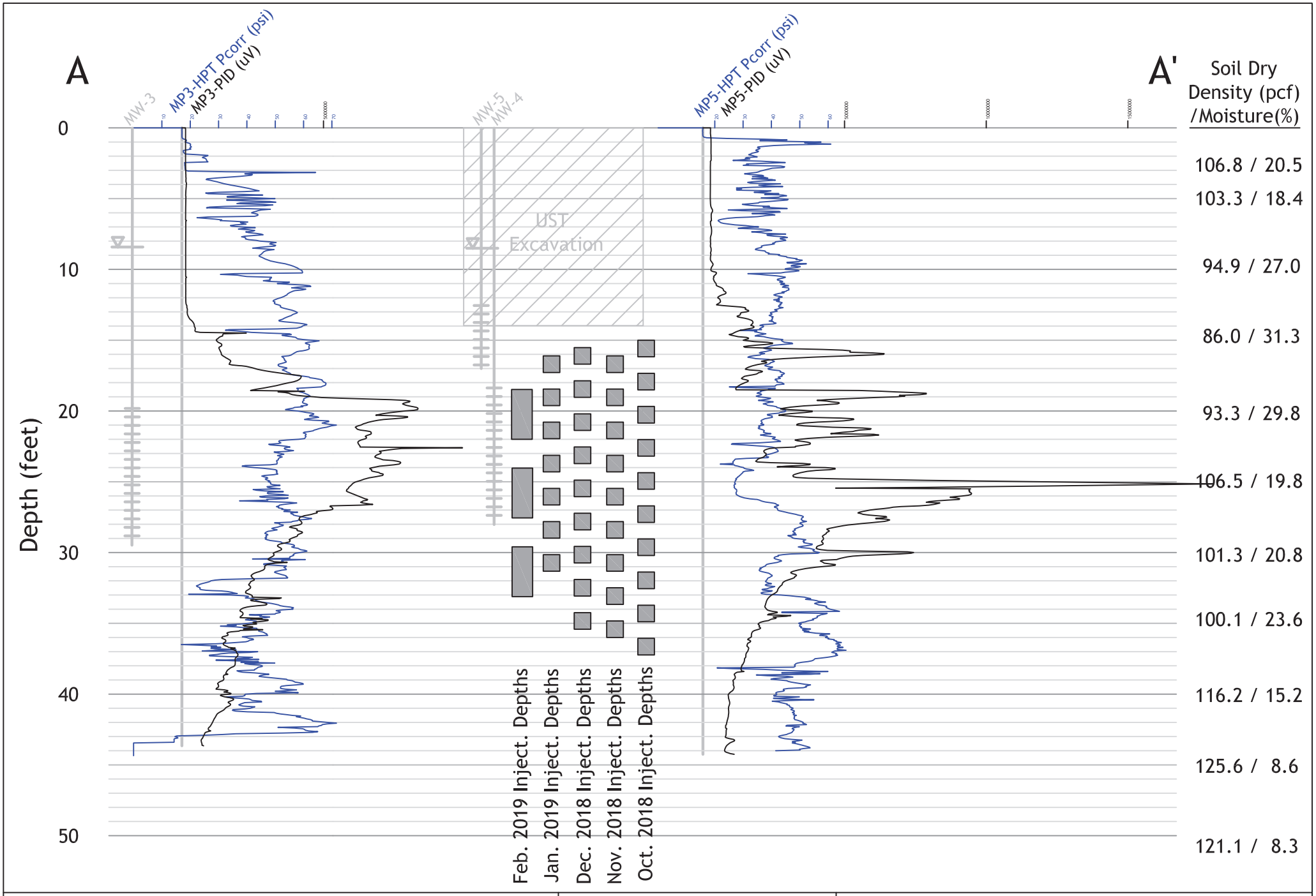
[9] WellTest, Inc., June 3, 2016. "Secondary-Source and Free-Product Removal Documentation Report", 61p, https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1084448277/T10000001657.PDF

[10] https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf

FIGURES



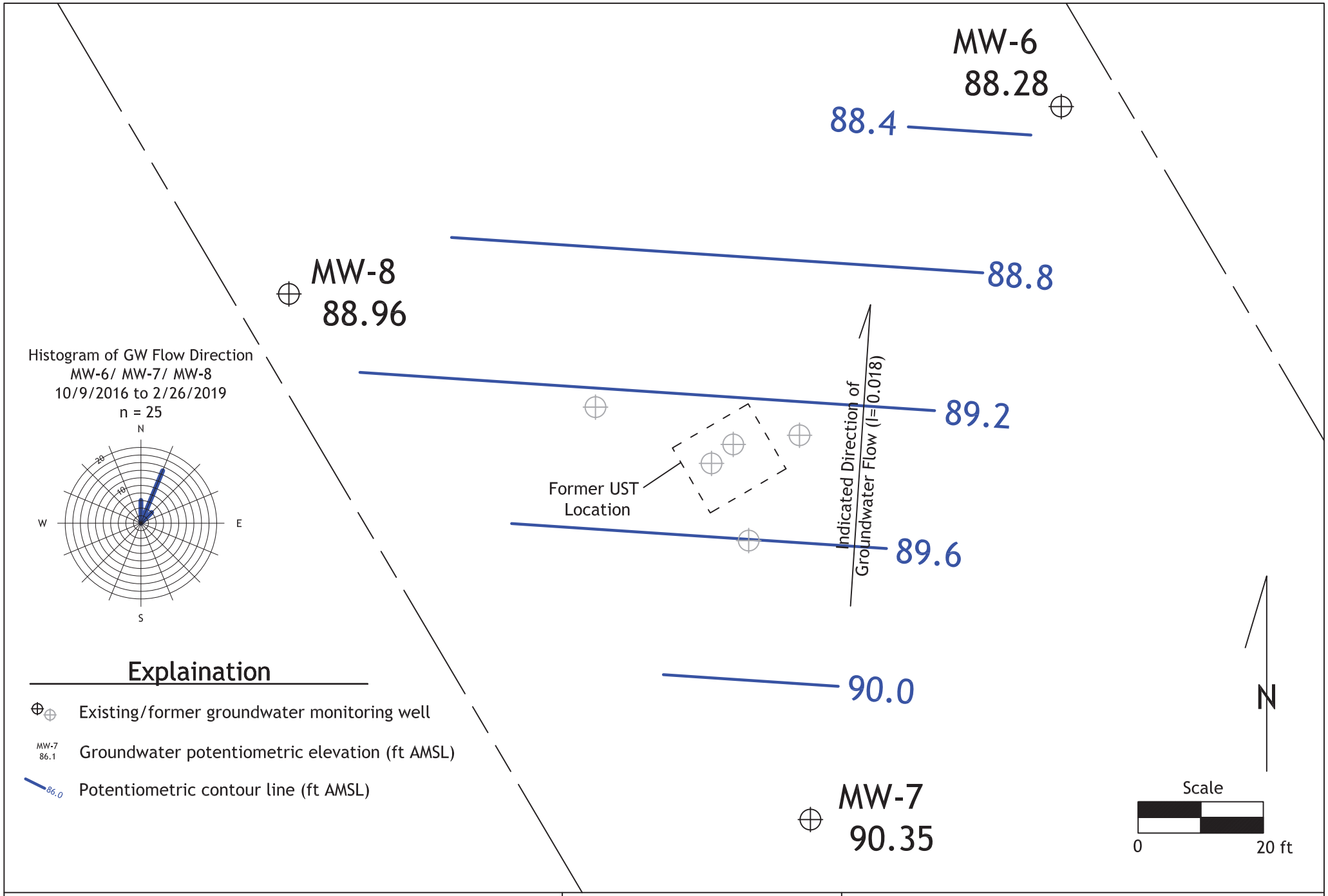
Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 1: ISCO Injection Points Feb. 26-27, 2019



Ryan Geologic & Environmental Services, Inc.
PO Box 525; McCloud, California 96057
530.925.4932

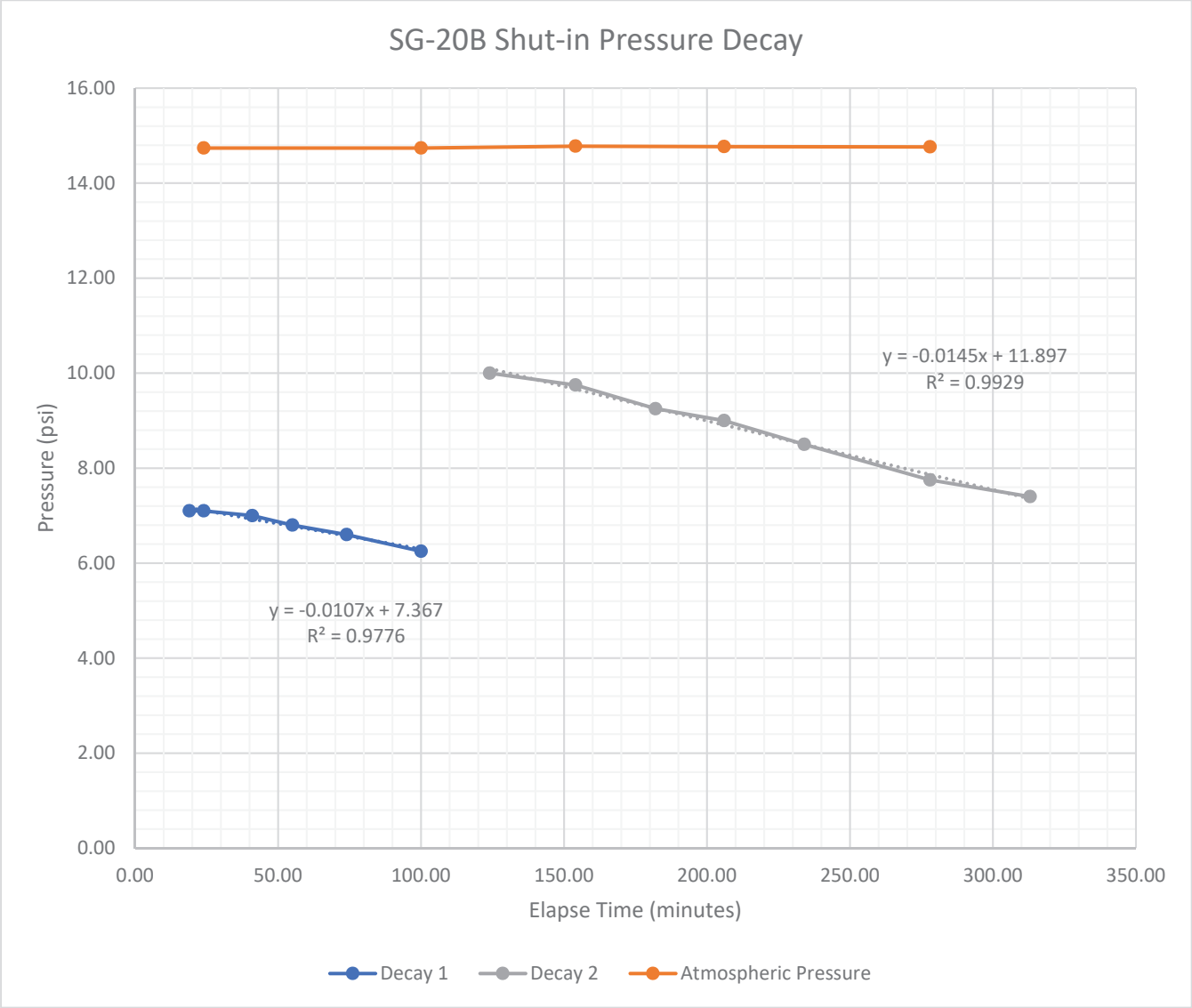
1936 Alum Rock Ave
San Jose, CA

Figure 2:
Cross-Section thorough Impact Area and ISCO Injection Intervals



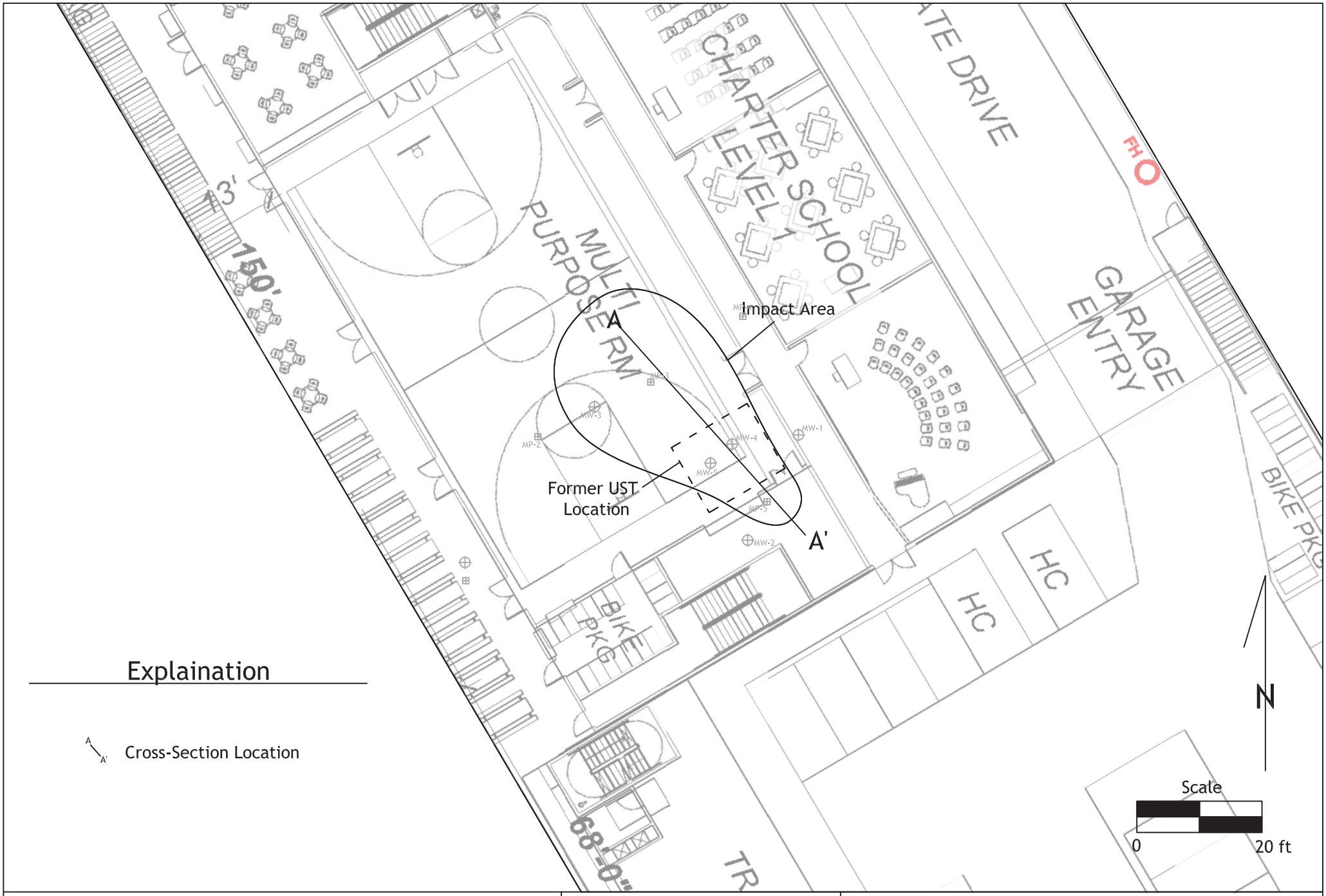
Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 3: Direction of Groundwater Flow February 26, 2019

Figure 4: SG-20B Shut-in Pressure Decay



NOTES:

(1) Shut-in pressure decay measured during purging of ~800 mL of soil vapor.
(2) Pressure decay is the result of flow rate from well and flow rate of equipment leak(s).
(3) Gap between decay curves was due to active pumping.
(4) Flow rates documented during purging were approximately 6.5 to 19.5 mL/min at pressures of 6.0 to 10.0 psi.
(5) Flow rates above 100 to 200 mL/min at pressures ≤ 3.6 psi are considered appropriate for active sampling techniques.



Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 5: Proposed Building and Impact Area Locations

APPENDIX A: Cumulative Injection Depths, Pressures, and Volumes

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
10/29/18 1250	Test	18.0-19.2	0	50	6.9	0		RAS not functional
10/29/18 1251	Test	18.0-19.2	0	85	14.5	0		RAS not functional
10/29/18 1252	Test	18.0-19.2	0	105	18.5	0		RAS not functional
10/29/18 1301	Test	25.0-26.2	0	40	7.5	0		RAS not functional
10/29/18 1302	Test	25.0-26.2	0	100	19	0		RAS not functional
10/29/18 1303	Test	25.0-26.2	0	115	21	0		RAS not functional
10/29/18 1408	B1	17.3-18.5	39.6	110	13.2	39.6		RAS not functional
10/29/18 1413	B1	19.7-20.9	39.6	120	13.2	39.6		RAS not functional
10/29/18 1420	B1	22.0-23.2	39.6	9	13.2	39.6		RAS not functional
10/29/18 1428	B1	24.3-25.5	39.6	100	13.2	39.6		RAS not functional
10/29/18 1437	B1	26.7-27.9	39.6	10	13.2	39.6		RAS not functional
10/29/18 1445	B1	29.0-30.2	39.6	8	9.9	39.6		RAS not functional
10/29/18 1455	B1	31.3-32.5	39.6	90	9.9	39.6		RAS not functional
10/29/18 1503	B1	33.7-34.9	39.6	90	13.2	39.6		RAS not functional
10/29/18 1510	B1	36.0-37.2	39.6	9	13.2	39.6		RAS not functional
10/30/18 0829	B2	17.3-18.5	39.6	115	11.8	39.6		RAS not functional
10/30/18 0840	B2	19.7-20.9	39.6	115	11.2	39.6		RAS not functional
10/30/18 0934	B2	26.7-27.9	39.6	85	9.1	39.6		RAS not functional
10/30/18 0939	B2	22.0-23.2	39.6	100	10.9	39.6		RAS not functional
10/30/18 0948	B2	24.3-25.5	39.6	90	9.5	39.6		RAS not functional
10/30/18 1001	B2	29.0-30.2	39.6	110	11.5	39.6		RAS not functional
10/30/18 1008	B2	31.3-32.5	39.6	105	10.4	39.6		RAS not functional
10/30/18 1017	B2	33.7-34.9	39.6	115	11.5	39.6		RAS not functional
10/30/18 1024	B2	36.0-37.2	39.6	115	10.2	39.6		RAS not functional
10/30/18 1047	B3	15.0-16.2	35.6	116	11.7	35.6		RAS not functional
10/30/18 1050	B3	17.3-18.5	35.6	120	11.9	35.6		RAS not functional
10/30/18 1058	B3	19.7-20.9	35.6	110	11.4	35.6		RAS not functional
10/30/18 1104	B3	22.0-23.2	35.6	120	11.9	35.6		RAS not functional
10/30/18 1111	B3	24.3-25.5	35.6	115	12.2	35.6		RAS not functional
10/30/18 1116	B3	26.7-27.9	35.6	120	12.2	35.6		RAS not functional
10/30/18 1124	B3	29.0-30.2	35.6	120	12.4	35.6		RAS not functional
10/30/18 1130	B3	31.3-32.5	35.6	115	12	35.6		RAS not functional
10/30/18 1140	B3	33.7-34.9	35.6	120	11.3	35.6		RAS not functional
10/30/18 1152	B3	36.0-37.2	35.6	120	12.6	35.6		RAS not functional
10/30/18 1202	B4	17.3-18.5	39.6	120	13.2	39.77	79.08	Typical pres/flow
10/30/18 1223	B4	19.7-20.9	39.6	115	13.2	40.65	66.24	Typical pres/flow
10/30/18 1230	B4	22.0-23.2	39.6	115	13.2	29	77.4	Typical pres/flow
10/30/18 1237	B4	24.3-25.5	39.6	110	13.2	30.09	59.85	Typical pres/flow
10/30/18 1245	B4	26.7-27.9	39.6	115	13.2	40.53	80.65	Typical pres/flow
10/30/18 1254	B4	29.0-30.2	39.6	115	13.2	40.98	88.03	Typical pres/flow
10/30/18 1302	B4	31.3-32.5	39.6	120	13.2	40.41	80.65	Typical pres/flow
10/30/18 1310	B4	33.7-34.9	39.6	125	13.2	32.09	83.04	Typical pres/flow
10/30/18 1316	B4	36.0-37.2	39.6	120	13.2	31.31	100.04	Typical pres/flow (+end of mix?)

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
10/30/18 1409	B5	17.3-18.5	39.6	120	13.2	39.58	70.58	Typical pres/flow
10/30/18 1416	B5	19.7-20.9	39.6	100	13.2	40.9	72.13	Typical pres/flow
10/30/18 1423	B5	22.0-23.2	39.6	110	13.2	40.54	77	Typical pres/flow
10/30/18 1431	B5	24.3-25.5	39.6	100	13.2	40.23	73.01	Typical pres/flow
10/30/18 1440	B5	26.7-27.9	39.6	110	13.2	40.77	90.88	Typical pres/flow
10/30/18 1448	B5	29.0-30.2	39.6	110	13.2	40.88	77.26	Typical pres/flow
10/30/18 1455	B5	31.3-32.5	39.6	120	13.2	40.6	73.32	Typical pres/flow
10/30/18 1508	B5	33.7-34.9	39.6	125	13.2	41.25	75.05	Typical pres/flow + tool string leak
10/30/18 1515	B5	36.0-37.2	39.6	125	13.2	37.76	107.11	Typical pres/flow (+end of mix?)
10/31/18 0904	B6	19.7-20.9	35.6	110	11.9	36.11	68.88	Kerfuffle at start
10/31/18 0912	B6	15.0-16.2	35.6	110	11.9	36.99	63.36	Kerfuffle at start
10/31/18 0918	B6	17.3-18.5	35.6	115	11.9	39.53	69.26	Typical pres/flow
10/31/18 0925	B6	22.0-23.2	35.6	110	11.9	40.44	66.55	Kerfuffle at start
10/31/18 0932	B6	24.3-25.5	35.6	115	11.9	35.73	91.25	Typical pres/flow almost
10/31/18 0937	B6	26.7-27.9	35.6	120	11.9	38.8	88.79	Typical pres/flow
10/31/18 0943	B6	29.0-30.2	35.6	125	11.9	39.85	85.04	Typical pres/flow
10/31/18 0948	B6	31.3-32.5	35.6	120	11.9	39.08	94.85	Typical pres/flow
10/31/18 0954	B6	33.7-34.9	35.6	125	11.9	1.35	98.95	Typical pres/flow + flow meter non-functional
10/31/18 1001	B6	36.0-37.2	35.6	120	11.9	32.7	97.89	Typical pres/flow (+end of mix?)
10/31/18 1026	B7	17.3-18.5	39.6	115	13.2	28.42	73.32	Zero flow + hi press at start
10/31/18 1032	B7	19.7-20.9	39.6	105	13.2	41.06	66.28	Typical pres/flow
10/31/18 1039	B7	22.0-23.2	39.6	105	13.2	42.56	66.7	Typical pres/flow
10/31/18 1047	B7	24.3-25.5	39.6	120	13.2	42.33	74.12	Typical pres/flow
10/31/18 1055	B7	26.7-27.9	39.6	105	13.2	36.19	64.14	Zero flow + hi press in middle; Surfacing occurs in crack between B7 and B4 during early injection
10/31/18 1112	B7	29.0-30.2	10	105	13.2	11.54	90.15	Typical pres/flow
10/31/18 1325	B8	22.0-23.2	37	60	7.4	41.06	45.27	Zero flow + hi press at start; B4 - End of mix flow decrease
10/31/18 1334	B8	24.3-25.5	37	55	7.4	49.24	44.57	Kerfuffle at start
10/31/18 1345	B8	26.7-27.9	37	55	7.4	42.2	46.74	Typical pres/flow
10/31/18 1357	B8	29.0-30.2	37	50	5.3	39.6	46.14	Zero flow + hi press in middle
11/01/18 1004	B11	15.0-16.2	35.6	55	5.9	33.63	46.5	Zero flow + hi press at start
11/01/18 1015	B11	17.3-18.5	35.6	50	5.8	37	45.42	Kerfuffle at start
11/01/18 1026	B11	19.7-20.9	35.6	50	5.5	42.15	42.25	Kerfuffle at start
11/01/18 1034	B11	22.0-23.2	35.6	60	6	40.4	40.87	Kerfuffle at start
11/01/18 1043	B11	24.3-25.5	35.6	50	5	28.76	41.29	Typical pres/flow (+end of mix?); End of mix signature (Surfacing at B3?)
11/01/18 1052	B11	26.7-27.9	20	60	6.6	21.24	49.36	Typical pres/flow
11/01/18 1121	B10	19.7-20.9	39.6	50	5.2	42.02	56.48	Typical pres/flow; Partial boring completed; Inject remaining mix into main depth and quit event 1
11/01/18 1132	B10	22.0-23.2	39.6	50	5.9	43.17	48.19	Kerfuffle at start
11/01/18 1143	B10	24.3-25.5	39.6	50	6.5	42.19	39.78	Zero flow + hi press at end
11/01/18 1151	B10	26.7-27.9	39.6	50	5.6	29.77	44.15	Typical pres/flow (+end of mix?)

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
11/19/08 1012	B12	18.5-19.67	44.5	40	6.4	44.5	46	5 gpm with 46psi to start
11/19/08 1024	B12	20.8-21.97	44.5	35	8.9	44.5	40	6.2gpm with 40psi to start
11/19/08 1034	B12	23.2-24.37	44.5	32	7.4	44.5	35	7.3gpm with 35psi to start
11/19/08 1042	B12	25.5-26.67	44.5	34	7.4	44.5	40	6.4gpm with 40psi to start
11/19/08 1053	B12	27.8-28.97	44.5	35	6.4	44.5	42	6.1gpm with 42psi to start
11/19/08 1103	B12	30.2-31.37	44.5	40	8.9	44.5	40	6.6gpm with 40psi to start
11/19/08 1111	B12	32.5-33.67	44.5	42	8.9	44.5	48	8.3gpm with 48psi to start
11/19/08 1119	B12	34.8-35.97	44.5	42	8.9	44.5	48	8.5gpm with 48psi to start
11/19/08 1231	B13	18.5-19.67	44.5	40	5.6	44.5	40	5.9gpm with 40psi to start
11/19/08 1244	B13	20.8-21.97	44.5	42	7.4	44.5	54	4.9gpm with 54psi to start
11/19/08 1253	B13	23.2-24.37	44.5	35	7.4	44.5	38	7gpm with 38psi to start
11/19/08 1303	B13	25.5-26.67	44.5	36	8.9	44.5	42	6.6gpm with 42psi to start
11/19/08 1311	B13	27.8-28.97	44.5	48	8.9	44.5	60	7.8gpm with 60psi to start
11/19/08 1320	B13	30.2-31.37	44.5	54	8.9	44.5	58	8.5gpm with 58psi to start
11/19/08 1328	B13	32.5-33.67	44.5	56	8.9	44.5	62	8.9gpm with 62psi to start
11/19/08 1336	B13	34.8-35.97	44.5	54	8.9	44.5	58	8.9gpm with 58psi to start
11/19/08 1432	B14A	16.2-17.37	39.6	28	6.6	39.6	30	5.4gpm with 30psi to start
11/19/08 1442	B14A	18.5-19.67	39.6	36	6.6	39.6	40	5.7gpm with 40psi to start
11/19/08 1449	B14A	20.8-21.97	39.6	46	9.9	39.6	50	8.7gpm with 50psi to start
11/19/08 1457	B14A	23.2-24.37	30	44	10	30	50	8.8gpm with 50psi to start. Stop injecting after 30gal due to daylighting from B3.
11/19/08 1508	B14A	27.8-28.97	21	30	5.3	21	38	3.8gpm with 38psi to start. Skipped two intervals and tried to inject at this interval but again saw daylighting up same adjacent borehole after 21gal injected.
11/20/18 0809	B14B	25.5-26.67	46.6	48	6.7	46.6	50	Grouted up location 14 and pushed rods down location 3 and regrouted old borehole to try and get a better seal. Moved over to reset tooling at new location, 14B, to finish injecting remaining mixed reagent. 5.4gpm with 50psi to start
11/20/18 0818	B14B	30.2-31.37	46.6	48	7.8	46.6	48	6.6gpm with 48psi to start
11/20/18 0826	B14B	32.5-33.67	46.6	50	7.8	46.6	50	6.8gpm with 50psi to start
11/20/18 0834	B14B	34.8-35.97	46.6	50	7.8	46.6	50	6.4gpm with 50psi to start
11/20/18 0909	B15	18.5-19.67	44.5	46	6.4	44.5	50	5.3gpm with 50psi to start
11/20/18 0917	B15	20.8-21.97	44.5	47	8.9	44.5	52	6.7gpm with 52psi to start
11/20/18 0924	B15	23.2-24.37	44.5	44	8.9	44.5	50	8gpm wit 50psi to start
11/20/18 0932	B15	25.5-26.67	44.5	48	8.9	44.5	50	7.3gpm with 50psi to start
11/20/18 0940	B15	27.8-28.97	44.5	52	8.9	44.5	60	7.1gpm with 60psi to start
11/20/18 0948	B15	30.2-31.37	44.5	54	8.9	44.5	56	7.5gpm with 56psi to start
11/20/18 0955	B15	32.5-33.67	44.5	56	8.9	44.5	60	7.3gpm with 60psi to start
11/20/18 1005	B15	34.8-35.97	44.5	54	8.9	44.5	60	7.4gpm with 60psi to start

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
11/20/18 1026	B16	18.5-19.67	44.5	48	7.4	44.5	52	5.8gpm with 52psi to start
11/20/18 1034	B16	20.8-21.97	44.5	46	8.9	44.5	52	7.9gpm with 52psi to start
11/20/18 1041	B16	23.2-24.37	44.5	45	8.9	44.5	50	8.8gpm with 50psi to start
11/20/18 1046	B16	25.5-26.67	44.5	48	8.9	44.5	52	8.6gpm with 52psi to start
11/20/18 1054	B16	27.8-28.97	44.5	51	8.9	44.5	60	7.5gpm with 60psi to start
11/20/18 1102	B16	30.2-31.37	44.5	52	8.9	44.5	54	8.0gpm with 54psi to start
11/20/18 1111	B16	32.5-33.67	44.5	55	8.9	44.5	58	7.8gpm with 58psi to start
11/20/18 1118	B16	34.8-35.97	44.5	51	8.9	44.5	56	8.1gpm with 56psi to start
11/20/18 1143	B17	18.5-19.67	44.5	48	6.4	44.5	52	5.5gpm with 52psi to start
11/20/18 1152	B17	20.8-21.97	44.5	46	7.4	44.5	52	5.8gpm with 52psi to start
11/20/18 1202	B17	23.2-24.37	44.5	45	8.9	44.5	50	8gpm with 50psi to start
11/20/18 1209	B17	25.5-26.67	44.5	46	8.9	44.5	52	8gpm with 52psi to start
11/20/18 1217	B17	27.8-28.97	44.5	48	8.9	44.5	56	7.6gpm with 56psi to start
11/20/18 1225	B17	30.2-31.37	44.5	48	8.9	44.5	54	7.8gpm with 54psi to start
11/20/18 1232	B17	32.5-33.67	44.5	52	8.9	44.5	56	7.5gpm with 56psi to start
11/20/18 1241	B17	34.8-35.97	44.5	52	8.9	44.5	60	7gpm with 60psi to start
12/27/18 1041	B18	15.6-16.8	39.6	55	5.9	--	65	65psi with 4.6gpm
12/27/18 1050	B18	17.9-19.1	39.6	55	7.2	--	60	60psi with 5.3gpm
12/27/18 1059	B18	20.3-21.4	39.6	55	8.9	--	60	60psi with 6.4gpm
12/27/18 1106	B18	22.6-23.8	39.6	55	8.9	--	55	55psi with 8.9gpm
12/27/18 1112	B18	24.9-26.1	39.6	40	8.9	--	45	45psi with 7.6gpm
12/27/18 1121	B18	27.3-28.4	39.6	50	8.9	--	55	55psi with 7.5gpm
12/27/18 1129	B18	29.6-30.8	39.6	60	8.9	--	60	60psi with 8.7gpm
12/27/18 1134	B18	31.9-33.1	39.6	55	8.9	--	60	60psi with 8.6gpm
12/27/18 1140	B18	34.3-35.4	39.6	60	8.9	--	65	65psi with 8.7gpm
12/27/18 1303	B19	15.6-16.8	39.6	60	7.2	--	65	65psi with 5.8gpm
12/27/18 1310	B19	17.9-19.1	39.6	55	7.2	--	60	60psi with 5.9gpm
12/27/18 1318	B19	20.3-21.4	39.6	55	7.2	--	60	60psi with 7.2gpm
12/27/18 1325	B19	22.6-23.8	39.6	45	8.9	--	50	50psi with 8.2gpm
12/27/18 1331	B19	24.9-26.1	39.6	40	8.9	--	50	50psi with 8.2gpm
12/27/18 1336	B19	27.3-28.4	39.6	50	8.9	--	55	55psi with 8.4gpm
12/27/18 1342	B19	29.6-30.8	39.6	50	8.9	--	50	50psi with 8.6gpm
12/27/18 1347	B19	31.9-33.1	39.6	50	8.9	--	55	55psi with 8.4gpm
12/27/18 1354	B19	34.3-35.4	39.6	45	8.9	--	50	50psi with 8.7gpm
12/27/18 1411	B20	17.9-19.1	44.5	55	5.6	--	60	60psi with 5.2gpm
12/27/18 1423	B20	20.3-21.4	44.5	50	8.9	--	55	55psi with 6.8gpm
12/27/18 1431	B20	22.6-23.8	44.5	45	8.9	--	50	50psi with 8gpm
12/27/18 1439	B20	24.9-26.1	44.5	45	8.9	--	50	50psi with 7.8gpm
12/27/18 1447	B20	27.3-28.4	44.5	55	8.9	--	60	60psi with 7.7gpm
12/27/18 1455	B20	29.6-30.8	44.5	55	8.9	--	65	65psi with 8.9gpm
12/27/18 1502	B20	31.9-33.1	44.5	50	8.9	--	60	60psi with 7.9gpm
12/27/18 1511	B20	34.3-35.4	44.5	55	8.9	--	60	60psi with 8.2gpm

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
12/28/18 0746	B21	17.9-19.1	44.5	50	6.3	--	55	55psi with 5.6gpm
12/28/18 0757	B21	20.3-21.4	44.5	50	7.4	--	55	55psi with 7.2gpm
12/28/18 0807	B21	22.6-23.8	44.5	45	8.9	--	50	50psi with 7.7gpm
12/28/18 0815	B21	24.9-26.1	44.5	55	8.9	--	55	55psi with 8.4gpm
12/28/18 0823	B21	27.3-28.4	44.5	50	11.1	--	45	45psi with 8.7gpm
12/28/18 0830	B21	29.6-30.8	44.5	50	8.9	--	55	55psi with 7.2gpm
12/28/18 0840	B21	31.9-33.1	44.5	60	11.1	--	60	60psi with 8.6gpm
12/28/18 0847	B21	34.3-35.4	44.5	65	11.1	--	65	65psi with 8.9gpm
12/28/18 0903	B22	17.9-19.1	44.5	55	7.4	--	60	60psi with 6.9gpm
12/28/18 0912	B22	20.3-21.4	44.5	50	7.4	--	55	55psi with 7.2gpm
12/28/18 0921	B22	22.6-23.8	44.5	55	8.9	--	60	60psi with 8.2gpm. Surfacing from crack adjacent to borehole upon completion of third interval. Moved to next location.
12/28/18 0944	B23	17.9-19.1	44.5	45	7.4	--	55	55psi with 5.9gpm
12/28/18 0952	B23	20.3-21.4	44.5	50	6.3	--	55	55psi with 6.2gpm
12/28/18 1002	B23	22.6-23.8	44.5	50	7.4	--	50	50psi with 6.9gpm
12/28/18 1009	B23	24.9-26.1	44.5	45	7.4	--	50	50psi with 7.3gpm
12/28/18 1019	B23	27.3-28.4	44.5	55	8.9	--	60	60psi with 6.7gpm
12/28/18 1027	B23	29.6-30.8	30	50	6	--	55	55psi with 6.6gpm.
12/28/18 1222	B24	17.9-19.1	44.5	50	7.4	--	55	55psi with 5.1gpm
12/28/18 1232	B24	20.3-21.4	44.5	50	6.3	--	55	55psi with 6.1gpm
12/28/18 1242	B24	22.6-23.8	44.5	45	8.9	--	55	55psi with 7.3gpm
12/28/18 1249	B24	24.9-26.1	60	50	8.6	--	55	55psi with 7.3gpm. Inject extra 15.5gal that was left over from B21
12/28/18 1300	B24	27.3-28.4	44.5	45	7.4	--	50	50psi with 6.4gpm
12/28/18 1309	B24	29.6-30.8	44.5	50	7.4	--	55	55psi with 7.1gpm
12/28/18 1316	B24	31.9-33.1	44.5	50	7.4	--	55	55psi with 7.2gpm
01/21/19 1057	B25	18.5-19.7	59.3	55	5.0	--	60	
01/21/19 1114	B25	20.9-22	59.3	55	5.5	--	55	
01/21/19 1127	B25	23.2-24.4	59.3	45	5.8	--	55	
01/21/19 1142	B25	25.5-26.7	59.3	50	5.5	--	50	
01/21/19 1154	B25	27.9-29	59.3	50	5.5	--	55	
01/21/19 1206	B25	30.2-31.4	59.3	55	5.2	--	55	
01/21/19 1325	B26	18.5-19.7	59.3	55	5.5	--	60	
01/21/19 1343	B26	20.9-22	59.3	50	5.5	--	55	
01/21/19 1357	B26	23.2-24.4	59.3	45	5.5	--	55	
01/21/19 1411	B26	25.5-26.7	59.3	50	6.4	--	50	
01/21/19 1423	B26	27.9-29	59.3	55	6.0	--	55	
01/21/19 1434	B26	30.2-31.4	59.3	50	6.0	--	50	
01/22/19 0755	B27	18.5-19.7	59.3	40	5.0	--	45	
01/22/19 0814	B27	20.9-22	59.3	40	5.0	--	45	
01/22/19 0834	B27	23.2-24.4	59.3	40	5.0	--	40	
01/22/19 0847	B27	25.5-26.7	59.3	40	5.0	--	40	
01/22/19 0902	B27	27.9-29	59.3	40	5.0	--	40	
01/22/19 0920	B27	30.2-31.4	59.3	40	5.0	--	40	
01/22/19 1600	B27	30.2-31.4	52	43	5.0	--	81	Add remnants from B30 batch

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
01/22/19 0945	B28	18.5-19.7	59.3	45	5.0	--	50	
01/22/19 0958	B28	20.8-22	59.3	45	5.0	--	45	
01/22/19 1014	B28	23.2-24.3	59.3	40	5.5	--	45	
01/22/19 1027	B28	25.5-26.7	59.3	40	5.5	--	45	
01/22/19 1041	B28	27.8-29	59.3	40	5.5	--	45	
01/22/19 1055	B28	30.2-31.3	59.3	40	5.5	--	45	
01/22/19 1121	B29	16.2-17.4	50.9	40	5.8	--	45	Surfacing after 47 gallons
--	B29	18.5-19.7	--	--	--	--	--	Skip interval due to surfacing
01/22/19 1153	B29	20.8-22	67.6	35	3.8	--	40	Try 40psi/3gpm
01/22/19 1217	B29	23.2-24.3	60	30	4.0	--	40	Inj at 40psi/3gpm surfacing after 60 gallons
01/22/19 1243	B29	25.5-26.7	25	35	3.0	--	35	Surfacing after 25 gallons
--	B29	27.8-29	--	--	--	--	--	Skip interval due to surfacing
01/22/19 1308	B29	30.2-31.3	152	35	2.0	--	30	Try 35psi/2gpm
01/22/19 1425	B30	18.5-19.7	50.9	40	5.5	--	45	
01/22/19 1439	B30	20.8-22	50.9	40	5.5	--	45	
01/22/19 1454	B30	23.2-24.3	50.9	40	6.0	--	50	
01/22/19 1509	B30	25.5-26.7	50.9	40	6.0	--	45	
01/22/19 1521	B30	27.8-29	93	40	5.0	--	45	Surfacing after 90 gallons
01/22/19 1540	B30	30.2-31.3	7	40	5.0	--	45	Still surfacing pump 7 gallons
02/26/19 0827	B31	18.5-22.0	81.5	50	6.5	--	60	
02/26/19 0847	B31	24.0-27.5	81.5	60	8.0	--	60	
02/26/19 0901	B31	29.0-33.0	32.6	50	5.0	--	50	
02/26/19 0913	B32	18.5-22.0	65.0	50	6.0	--	60	9:24 surfacing after 65 gallons
02/26/19 0936	B32	24.0-27.5	98.0	35	5.0	--	50	9:36 reduce to 35psi and 5gpm
02/26/19 1000	B32	29.0-33.0	32.6	35	4.0	--	40	
02/26/19 1013	B33	18.5-22.0	81.5	40	5.8	--	50	10:27 some surfacing after 80 gallons
02/26/19 1034	B33	24.0-27.5	81.5	20	4.5	--	30	10:34 reduce to 4gpm and 30psi
02/26/19 1057	B33	29.0-33.0	32.6	20	4.0	--	30	
02/26/19 1138	B34	18.5-22.0	81.5	50	8.0	--	60	
02/26/19 1155	B34	24.0-27.5	81.5	50	8.0	--	60	
02/26/19 1211	B34	29.0-33.0	32.6	50	6.5	--	50	
02/26/19 1220	B35	18.5-22.0	81.5	40	6.2	--	50	
02/26/19 1234	B35	24.0-27.5	81.5	50	6.2	--	50	
02/26/19 1252	B35	29.0-33.0	32.6	40	5.5	--	40	
02/26/19 1304	B36	18.5-22.0	81.5	50	8.0	--	60	
02/26/19 1321	B36	24.0-27.5	81.5	50	8.0	--	50	
02/26/19 1335	B36	29.0-33.0	32.6	50	8.0	--	50	
02/26/19 1346	B37	18.5-22.0	38.0	30	5.0	--	40	low flow rates here due to previous surfacing issues
02/26/19 1405	B37	24.0-27.5	40.0	20	3.0	--	40	13:55 surfacing at 18' interval after 38 gallons
02/26/19 1429	B37	29.0-33.0	36.0	20	3.0	--	40	push on to 24' and try again

Continued….

TIME	Boring ID	Depth Interval (feet)	Trailer Total Volume (Gallons)	Trailer Sustained Pressure (psi)	Trailer Flow Rate (gpm)	RAS Total Volume (gallons)	Max Initial Pressure (psi)	COMMENTS
02/26/19 1441	B38	18.5-22.0	81.5	50	8.0	--	60	
02/26/19 1513	B38	24.0-27.5	81.5	50	8.0	--	50	
02/26/19 1530	B38	29.0-33.0	32.6	50	3.0	--	50	
02/27/19 0838	B39	18.5-22.0	81.5	40	6.0	--	60	8:38; starting at low flowrates
02/27/19 0853	B39	24.0-27.5	81.5	40	8.0	--	50	8:53; increase flowrate to 8gpm
02/27/19 0909	B39	29.0-33.0	32.6	45	6.0	--	40	
02/27/19 0918	B40	18.5-22.0	81.5	50	8.0	--	60	
02/27/19 0939	B40	24.0-27.5	81.5	50	8.0	--	60	
02/27/19 0952	B40	29.0-33.0	32.6	50	8.0	--	50	
02/27/19 1015	B41	18.5-22.0	81.5	40	8.0	--	50	
02/27/19 1033	B41	24.0-27.5	81.5	40	8.0	--	40	
02/27/19 1050	B41	29.0-33.0	32.6	40	6.5	--	50	
02/27/19 1114	B42	18.5-22.0	81.5	50	8.0	--	60	
02/27/19 1130	B42	24.0-27.5	81.5	50	7.5	--	50	
02/27/19 1150	B42	29.0-33.0	22.0	50	4.0	--	50	

NOTES:

(1) Injection borings installed during the 3rd pressure injection event (B18 – B24) have been re-numbered from that originally reported. The re-numbering reflects the order they were actually installed. The re-numbering is also reflected on updated maps.

APPENDIX B: Laboratory Analytical Report Sheets

Neil O'Hara
RNC Environmental, LLC
151 Nursery St
Ashland, OR 97520
Tel: (888) 485-3330
Email: neil@rnc-enviro.com

RE:

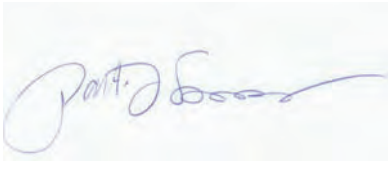
Work Order No.: 1902207

Dear Neil O'Hara:

Torrent Laboratory, Inc. received 3 sample(s) on February 26, 2019 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991 If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.



Patti L Sandrock
QA Officer

March 05, 2019
Date

Date: 3/5/2019

Client: RNC Environmental, LLC

Project:

Work Order: 1902207

CASE NARRATIVE

Unless otherwise indicated in the following narrative, no issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date Received: 02/26/19
Date Reported: 03/05/19

MW-8 1902207-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	100	0.050	50	62	mg/L

MW-7 1902207-002

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	100	0.050	50	170	mg/L

MW-6 1902207-003

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Sulfate	E300.0	100	0.050	50	310	mg/L
MTBE	SW8260B	1	0.077	0.50	0.64	ug/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1902207-001A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 / 8:47		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	3/4/19	9:41:00AM
Prep Batch ID:	1111304	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	03/04/19	14:22	NP	437522
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	14:22	NP	437522
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	03/04/19	14:22	NP	437522
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	03/04/19	14:22	NP	437522
Diisopropyl ether	SW8260B	1	0.12	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Ethyl tert-Butyl Ether	SW8260B	1	0.064	0.50	ND		ug/L	03/04/19	14:22	NP	437522
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	14:22	NP	437522
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Tert amyl-Methyl Ether	SW8260B	1	0.072	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	03/04/19	14:22	NP	437522
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	03/04/19	14:22	NP	437522
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	03/04/19	14:22	NP	437522

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1902207-001A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 / 8:47		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	3/4/19	9:41:00AM
Prep Batch ID:	1111304	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	03/04/19	14:22	NP	437522
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	03/04/19	14:22	NP	437522
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	03/04/19	14:22	NP	437522
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	03/04/19	14:22	NP	437522
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	03/04/19	14:22	NP	437522
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	14:22	NP	437522
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	03/04/19	14:22	NP	437522
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	03/04/19	14:22	NP	437522
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	03/04/19	14:22	NP	437522
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	03/04/19	14:22	NP	437522
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	14:22	NP	437522
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	03/04/19	14:22	NP	437522
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	03/04/19	14:22	NP	437522
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	03/04/19	14:22	NP	437522
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	03/04/19	14:22	NP	437522
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	03/04/19	14:22	NP	437522
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**119**		%	03/04/19	14:22	NP	437522
(S) Toluene-d8	SW8260B		75.1 - 127		**106**		%	03/04/19	14:22	NP	437522
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**97.6**		%	03/04/19	14:22	NP	437522

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1902207-001A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 / 8:47		
SDG:			

Prep Method:	5030GRO	**Prep Batch Date/Time:**	3/4/19	9:41:00AM
Prep Batch ID:	1111305	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	03/04/19	14:22	NP	437522
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		**77.4**		%	03/04/19	14:22	NP	437522

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-8	**Lab Sample ID:**	1902207-001B
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 / 8:47		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	2/26/19	3:00:00PM
Prep Batch ID:	1111237	**Prep Analyst:**	IRNAZ	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	100	0.050	50	**62**		mg/L	02/27/19	9:51	IZ	437448

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1902207-002A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 /		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	2/27/19 9:16:00AM
Prep Batch ID:	1111231	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	02/27/19	18:52	NP	437441
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	02/27/19	18:52	NP	437441
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	02/27/19	18:52	NP	437441
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	02/27/19	18:52	NP	437441
Diisopropyl ether	SW8260B	1	0.12	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Ethyl tert-Butyl Ether	SW8260B	1	0.064	0.50	ND		ug/L	02/27/19	18:52	NP	437441
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	02/27/19	18:52	NP	437441
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Tert amyl-Methyl Ether	SW8260B	1	0.072	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	02/27/19	18:52	NP	437441
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	02/27/19	18:52	NP	437441
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	02/27/19	18:52	NP	437441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1902207-002A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 /		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	2/27/19 9:16:00AM
Prep Batch ID:	1111231	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	02/27/19	18:52	NP	437441
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	02/27/19	18:52	NP	437441
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	02/27/19	18:52	NP	437441
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	02/27/19	18:52	NP	437441
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	02/27/19	18:52	NP	437441
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	02/27/19	18:52	NP	437441
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	02/27/19	18:52	NP	437441
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	02/27/19	18:52	NP	437441
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	02/27/19	18:52	NP	437441
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	02/27/19	18:52	NP	437441
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	02/27/19	18:52	NP	437441
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	02/27/19	18:52	NP	437441
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	02/27/19	18:52	NP	437441
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	02/27/19	18:52	NP	437441
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	02/27/19	18:52	NP	437441
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	02/27/19	18:52	NP	437441
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**130**		%	02/27/19	18:52	NP	437441
(S) Toluene-d8	SW8260B		75.1 - 127		**112**		%	02/27/19	18:52	NP	437441
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**97.3**		%	02/27/19	18:52	NP	437441

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1902207-002A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 /		
SDG:			

Prep Method:	5030GRO	**Prep Batch Date/Time:**	3/4/19	9:41:00AM
Prep Batch ID:	1111305	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	03/04/19	14:52	NP	437522
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		**70.2**		%	03/04/19	14:52	NP	437522

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-7	**Lab Sample ID:**	1902207-002B
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 /		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	2/26/19 3:00:00PM
Prep Batch ID:	1111237	**Prep Analyst:**	IRNAZ

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	100	0.050	50	**170**		mg/L	02/27/19	10:13	IZ	437448

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1902207-003A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 / 9:12		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	3/4/19 9:41:00AM
Prep Batch ID:	1111304	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	03/04/19	13:53	NP	437522
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	13:53	NP	437522
MTBE	SW8260B	1	0.077	0.50	**0.64**		ug/L	03/04/19	13:53	NP	437522
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	03/04/19	13:53	NP	437522
Diisopropyl ether	SW8260B	1	0.12	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Ethyl tert-Butyl Ether	SW8260B	1	0.064	0.50	ND		ug/L	03/04/19	13:53	NP	437522
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	13:53	NP	437522
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Tert amyl-Methyl Ether	SW8260B	1	0.072	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	03/04/19	13:53	NP	437522
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	03/04/19	13:53	NP	437522
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	03/04/19	13:53	NP	437522

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1902207-003A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 / 9:12		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	3/4/19 9:41:00AM
Prep Batch ID:	1111304	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	03/04/19	13:53	NP	437522
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	03/04/19	13:53	NP	437522
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	03/04/19	13:53	NP	437522
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	03/04/19	13:53	NP	437522
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	03/04/19	13:53	NP	437522
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	03/04/19	13:53	NP	437522
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	03/04/19	13:53	NP	437522
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	03/04/19	13:53	NP	437522
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	03/04/19	13:53	NP	437522
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	03/04/19	13:53	NP	437522
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	03/04/19	13:53	NP	437522
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	03/04/19	13:53	NP	437522
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	03/04/19	13:53	NP	437522
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	03/04/19	13:53	NP	437522
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	03/04/19	13:53	NP	437522
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	03/04/19	13:53	NP	437522
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**118**		%	03/04/19	13:53	NP	437522
(S) Toluene-d8	SW8260B		75.1 - 127		**109**		%	03/04/19	13:53	NP	437522
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**100**		%	03/04/19	13:53	NP	437522

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1902207-003A
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 / 9:12		
SDG:			

Prep Method:	5030GRO	**Prep Batch Date/Time:**	3/4/19	9:41:00AM
Prep Batch ID:	1111305	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	03/04/19	13:53	NP	437522
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		**77.9**		%	03/04/19	13:53	NP	437522

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 02/26/19, 3:29 pm
Date Reported: 03/05/19

Client Sample ID:	MW-6	**Lab Sample ID:**	1902207-003B
Project Name/Location:		**Sample Matrix:**	Groundwater
Project Number:	AR1936		
Date/Time Sampled:	02/26/19 / 9:12		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	2/26/19	3:00:00PM
Prep Batch ID:	1111237	**Prep Analyst:**	IRNAZ	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	100	0.050	50	**310**		mg/L	02/27/19	10:36	IZ	437448

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1902207	**Prep Method:**	5030VOC	**Prep Date:**	02/27/19	**Prep Batch:**	1111231
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	2/27/2019	**Analytical Batch:**	437441
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.26	0.50	ND	
Chloromethane	0.17	0.50	ND	
Vinyl Chloride	0.21	0.50	ND	
Bromomethane	0.21	0.50	ND	
Chloroethane	0.11	0.50	ND	
Trichlorofluoromethane	0.19	0.50	ND	
1,1-Dichloroethene	0.14	0.50	ND	
Freon 113	0.34	0.50	ND	
Methylene Chloride	0.13	1.0	ND	
trans-1,2-Dichloroethene	0.16	0.50	ND	
MTBE	0.077	0.50	ND	
tert-Butanol	2.9	5.0	ND	
Diisopropyl ether	0.12	0.50	ND	
1,1-Dichloroethane	0.12	0.50	ND	
Ethyl tert-Butyl Ether	0.064	0.50	ND	
cis-1,2-Dichloroethene	0.15	0.50	ND	
2,2-Dichloropropane	0.094	0.50	ND	
Bromochloromethane	0.15	0.50	ND	
Chloroform	0.12	0.50	ND	
Carbon Tetrachloride	0.16	0.50	ND	
1,1,1-Trichloroethane	0.16	0.50	ND	
1,1-Dichloropropene	0.19	0.50	ND	
Benzene	0.065	0.50	ND	
Tert amyl-Methyl Ether	0.072	0.50	ND	
1,2-Dichloroethane	0.11	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
Dibromomethane	0.11	0.50	ND	
1,2-Dichloropropane	0.089	0.50	ND	
Bromodichloromethane	0.076	0.50	ND	
cis-1,3-Dichloropropene	0.078	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.24	0.50	ND	
trans-1,3-Dichloropropene	0.22	0.50	ND	
1,1,2-Trichloroethane	0.076	0.50	ND	
Dibromochloromethane	0.18	0.50	ND	
1,3-Dichloropropane	0.22	0.50	ND	
1,2-Dibromoethane	0.079	0.50	ND	
Chlorobenzene	0.16	0.50	ND	
Ethylbenzene	0.20	0.50	ND	
1,1,1,2-Tetrachloroethane	0.087	0.50	ND	
m,p-Xylene	0.39	1.0	ND	
o-Xylene	0.15	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1902207	**Prep Method:**	5030VOC	**Prep Date:**	02/27/19	**Prep Batch:**	1111231
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	2/27/2019	**Analytical Batch:**	437441
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.11	0.50	ND	
Bromoform	0.076	0.50	ND	
Isopropyl Benzene	0.22	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.079	0.50	ND	
2-Chlorotoluene	0.25	0.50	ND	
1,3,5-Trimethylbenzene	0.24	0.50	ND	
1,2,3-Trichloropropane	0.15	0.50	ND	
4-Chlorotoluene	0.22	0.50	ND	
tert-Butylbenzene	0.26	0.50	ND	
1,2,4-Trimethylbenzene	0.23	0.50	ND	
sec-Butyl Benzene	0.30	0.50	ND	
p-Isopropyltoluene	0.27	0.50	ND	
1,3-Dichlorobenzene	0.17	0.50	ND	
1,4-Dichlorobenzene	0.18	0.50	ND	
n-Butylbenzene	0.27	0.50	ND	
1,2-Dichlorobenzene	0.16	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.76	2.0	ND	
Hexachlorobutadiene	0.62	2.0	ND	
1,2,4-Trichlorobenzene	0.93	2.0	ND	
Naphthalene	1.2	2.0	ND	
1,2,3-Trichlorobenzene	1.2	2.0	ND	
(S) Dibromofluoromethane			120	
(S) Toluene-d8			101	
(S) 4-Bromofluorobenzene			96.2	

Work Order:	1902207	**Prep Method:**	300.0P	**Prep Date:**	02/26/19	**Prep Batch:**	1111237
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	2/26/2019	**Analytical Batch:**	437448
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Sulfate	0.00050	0.50	0.0022	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1902207	**Prep Method:**	5030VOC	**Prep Date:**	03/04/19	**Prep Batch:**	1111304
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	3/4/2019	**Analytical Batch:**	437522
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.26	0.50	ND	
Chloromethane	0.17	0.50	ND	
Vinyl Chloride	0.21	0.50	ND	
Bromomethane	0.21	0.50	ND	
Chloroethane	0.11	0.50	ND	
Trichlorofluoromethane	0.19	0.50	ND	
1,1-Dichloroethene	0.14	0.50	ND	
Freon 113	0.34	0.50	ND	
Methylene Chloride	0.13	1.0	ND	
trans-1,2-Dichloroethene	0.16	0.50	ND	
MTBE	0.077	0.50	ND	
tert-Butanol	2.9	5.0	ND	
Diisopropyl ether	0.12	0.50	ND	
1,1-Dichloroethane	0.12	0.50	ND	
Ethyl tert-Butyl Ether	0.064	0.50	ND	
cis-1,2-Dichloroethene	0.15	0.50	ND	
2,2-Dichloropropane	0.094	0.50	ND	
Bromochloromethane	0.15	0.50	ND	
Chloroform	0.12	0.50	ND	
Carbon Tetrachloride	0.16	0.50	ND	
1,1,1-Trichloroethane	0.16	0.50	ND	
1,1-Dichloropropene	0.19	0.50	ND	
Benzene	0.065	0.50	ND	
Tert amyl-Methyl Ether	0.072	0.50	ND	
1,2-Dichloroethane	0.11	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
Dibromomethane	0.11	0.50	ND	
1,2-Dichloropropane	0.089	0.50	ND	
Bromodichloromethane	0.076	0.50	ND	
cis-1,3-Dichloropropene	0.078	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.24	0.50	ND	
trans-1,3-Dichloropropene	0.22	0.50	ND	
1,1,2-Trichloroethane	0.076	0.50	ND	
Dibromochloromethane	0.18	0.50	ND	
1,3-Dichloropropane	0.22	0.50	ND	
1,2-Dibromoethane	0.079	0.50	ND	
Chlorobenzene	0.16	0.50	ND	
Ethylbenzene	0.20	0.50	ND	
1,1,1,2-Tetrachloroethane	0.087	0.50	ND	
m,p-Xylene	0.39	1.0	0.90	
o-Xylene	0.15	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1902207	**Prep Method:**	5030VOC	**Prep Date:**	03/04/19	**Prep Batch:**	1111304
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	3/4/2019	**Analytical Batch:**	437522
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Styrene	0.11	0.50	ND	
Bromoform	0.076	0.50	ND	
Isopropyl Benzene	0.22	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.079	0.50	ND	
2-Chlorotoluene	0.25	0.50	ND	
1,3,5-Trimethylbenzene	0.24	0.50	ND	
1,2,3-Trichloropropane	0.15	0.50	ND	
4-Chlorotoluene	0.22	0.50	ND	
tert-Butylbenzene	0.26	0.50	ND	
1,2,4-Trimethylbenzene	0.23	0.50	ND	
sec-Butyl Benzene	0.30	0.50	ND	
p-Isopropyltoluene	0.27	0.50	ND	
1,3-Dichlorobenzene	0.17	0.50	ND	
1,4-Dichlorobenzene	0.18	0.50	ND	
n-Butylbenzene	0.27	0.50	ND	
1,2-Dichlorobenzene	0.16	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.76	2.0	ND	
Hexachlorobutadiene	0.62	2.0	ND	
1,2,4-Trichlorobenzene	0.93	2.0	ND	
Naphthalene	1.2	2.0	ND	
1,2,3-Trichlorobenzene	1.2	2.0	ND	
(S) Dibromofluoromethane			118	
(S) Toluene-d8			101	
(S) 4-Bromofluorobenzene			99.2	

Work Order:	1902207	**Prep Method:**	5030GRO	**Prep Date:**	03/04/19	**Prep Batch:**	1111305
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	3/4/2019	**Analytical Batch:**	437522
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH(Gasoline)	29	50	ND	
(S) 4-Bromofluorobenzene			73.0	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1902207	**Prep Method:**	5030VOC	**Prep Date:**	02/27/19	**Prep Batch:**	1111231
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	2/27/2019	**Analytical Batch:**	437441
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.9	98.7	95.8	2.88	61.4 - 129	30	
Benzene	0.16	0.50	ND	17.9	101	100	0.557	66.9 - 140	30	
Trichloroethylene	0.15	0.50	ND	17.9	101	101	0.554	69.3 - 144	30	
Toluene	0.14	0.50	ND	17.9	106	111	4.65	76.6 - 123	30	
Chlorobenzene	0.16	0.50	ND	17.9	98.6	106	7.65	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	98.4	99.9		61.2 - 131		
(S) Toluene-d8				17.9	98.1	102		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	95.1	96.5		64.1 - 120		

Work Order:	1902207	**Prep Method:**	300.0P	**Prep Date:**	02/26/19	**Prep Batch:**	1111237
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	2/26/2019	**Analytical Batch:**	437448
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Sulfate	0.00050	0.50	0.0022	2.5	101	101	0.000	80 - 120	20	

Work Order:	1902207	**Prep Method:**	5030VOC	**Prep Date:**	03/04/19	**Prep Batch:**	1111304
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	3/4/2019	**Analytical Batch:**	437522
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.9	97.6	96.8	0.576	61.4 - 129	30	
Benzene	0.16	0.50	ND	17.9	106	104	1.60	66.9 - 140	30	
Trichloroethylene	0.15	0.50	ND	17.9	101	99.6	1.67	69.3 - 144	30	
Toluene	0.14	0.50	ND	17.9	108	107	0.000	76.6 - 123	30	
Chlorobenzene	0.16	0.50	ND	17.9	101	106	4.32	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	98.8	97.9		61.2 - 131		
(S) Toluene-d8				17.9	101	103		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	104	102		64.1 - 120		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1902207	**Prep Method:**	5030GRO	**Prep Date:**	03/04/19	**Prep Batch:**	1111305
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	3/4/2019	**Analytical Batch:**	437522
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	29	50	ND	238	104	90.0	14.7	52.4 - 127	30	
(S) 4-Bromofluorobenzene				11.9	99.6	87.4		41.5 - 125		

Torrent LABORATORY, INC.

MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1902207	**Prep Method:**	300.0P	**Prep Date:**	02/26/19	**Prep Batch:**	1111237
Matrix:	**Water**	**Analytical Method:**	E300.0	**Analyzed Date:**	27-Feb-2019	**Analytical Batch:**	437448
Spiked Sample:	1902207-003B						
Units:	mg/L						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Sulfate	0.050	50	310	250	99.6	99.7	0.000	75 - 125	20	

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg/m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the analyte is found in the associated method or preparation blank

D - Surrogate is not recoverable due to the necessary dilution of the sample

E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.

H- Indicates that the recommended holding time for the analyte or compound has been exceeded

J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative

NA - Not Analyzed

N/A - Not Applicable

ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.

NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added

R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts

S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative

X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: RNC Environmental, LLC

Project Name:

Work Order No.: 1902207

Date and Time Received: 2/26/2019 3:29:00PM

Received By: Navin Ghodasara

Physically Logged By: Navin Ghodasara

Checklist Completed By: Navin Ghodasara

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	Yes	Temperature:	5.0	°C
Water-VOA vials have zero headspace?	Yes			
Water-pH acceptable upon receipt?	N/A			

pH Checked by: na

pH Adjusted by: na

Comments:

Login Summary Report

Client ID:	TL6321	RNC Environmental, LLC	**QC Level:**	II
Project Name:			**TAT Requested:**	5+ day:5
Project # :	AR1936		**Date Received:**	2/26/2019
Report Due Date:	3/5/2019		**Time Received:**	3:29 pm

Comments:

Work Order # : ***1902207***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1902207-001A	MW-8	02/26/19 8:47	Water	04/12/19			VOC_W_GRO VOC_W_8260B	
1902207-001B	MW-8	02/26/19 8:47	Water	04/12/19			Anion_W_300.0	
Sample Note:	Sulfate.							
1902207-002A	MW-7	02/26/19	Water	04/12/19			VOC_W_8260B VOC_W_GRO	
1902207-002B	MW-7	02/26/19	Water	04/12/19			Anion_W_300.0	
1902207-003A	MW-6	02/26/19 9:12	Water	04/12/19			VOC_W_GRO VOC_W_8260B	
1902207-003B	MW-6	02/26/19 9:12	Water	04/12/19			Anion_W_300.0	

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
Fax: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 1902207

Company Name: RNC ENVIRONMENTAL LLC ☐ ☒ Env. ☐ Special			Project #: AR1936 PO#:
Address: 151 NURSERY STR			Project Name:
City: ASHLAND, ~~OR~~	State: OR	Zip Code: 97520	Comments:
Telephone:	Cell: 889 485 3330		SAMPLER: RICH RYAN
REPORT TO: NEIL O'HARA	BILL TO:		EMAIL: RICH@RYANGES.COM

TURNAROUND TIME:
☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day
☒ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day
☐ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE:
☐ Storm Water ☐ Air
☐ Waste Water ☐ Wipe
☒ Ground Water ☐ Other
☐ Soil ☐ Product / Bulk

REPORT FORMAT:
☐ Level II - Std.
☐ Excel - EDD
☐ EDF ☐ Std.-EDD
☐ QC Level III
☐ QC Level IV

ANALYSIS REQUESTED

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	VOCs 8260	TPH gas 8260	SULFATE 300	REMARKS
001A/B		MW-8	2/26/19 0847	W	4	40 VOA 1 L POLY	✓	✓	✓	
002A/B		MW-7	↓	↓	↓	↓	✓	✓	✓	
003A/B		MW-6	0912	↓	↓	↓	✓	✓	✓	

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1	[signature]	RICH RYAN	2/26/19	1529	[signature]	NAVIN G.	2-26-19	1529
2	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:

Were Samples Received in Good Condition? ☒ Yes ☐ NO Samples on Ice? ☒ Yes ☐ NO Method of Shipment D/O. Sample seals intact? ☐ Yes ☐ NO ☒ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Log In By: [signature] Date: 2-26-19 Labeled By: [signature] Date: 2-26-19 #2 Temp 5 °C

eurofins | Air Toxics

3/25/2019

Mr. Richard Ryan

Ryan Geologic & Environmental Services, Inc.

PO Box 525

McCloud CA 96057

Project Name:

Project #: AR1936

Workorder #: 1903428

Dear Mr. Richard Ryan

The following report includes the data for the above referenced project for sample(s) received on 3/19/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive S.E. WMS are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Sarah Westerman

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1903428

Work Order Summary

CLIENT:	Mr. Richard Ryan Ryan Geologic & Environmental Services, Inc. PO Box 525 McCloud, CA 96057	**BILL TO:**	Mr. Neil OHara RNC Environmental 151 Nursery St Ashland, OR 97520
PHONE:		**P.O. #**	
FAX:		**PROJECT #**	AR1936
DATE RECEIVED:	03/19/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	03/25/2019		

FRACTION #	NAME	TEST
01A	SG20C	Passive S.E. WMS
02A	BLANK	Passive S.E. WMS
03A	Lab Blank	Passive S.E. WMS
04A	LCS	Passive S.E. WMS
04AA	LCSD	Passive S.E. WMS

CERTIFIED BY: Heidi Hayes DATE: 03/25/19

Technical Director

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
WMS Passive SE by Mod EPA TO-17
Ryan Geologic & Environmental Services, Inc.
Workorder# 1903428

Two WMS-LU samples were received on March 19, 2019. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank and in sample BLANK, a sampling duration of 27198 minutes was applied. The assumed temperature used for the uptake rate is listed on the data

page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

Summary of Detected Compounds
VOC BY PASSIVE SAMPLER - GC/MS

Client Sample ID: SG20C

Lab ID#: 1903428-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	10	24	1200
Toluene	0.050	1.8	8.1	300
Ethyl Benzene	0.050	1.3	80	2100
m,p-Xylene	0.050	1.3	230	6000
o-Xylene	0.050	1.2	190	4600
Naphthalene	0.050	1.2	1.8	44

Client Sample ID: BLANK

Lab ID#: 1903428-02A

No Detections Were Found.

eurofins | Air Toxics

Client Sample ID: SG20C

Lab ID#: 1903428-01A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c032107sim**	**Date of Collection: 3/18/19 12:08:00 PM**
Dil. Factor:	**1.00**	**Date of Analysis: 3/21/19 10:26 AM**
		Date of Extraction: 3/21/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	10	24	1200
Toluene	0.050	1.8	8.1	300
Ethyl Benzene	0.050	1.3	80	2100
m,p-Xylene	0.050	1.3	230	6000
o-Xylene	0.050	1.2	190	4600
Naphthalene	0.050	1.2	1.8	44

Temperature = 77.0F , duration time = 27198 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

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Client Sample ID: BLANK

Lab ID#: 1903428-02A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c032108sim**	**Date of Collection: 3/18/19 12:11:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/21/19 10:52 AM**	
		Date of Extraction: 3/21/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	10	Not Detected	Not Detected
Toluene	0.050	1.8	Not Detected	Not Detected
Ethyl Benzene	0.050	1.3	Not Detected	Not Detected
m,p-Xylene	0.050	1.3	Not Detected	Not Detected
o-Xylene	0.050	1.2	Not Detected	Not Detected
Naphthalene	0.050	1.2	Not Detected	Not Detected

Temperature = 77.0F , duration time = 27198 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	90	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1903428-03A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c032105sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/21/19 09:20 AM**	
		Date of Extraction: 3/21/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	10	Not Detected	Not Detected
Toluene	0.050	1.8	Not Detected	Not Detected
Ethyl Benzene	0.050	1.3	Not Detected	Not Detected
m,p-Xylene	0.050	1.3	Not Detected	Not Detected
o-Xylene	0.050	1.2	Not Detected	Not Detected
Naphthalene	0.050	1.2	Not Detected	Not Detected

Temperature = 77.0F , duration time = 27198 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	91	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1903428-04A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c032103sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/21/19 08:21 AM**	
		Date of Extraction: 3/21/19	

Compound	%Recovery	Method Limits
Benzene	84	70-130
Toluene	88	70-130
Ethyl Benzene	92	70-130
m,p-Xylene	86	70-130
o-Xylene	81	70-130
Naphthalene	17	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	90	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1903428-04AA

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**c032104sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/21/19 08:48 AM**	
		Date of Extraction: 3/21/19	

Compound	%Recovery	Method Limits
Benzene	85	70-130
Toluene	89	70-130
Ethyl Benzene	92	70-130
m,p-Xylene	87	70-130
o-Xylene	82	70-130
Naphthalene	17	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	91	70-130

Neil O'Hara
RNC Environmental, LLC
151 Nursery St
Ashland, OR 97520
Tel: (888) 485-3330
Email: neil@rnc-enviro.com

RE: AR1936

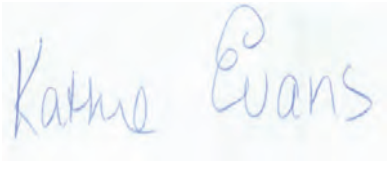
Work Order No.: 1904197

Dear Richard Ryan:

Torrent Laboratory, Inc. received 1 sample(s) on April 23, 2019 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991 If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.



Kathie Evans
Project Manager

April 30, 2019
Date

Date: 4/30/2019

Client: RNC Environmental, LLC

Project: AR1936

Work Order: 1904197

CASE NARRATIVE

Unless otherwise indicated in the following narrative, no issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date Received: 04/23/19
Date Reported: 04/30/19

SG20B

1904197-001

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Oxygen	D1946	3	0.032	0.15	17%
2-Propanol (Isopropyl Alcohol)	ETO15	8000	10000	98000	1600000

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 04/23/19, 10:27 am
Date Reported: 04/30/19

Client Sample ID:	SG20B	**Lab Sample ID:**	1904197-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Air
Project Number:			
Date/Time Sampled:	04/23/19 / 10:27	**Certified Clean WO # :**	
Canister/Tube ID:		**Received PSI :**	
Collection Volume (L):		**Corrected PSI :**	
SDG:			

Prep Method:	FG-P	**Prep Batch Date/Time:**	4/25/19	3:32:00PM
Prep Batch ID:	1112730	**Prep Analyst:**	BPATEL	

Parameters:	Analysis Method	DF	MDL %	PQL %	Results %	Results ppbv	Q	Analyzed	Time	By	Analytical Batch
Oxygen	D1946	3.00	0.032	0.15	17			04/25/19	16:59	BA	438806

Prep Method:	TO15-P	**Prep Batch Date/Time:**	4/22/19	10:00:00PM		
Prep Batch ID:	1112508	**Prep Analyst:**	BALI			

Parameters:	Analysis Method	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Q	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	ETO15	8,000	13000	20000	ND	ND		04/23/19	18:28	BA	438607
1,1-Difluoroethane	ETO15	8,000	2800	110000	ND	ND		04/23/19	18:28	BA	438607
1,2-Dichlorotetrafluoroethane	ETO15	8,000	230000	450000	ND	ND		04/23/19	18:28	BA	438607
Chloromethane	ETO15	8,000	16000	33000	ND	ND		04/23/19	18:28	BA	438607
Vinyl Chloride	ETO15	8,000	1800	10000	ND	ND		04/23/19	18:28	BA	438607
1,3-Butadiene	ETO15	8,000	2700	8800	ND	ND		04/23/19	18:28	BA	438607
Bromomethane	ETO15	8,000	5200	16000	ND	ND		04/23/19	18:28	BA	438607
Chloroethane	ETO15	8,000	6500	11000	ND	ND		04/23/19	18:28	BA	438607
Trichlorofluoromethane	ETO15	8,000	4500	22000	ND	ND		04/23/19	18:28	BA	438607
1,1-Dichloroethene	ETO15	8,000	6600	16000	ND	ND		04/23/19	18:28	BA	438607
Freon 113	ETO15	8,000	8200	31000	ND	ND		04/23/19	18:28	BA	438607
Carbon Disulfide	ETO15	8,000	3000	12000	ND	ND		04/23/19	18:28	BA	438607
2-Propanol (Isopropyl Alcohol)	ETO15	8,000	10000	98000	1600000	650,406.50		04/23/19	18:28	BA	438607
Methylene Chloride	ETO15	8,000	5600	83000	ND	ND		04/23/19	18:28	BA	438607
Acetone	ETO15	8,000	3200	95000	ND	ND		04/23/19	18:28	BA	438607
trans-1,2-Dichloroethene	ETO15	8,000	3800	16000	ND	ND		04/23/19	18:28	BA	438607
Hexane	ETO15	8,000	3700	14000	ND	ND		04/23/19	18:28	BA	438607
MTBE	ETO15	8,000	3600	14000	ND	ND		04/23/19	18:28	BA	438607
tert-Butanol	ETO15	8,000	4900	12000	ND	ND		04/23/19	18:28	BA	438607
Diisopropyl ether (DIPE)	ETO15	8,000	5900	17000	ND	ND		04/23/19	18:28	BA	438607
1,1-Dichloroethane	ETO15	8,000	4300	16000	ND	ND		04/23/19	18:28	BA	438607
ETBE	ETO15	8,000	2600	17000	ND	ND		04/23/19	18:28	BA	438607
cis-1,2-Dichloroethene	ETO15	8,000	6700	16000	ND	ND		04/23/19	18:28	BA	438607
Chloroform	ETO15	8,000	7700	20000	ND	ND		04/23/19	18:28	BA	438607
Vinyl Acetate	ETO15	8,000	6100	14000	ND	ND		04/23/19	18:28	BA	438607

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 04/23/19, 10:27 am
Date Reported: 04/30/19

Client Sample ID:	SG20B	**Lab Sample ID:**	1904197-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Air
Project Number:			
Date/Time Sampled:	04/23/19 / 10:27	**Certified Clean WO # :**	
Canister/Tube ID:		**Received PSI :**	
Collection Volume (L):		**Corrected PSI :**	
SDG:			

Prep Method:	TO15-P	**Prep Batch Date/Time:**	4/22/19	10:00:00PM
Prep Batch ID:	1112508	**Prep Analyst:**	BALI	

Parameters:	Analysis Method	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Q	Analyzed	Time	By	Analytical Batch
Carbon Tetrachloride	ETO15	8,000	8900	25000	ND	ND		04/23/19	18:28	BA	438607
1,1,1-Trichloroethane	ETO15	8,000	6300	22000	ND	ND		04/23/19	18:28	BA	438607
2-Butanone (MEK)	ETO15	8,000	3100	12000	ND	ND		04/23/19	18:28	BA	438607
Ethyl Acetate	ETO15	8,000	3800	14000	ND	ND		04/23/19	18:28	BA	438607
Tetrahydrofuran	ETO15	8,000	3600	12000	ND	ND		04/23/19	18:28	BA	438607
Benzene	ETO15	8,000	3500	13000	ND	ND		04/23/19	18:28	BA	438607
TAME	ETO15	8,000	5400	17000	ND	ND		04/23/19	18:28	BA	438607
1,2-Dichloroethane (EDC)	ETO15	8,000	3400	16000	ND	ND		04/23/19	18:28	BA	438607
Trichloroethylene	ETO15	8,000	6400	21000	ND	ND		04/23/19	18:28	BA	438607
1,2-Dichloropropane	ETO15	8,000	6100	18000	ND	ND		04/23/19	18:28	BA	438607
Bromodichloromethane	ETO15	8,000	5900	27000	ND	ND		04/23/19	18:28	BA	438607
1,4-Dioxane	ETO15	8,000	14000	29000	ND	ND		04/23/19	18:28	BA	438607
trans-1,3-Dichloropropene	ETO15	8,000	8500	18000	ND	ND		04/23/19	18:28	BA	438607
Toluene	ETO15	8,000	6000	15000	ND	ND		04/23/19	18:28	BA	438607
4-Methyl-2-Pentanone (MIBK)	ETO15	8,000	6000	16000	ND	ND		04/23/19	18:28	BA	438607
cis-1,3-Dichloropropene	ETO15	8,000	3400	18000	ND	ND		04/23/19	18:28	BA	438607
Tetrachloroethylene	ETO15	8,000	12000	27000	ND	ND		04/23/19	18:28	BA	438607
1,1,2-Trichloroethane	ETO15	8,000	4700	22000	ND	ND		04/23/19	18:28	BA	438607
Dibromochloromethane	ETO15	8,000	8900	34000	ND	ND		04/23/19	18:28	BA	438607
1,2-Dibromoethane (EDB)	ETO15	8,000	5900	31000	ND	ND		04/23/19	18:28	BA	438607
2-Hexanone	ETO15	8,000	5200	16000	ND	ND		04/23/19	18:28	BA	438607
Ethyl Benzene	ETO15	8,000	5000	17000	ND	ND		04/23/19	18:28	BA	438607
Chlorobenzene	ETO15	8,000	4800	18000	ND	ND		04/23/19	18:28	BA	438607
1,1,1,2-Tetrachloroethane	ETO15	8,000	6700	27000	ND	ND		04/23/19	18:28	BA	438607
m,p-Xylene	ETO15	8,000	7800	17000	ND	ND		04/23/19	18:28	BA	438607
o-Xylene	ETO15	8,000	2400	17000	ND	ND		04/23/19	18:28	BA	438607
Styrene	ETO15	8,000	3700	17000	ND	ND		04/23/19	18:28	BA	438607
Bromoform	ETO15	8,000	10000	41000	ND	ND		04/23/19	18:28	BA	438607
1,1,2,2-Tetrachloroethane	ETO15	8,000	6500	27000	ND	ND		04/23/19	18:28	BA	438607
4-Ethyl Toluene	ETO15	8,000	4400	20000	ND	ND		04/23/19	18:28	BA	438607
1,3,5-Trimethylbenzene	ETO15	8,000	2400	20000	ND	ND		04/23/19	18:28	BA	438607
1,2,4-Trimethylbenzene	ETO15	8,000	4800	20000	ND	ND		04/23/19	18:28	BA	438607
1,4-Dichlorobenzene	ETO15	8,000	6000	24000	ND	ND		04/23/19	18:28	BA	438607

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Richard Ryan
RNC Environmental, LLC

Date/Time Received: 04/23/19, 10:27 am
Date Reported: 04/30/19

Client Sample ID:	SG20B	**Lab Sample ID:**	1904197-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Air
Project Number:			
Date/Time Sampled:	04/23/19 / 10:27	**Certified Clean WO # :**	
Canister/Tube ID:		**Received PSI :**	
Collection Volume (L):		**Corrected PSI :**	
SDG:			

Prep Method:	TO15-P	**Prep Batch Date/Time:**	4/22/19	10:00:00PM
Prep Batch ID:	1112508	**Prep Analyst:**	BALI	

Parameters:	Analysis Method	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Q	Analyzed	Time	By	Analytical Batch
1,3-Dichlorobenzene	ETO15	8,000	11000	24000	ND	ND		04/23/19	18:28	BA	438607
1,2-Dichlorobenzene	ETO15	8,000	8600	24000	ND	ND		04/23/19	18:28	BA	438607
Hexachlorobutadiene	ETO15	8,000	15000	43000	ND	ND		04/23/19	18:28	BA	438607
1,2,4-Trichlorobenzene	ETO15	8,000	17000	30000	ND	ND		04/23/19	18:28	BA	438607
Naphthalene	ETO15	8,000	10000	21000	ND	ND		04/23/19	18:28	BA	438607
(S) 4-Bromofluorobenzene	ETO15	8,000	50	150	93 %			04/23/19	18:28	BA	438607

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1904197	**Prep Method:**	TO15-P	**Prep Date:**	04/22/19	**Prep Batch:**	1112508
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	4/23/2019	**Analytical Batch:**	438607
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.32	0.50	ND	
1,1-Difluoroethane	0.13	5.0	ND	
1,2-Dichlorotetrafluoroethane	4.0	8.0	ND	
Chloromethane	0.99	2.0	ND	
Vinyl Chloride	0.088	0.50	ND	
1,3-Butadiene	0.15	0.50	ND	
Bromomethane	0.17	0.50	ND	
Chloroethane	0.31	0.50	ND	
Trichlorofluoromethane	0.099	0.50	ND	
1,1-Dichloroethene	0.21	0.50	ND	
Freon 113	0.13	0.50	ND	
Carbon Disulfide	0.12	0.50	ND	
2-Propanol (Isopropyl Alcohol)	0.52	5.0	ND	
Methylene Chloride	0.20	3.0	0.36	
Acetone	0.17	5.0	1.4	
trans-1,2-Dichloroethene	0.12	0.50	ND	
Hexane	0.13	0.50	0.15	
MTBE	0.12	0.50	ND	
tert-Butanol	0.20	0.50	ND	
Diisopropyl ether (DIPE)	0.18	0.50	ND	
1,1-Dichloroethane	0.13	0.50	ND	
ETBE	0.078	0.50	ND	
cis-1,2-Dichloroethene	0.21	0.50	ND	
Chloroform	0.20	0.50	0.26	
Vinyl Acetate	0.22	0.50	ND	
Carbon Tetrachloride	0.18	0.50	ND	
1,1,1-Trichloroethane	0.15	0.50	ND	
2-Butanone (MEK)	0.13	0.50	0.19	
Ethyl Acetate	0.13	0.50	ND	
Tetrahydrofuran	0.15	0.50	ND	
Benzene	0.14	0.50	0.21	
TAME	0.16	0.50	ND	
1,2-Dichloroethane (EDC)	0.10	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
1,2-Dichloropropane	0.17	0.50	ND	
Bromodichloromethane	0.11	0.50	ND	
1,4-Dioxane	0.50	1.0	ND	
trans-1,3-Dichloropropene	0.23	0.50	ND	
Toluene	0.20	0.50	ND	
4-Methyl-2-Pentanone (MIBK)	0.18	0.50	ND	
cis-1,3-Dichloropropene	0.093	0.50	ND	
Tetrachloroethylene	0.22	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1904197	**Prep Method:**	TO15-P	**Prep Date:**	04/22/19	**Prep Batch:**	1112508
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	4/23/2019	**Analytical Batch:**	438607
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
1,1,2-Trichloroethane	0.11	0.50	ND	
Dibromochloromethane	0.13	0.50	ND	
1,2-Dibromoethane (EDB)	0.096	0.50	ND	
2-Hexanone	0.16	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
Chlorobenzene	0.13	0.50	ND	
1,1,1,2-Tetrachloroethane	0.12	0.50	ND	
m,p-Xylene	0.23	0.50	ND	
o-Xylene	0.070	0.50	ND	
Styrene	0.11	0.50	ND	
Bromoform	0.13	0.50	ND	
1,1,2,2-Tetrachloroethane	0.12	0.50	ND	
4-Ethyl Toluene	0.11	0.50	ND	
1,3,5-Trimethylbenzene	0.061	0.50	ND	
1,2,4-Trimethylbenzene	0.12	0.50	ND	
1,4-Dichlorobenzene	0.12	0.50	ND	
1,3-Dichlorobenzene	0.22	0.50	ND	
1,2-Dichlorobenzene	0.18	0.50	ND	
Hexachlorobutadiene	0.17	0.50	ND	
1,2,4-Trichlorobenzene	0.29	0.50	ND	
Naphthalene	0.24	0.50	ND	
Cyclohexane	0.50	0.50	ND	
Benzyl Chloride	0.20	0.50	ND	
Heptane	0.13	0.50	ND	
(S) 4-Bromofluorobenzene			92	

Work Order:	1904197	**Prep Method:**	FG-P	**Prep Date:**	04/25/19	**Prep Batch:**	1112730
Matrix:	Air	**Analytical Method:**	D1946	**Analyzed Date:**	4/25/2019	**Analytical Batch:**	438806
Units:	ppmv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Oxygen	110	500	ND	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1904197	**Prep Method:**	TO15-P	**Prep Date:**	04/22/19	**Prep Batch:**	1112508
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	4/23/2019	**Analytical Batch:**	438607
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.21	0.50	ND	8.00	85.7	88.3	3.02	65 - 135	30	
Benzene	0.14	0.50	ND	8.00	88.1	83.9	4.80	65 - 135	30	
Trichloroethylene	0.15	0.50	ND	8.00	88.0	87.0	1.14	65 - 135	30	
Toluene	0.20	0.50	ND	8.00	87.4	86.4	1.15	65 - 135	30	
Chlorobenzene	0.13	0.50	ND	8.00	81.3	83.2	2.28	65 - 135	30	
(S) 4-Bromofluorobenzene				20.0	99.8	101		50 - 150		

Work Order:	1904197	**Prep Method:**	FG-P	**Prep Date:**	04/25/19	**Prep Batch:**	1112730
Matrix:	Air	**Analytical Method:**	D1946	**Analyzed Date:**	4/25/2019	**Analytical Batch:**	438806
Units:	ppmv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Oxygen	110	500	ND	2500	113	108	4.72	65 - 135	30	

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg/m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the analyte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: RNC Environmental, LLC

Project Name: AR1936

Work Order No.: 1904197

Date and Time Received: 4/23/2019 10:27:00AM

Received By: Katherene Evans

Physically Logged By: Katherene Evans

Checklist Completed By: Katherene Evans

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes			
Container/Temp Blank temperature in compliance?	Yes	Temperature:	20.0	°C
Water-VOA vials have zero headspace?	No VOA vials submitted			
Water-pH acceptable upon receipt?	N/A			

pH Checked by: na

pH Adjusted by: na

Comments:

Tedlar bag rec'd at ambient temp. Not much air in bag, client indicated difficulties getting sample out of well

Login Summary Report

Client ID:	TL6321	RNC Environmental, LLC	**QC Level:**	II
Project Name:	AR1936		**TAT Requested:**	5+ day:5
Project # :			**Date Received:**	4/23/2019
Report Due Date:	4/30/2019		**Time Received:**	10:27 am

Comments:

Work Order # : ***1904197***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1904197-001A	SG20B	04/23/19 10:27	Air				VOC_A_FG D1946 VOC_A_TO15	

Sample Note: TO15 & O2.

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
Fax: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 1904197

Company Name: RNC ENVIRONMENTAL LLC ☐ ☑ Env. ☐ Special			Project #: AR1936 PO#:
Address: 151 NURSERY ST.			Project Name:
City: ASHLAND	State: OR	Zip Code: 97520	Comments:
Telephone: 888-485-3330	Cell:		SAMPLER: RICH RYAN
REPORT TO: NEIL O'HARA	BILL TO:		EMAIL: RICH@RYANGES.COM; NEIL@RNC-ENVIRO.COM

TURNAROUND TIME:
☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day
☐ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day
☐ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE:
☐ Storm Water ☐ Air
☐ Waste Water ☐ Wipe
☐ Ground Water ☐ Other
☐ Soil ☐ Product / Bulk

REPORT FORMAT:
☐ Level II - Std.
☐ Excel - EDD
☐ EDF ☐ Std.-EDD
☐ QC Level III
☐ QC Level IV

ANALYSIS REQUESTED

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	VOCs BY TO15	OXYGEN							REMARKS
001A		SG20B	4/23/19 0900	AIR	1	2L	✓	✓							

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1		RICH RYAN	4/23/19	1027	Katie	CB	4-23-19	10:27
2	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:

Were Samples Received in Good Condition? ☑ Yes ☐ NO Samples on Ice? ☐ Yes ☑ NO Method of Shipment D/Off Sample seals intact? ☐ Yes ☐ NO ☑ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Tedlar Bag Rec'd @ ambient temp

Log In By: _____ Date: _____ Labeled By: _____ Date: _____ Temp _____ °C

Page ___ of ___ Rev. 3

Remedial Action Status Report - #5
Post-ISCO Monitoring: July 2019
1936 Alum Rock Avenue; San Jose, CA 95116

August 22, 2019

Prepared for
Santa Clara County Department of Environmental Health
Hazardous Materials Compliance Division – Site Mitigation Program
1555 Berger Drive #300
San Jose, CA 95112

On Behalf of
Pacific West Communities, Inc
430 East State Street, Suite 100
Eagle, ID 83616

Prepared by
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McCloud, California 96057

and

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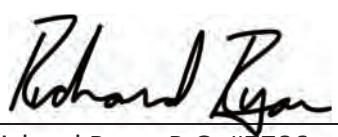
151 Nursery Street
Ashland, Oregon 97520



Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

Neil O'Hara
RNC Environmental, LLC

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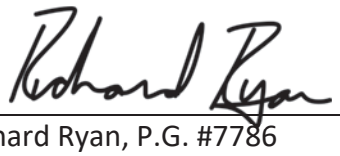
Statement of Accuracy

I am the primary author of this document and have either performed all field activities documented herein or been present as a field supervisor while the activities were performed. I declare under penalty of perjury that the information, interpretations, and recommendations contained in this document are true and correct to the best of my knowledge and my professional experience.



Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

Acronyms

AMSL	Above mean sea level
BGL	Below ground level
BTEX	Benzene, toluene, ethylbenzene, and xylenes
Cond	Conductivity
ESLs	Environmental Screening Levels
ISCO	In-Situ Chemical Oxidation
LTCP	Low-Threat Closure Policy
LUST	Leaking underground storage tank
L	Liter
MDL	Method detection Limit
MiHPT	Membrane interface probe and hydraulic profiling tool
mg/L	Milligrams per Liter
µg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per cubic meter
MTBE	Methyl-tert-butyl-ether
NAPH	Naphthalene
ORP	Oxygen/Reduction Potential
PQL	Practical quantitation limt
SCCDEH	Santa Clara County Dept. of Environmental Health
SCVWD	Santa Clara Valley Water District
SFBay RWQCB	San Francisco Bay Regional Water Quality Control Board
TDS	Total dissolved solids
TPH_G	Total petroleum hydrocarbons in the gasoline range
UST	Underground storage tank
VOCs	Volatile organic compounds
WMS-LU	Waterloo Membrane Sampler – Low Uptake

1.0 Introduction

During an August 10, 2018 meeting with SCCDEH, in-situ oxidation was selected as the best remedial option to address a subsurface release of gasoline at the site. Pressure injection of PersulfOx solution was selected as the best option to achieve in-situ oxidation. Five PersulfOx injection events occurred between October 2018 and February 2019, and a technical report documenting each injection was compiled and submitted to SCCDEH. In correspondence dated June 4 and June 17, 2019, SCCDEH required that a multi-point soil vapor survey be conducted on a grid pattern and that an additional grab groundwater sample should be collected in accordance with a workplan dated June 14, 2019. SCCDEH also approved abandonment of the three remaining groundwater monitoring wells at the site.

The purpose of this report is to document recent completion of the soil vapor survey and grab groundwater sampling, and to evaluate that information in terms of remedial action effectiveness. At the conclusion of the current round of field activities:

- Groundwater monitoring wells MW-6, MW-7, and MW-8 had been abandoned under permit from SCVWD.
- One grab groundwater sample (GRAB03) had been collected from within the impact area and analyzed for VOCs and sulfate by Torrent Laboratories.
- Fourteen passive soil vapor samples had been collected from points along a grid pattern and analyzed for BTEX, MTBE, and NAPH by Eurofins Air Toxics. The thirteen soil vapor probes remain onsite for subsequent abandonment.
- One active soil vapor sample had been collected from SG-20B into a Tedlar bag and was analyzed for BTEX, TPH_G, and oxygen by Torrent Laboratories.
- Seven 55-gallon steel drums containing petroleum impacted soil exist on site for subsequent disposal at a permitted facility.

2.0 Monitoring Well Abandonment

In correspondence dated June 4, 2019, SCCDEH approved a request to abandon groundwater monitoring wells MW-6, MW-7, and MW-8. Those wells were abandoned under permit from SCVWD on July 29, 2019. Copies of the SCVWD permits are included in **Appendix A**. Cascade Drilling LLC performed the well destruction activities. **Table 1** is a summary of well construction information.

All three wells were reamed to total depth (~30 ft) using an 8-inch auger drill string equipped with a stinger at the base of the string. The stinger's function was to keep the drill string aligned with the well pipe during reaming. Augers were left in the ground until Mr. Tim Ripp, SCVWD, arrived to

observe grouting. Neat cement grout was mixed in a 55-gallon drum at a rate of ~400 lbs cement per drum. Grout was pumped down hole via a tremie pipe inserted inside the augers. Once the augers were filled with grout, they were extracted, and additional grout was added to completely fill the boring. Each well consumed ~75 gallons of grout.

These wells were located outside the impact area and no odors or staining were observed in cuttings. The drill cuttings were stockpiled adjacent to the boring and will be used as common fill.

3.0 Grab Groundwater Sampling

One grab groundwater sample (GRAB03) was collected from a soil boring installed to 34 feet deep on July 18, 2019. **Figure 1** is a map showing the sampling location.

3.1 Soil Boring

Cascade Drillers LLC installed a 2.25-inch outside diameter soil boring to 34 feet BGL using a dual-tube, direct-push drill string. Soil cores (1.25-inch diameter) encased in 4-foot long plastic liners were recovered continuously as the boring was advanced. After retrieval, the plastic liners were cut open and inspected by a geologist. Photographs of the recovered soil core are shown in **Figure 2**.

The written log of geologist's observations indicates three potentially significant observations. First, the primary impact zone at 26 to 30 feet BGL was sandy but did not have any noticeable petroleum odor. Second, there was some petroleum odor in clay sediment between 18 and 23 feet and the odor apparently originated (was strongest) in a sandy zone at 23 to 24 feet BGL. Finally, the top 20 feet of sediment was predominantly clay and contained only some moisture.

3.2 Groundwater Sampling Procedures

After the boring reached its total depth, 35 feet of 1-inch diameter PVC well pipe (including a 5-foot section of well screen at the bottom) was installed in the boring and the outer steel casing of the dual-tube drill string was withdrawn to 5 ft BGL. Sufficient groundwater for sampling had accumulated in the well pipe ~2 hours after the boring was completed. A grab groundwater sample was collected from inside the well pipe using a new disposable bailer. Recovered groundwater was placed into laboratory supplied containers, the containers were labeled, placed on ice, and subsequently transported under chain of custody to Torrent Laboratories for analysis. Laboratory analysis was for TPH_G and 65 VOCs by SW846-8260 and for sulfate by EPA-NERL 300.0. Additionally, a MyronL Ultrameter II multimeter was used to measure groundwater quality indicator parameters from groundwater remaining in the bailer after sampling was complete.

3.3 Groundwater Sampling Results

Copies of laboratory analytical report sheets are included as **Appendix B**.

Table 2 is a summary of post-ISCO grab groundwater sampling results collected to date and includes the sample collected on July 18, 2019. Of the 63 VOCs tested during July, only 3 constituents (TPH_G, ethylbenzene, and n-propylbenzene) were detected in the groundwater. It is important to note that for the first-time benzene was **not** detected in groundwater within the primary impact zone.

Also, the concentration of sulfate in groundwater is indicated to remain elevated as would be expected after using sodium persulfate for ISCO. Elevated sulfate concentration is one of the intended long-term beneficial effects of ISCO at the site.

Table 3 is a summary of groundwater quality indicator parameters collected during grab groundwater sampling. A decrease in ORP is indicated for July 2019 after increasing ORP observed during ISCO activities. The decreasing ORP may reflect a return to sulfate-phase aerobic biodegradation that was indicated to exist pre-ISCO.

4.0 Soil Vapor Sampling

Soil vapor samples were collected from two types of wells/probes. The SG-20B well (5-feet deep) and the SG-20C well (9-feet deep) were existing at the site and had been constructed inside 3-inch diameter direct-push borings as the outer steel tube of a dual-tube drill string was being withdrawn. Flush-thread PVC well pipe and screen, drillers sand, a bentonite seal, and grout had been used to construct those wells. The SG-21 thru SG-31 probes consist of steel pipes hammered into 0.75-inch diameter direct-push borings. Construction diagrams for both types of probes are shown in **Figure 3**, and soil vapor well construction specifications are summarized in **Table 1**.

Both 'active' and 'passive' soil vapor sampling techniques were used during recent soil vapor sampling at the site. Passive samplers are better suited for human health risk assessments and in conditions were air permeability of sediments is low. Passive samplers were used for the multi-point soil vapor survey because of the low permeability conditions documented at the site. The advantage of the active sampling method is that the sample can be analyzed for oxygen content. Active vapor sampling had not been planned, but an active sample was collected from SG-20B after pressure decay testing on several of the vapor sampling probes including SG-20B indicated unusually rapid pressure decay (unusually high air permeability).

It should be noted that there was a small patch of soil staining near the SG-20B well head that had not been observed prior to July 2019.

4.1 Pressure Decay Testing

Pressure decay shut-in tests on a vapor probe are used to measure the subsurface permeability to air. Qualitatively, the greater the rate of pressure decay, the greater the permeability to air.

Pressure decay shut-in tests were conducted on SG-20B on two separate occasions using the same equipment and procedures. **Figure 4** shows results for both of those tests. On July 29th, pressure decay from 4 psi to 1 psi required 5.1 minutes. Previously, on April 23rd, pressure decay from 4 psi to 1 psi would have required 48 minutes based on projected best fit line. The different rates of pressure decay between the two tests indicates the permeability to air at SG-20B had significantly changed. Very low air permeability observed during April (the end of the wet season) compared to the relatively high permeability to air observed during July (the middle of the dry season) is attributed to seasonal difference in subsurface soil moisture.

4.2 Passive Soil Vapor Sampling and Results

Fourteen WMS-LU samplers (13 soil vapor samples plus 1 field blank) were deployed on July 3, 2019 in 5-foot deep probes on a 21-foot grid pattern across the site. Each sampler was retrieved 26 days later on July 29, 2019, re-sealed in its original packaging, and shipped via FedEx to Eurofins Air Toxics, Inc. The samples were analyzed for BTEX, MTBE, and naphthalene by modified method TO-15. Sample analysis was completed on August 14, 2019. Copies of the laboratory analytical report sheets are included in **Appendix B**. Note that the sampler deployed in SG-20C (9 feet deep) was wet when it was retrieved.

Table 4 is a summary of laboratory analytical results for soil vapor samples and includes results from both active and passive sampling methods (the samples collected by passive sampling methods do not include analysis for oxygen). For the samples collected on July 29, 2019, only 2 of 13 samples detected benzene in soil vapor at concentrations of 17 and 130 µg/m^3 in SG-27 and SG-20C, respectively. Napthalene was detected in only the SG-20C sample at a concentration of 6.9 µg/m^3. Note that those 3 detections are the only concentrations which exceed Tier 1 ESLs for sub-slab soil vapor. Toluene, ethylbenzene, and xylenes were also detected in soil vapor but at concentrations below Tier 1 ESLs. MTBE was not detected in soil vapor samples collected on July 29, 2019.

Passive samples previously collected from SG-20B (February 6, 2019) show much higher BTEX and naphthalene concentrations in soil vapor, but that was before the final ISCO injection event had occurred on February 27, 2019.

Figure 5 shows soil vapor sampling results in map view, and the total concentration of BTEX + naphthalene in soil vapor have been contoured on that map. The isoconcentration contours on that map indicate the highest soil vapor concentrations are currently located north of the primary impact

zone. That pattern is exactly what would be expected given a north-northeast direction of groundwater flow and successful source reduction of BTEX + naphthalene in the primary impact zone.

4.3 Active Soil Vapor Sampling and Results

A soil vapor sample was collected using active sampling methods from SG-20B on July 30th after observing unexpectedly high air permeability at SG-20B during a pressure decay test on July 29th.

The active vapor sampling system consisted of using a peristaltic pump to apply vacuum pressure to the well and collect a vapor sample into a 1L Tedlar bag attached to the discharge end of the pump. New silicon tubbing was used to make all connections from the well head to the Tedlar bag. A set of magnehelic gauges was used to monitor pressure, and the rate of flow was estimated by the time required to fill a 1L Tedlar bag during purging. The assembly was pressure tested prior to purging/sampling (see **Figure 4**). Pressure used during purging and sampling was <3 psi. The well head and several feet of ground surrounding the well was covered with a plastic sheet and an open pan of isopropyl alcohol was placed next to the well head under the plastic sheet to function as a leak detection gas. The calculated volume of standing air in the SG-20 well pipe and sandpack is 785 mL. The well was purged of >1L of air prior to sampling. After sample collection, the Tedlar bag was labeled, placed in container shielded from daylight, and transported under chain of custody the same day to Torrent Laboratories for analysis. The sample was analyzed for VOCs and TPH_G by SW846-8260 and for oxygen by ASTM D1946. Copies of the laboratory analytical report sheets are included in **Appendix B**.

Table 4 is a summary of laboratory analytical results for soil vapor samples and includes results from both active and passive sampling methods. The samples collected by active sampling methods include analysis for oxygen.

Two active soil vapor samples have been collected from SG-20B and the oxygen content in those samples varied from 11 to 17% oxygen. The sample collected during April 2019 contained a high concentration of 2-propanol (isopropyl alcohol) which was used as a leak detection gas, and vacuum pressures >7psi were required to obtain even a minimal amount of vapor for analysis. The Vapor sample collected during July 2019 contained high concentrations of TPH_G, and two solvents (ethyl acetate and tetrahydofuran). The solvents detected in the sample may be related either to contaminants introduced in laboratory or they may be related to the soil staining observed near the SG-20B well head.

5.0 Discussion

In-situ application of PersulfOx can be expected to produce early and late stage remedial effects. Early stage effects of PersulfOx result from a catalyzed reaction producing peroxide free radical

molecules. The peroxide radicals are a strong chemical oxidizer which should break chemical bonds between hydrogen and carbon in petroleum hydrocarbon molecules. Late stage effects of PersulfOx should result from increased sulfate content in the subsurface promoting sulfate-phase aerobic biodegradation. Continued improvement of groundwater quality in the future is anticipated based on late-stage effects of PersufOx.

Active soil vapor from SG-20B and passive soil vapor from SG-20B collected during July 2019 appear significantly different in character although the analytical results are not directly contradictory. It is suggested that passive sampling results are more representative of soil vapor emanating from the deeper subsurface while the active sampling results may be influenced by contaminants in shallow fill material at the site.

6.0 Summary and Conclusions

The July 2019 soil vapor and groundwater samples were collected approximately 150 days after the final ISCO injection event. **Table 5** is a checklist of criteria listed in 'State Water Board Policy for Low-Threat UST Case Closure' and, based on results of the July 2019 soil vapor and groundwater samples, the site meets the criteria for case closure under the low-threat policy.

A passive soil vapor sample (SG-20B; see **Table 4**) from above the primary impact area found non-detectable levels of benzene (RL <7.3 µg/m^3), 8.1 µg/m^3 of ethylbenzene, and non-detectable levels of naphthalene (RL <0.89 µg/m^3). Those soil vapor concentrations meet low-threat criteria for a residential exposure scenario (i.e., Benzene <85 µg/m^3, Ethylbenzene <1,100 µg/m^3, and Naphthalene <93 µg/m^3).

The July 2019 grab groundwater sample (GRAB03) collected from the primary impact area found non-detectable levels of benzene in groundwater for the first time (PQL <21 µg/L; MDL =2.7 µg/L). A decreasing concentration trend for benzene in groundwater is now well established (see **Table 2**). The low dissolved benzene concentration in the source area and the decreasing concentration trend indicate that site conditions can be anticipated to improve in the future.

TABLES

TABLE 1: Summary of Monitoring Well/Probe Construction

Well ID	Status	TOC Elev (ft AMSL)	Casing Diameter (in)	Screen Length (ft)	Top Scrn (ft)	Bot. Scrn (ft)	Boring TD (ft)
MW-1	Removed 10/16/18	95.46	2	15.0	15.0	30.0	30.0
MW-2	Removed 10/16/18	95.19	2	10.0	20.0	30.0	30.0
MW-3	Removed 10/16/18	95.45	2	10.0	19.5	29.5	29.5
MW-4	Removed 10/16/18	95.45	2	10.0	18.0	28.0	28.0
MW-5	Removed 10/16/18	95.38	2	15.0	12.0	17.0	17.0
MW-6	Removed 07/29/19	95.73	2	10.0	20.0	30.0	30.0
MW-7	Removed 07/29/19	94.97	2	10.0	18.0	28.0	28.0
MW-8	Removed 07/29/19	95.02	2	10.0	18.0	28.0	28.0
SG-20A	Inactive (compromised?)	--	0.75	0.5	4.5	5.0	5.0
SG-20B	Active	--	0.75	0.5	4.5	5.0	5.0
SG-20C	Active	--	0.75	1.0	8.0	9.0	9.0
SG-21 thru SG-31	Active	--	0.5	NA	NA	NA	5.0

NOTES:

(1) The bottom 8 to 12 inches of soil vapor monitoring well SG-20A was found to be flooded with water. Grouting activities during ISCO injection are assumed to have plugged the well. A replacement vapor well (SG-20B) was installed on Jan. 2, 2019.

(2) SG-21 thru SG-31 are temporary probes and consist of steel pipes driven into the ground with open hole immediately below the deepest end of the pipe and perforations in the bottom few inches of the pipe.

TABLE 2: Summary of Laboratory Analytical Results for Post-ISCO Grab Groundwater Samples

Date	Sample ID	TPH_G	Benzene	Toluene	Ethyl Benzene	o-Xylene	m,p-Xylene	MTBE	Naphthalene	Sulfate
09/07/17	MW-3*	**23300 x**	**2900**	**190**	**2800**	**1100**	**1300**	<21	**360**	--
01/10/18	MW-3*	**23100**	**1200**	**100**	**2300**	**550**	**1100**	<21	**370**	--
04/11/18	MW-3*	**20600**	**3500**	**360**	**2800**	**1300**	**1600**	<21	**420**	--
12/27/18	GRAB01	--	**26**	**45**	**52**	**55**	**83**	<0.5	**13**	**2100000**
01/21/19	GRAB02	**666 x**	**130**	**28**	**28**	**4**	**2.6**	**2.2**	<4.2	**8700000**
07/18/19	GRAB03	**2960 x**	<21	<21	**32**	<21	<42	<21	<84	**9100000**
Tier 1 GW ESLs (ug/L):		100	0.421	40	3.51	20		5	0.165	--
Surface Water ESL:		440	46	130	290	--		66000	240	--
AF = 0.001 ESLs:		n/a	97	312,857	1,123	104,286		n/a	83	--
AF = 0.0005 ESLs:		n/a	194	625,800	2,200	208,600		n/a	166	--

Continued…

TABLE 2: Summary of Laboratory Analytical Results for Post-ISCO Grab Groundwater Samples (continued)

Date	Sample ID	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	Bromo methane	Isopropyl Benzene	n-Propyl benzene	1,2-Dichloro ethane	n-Butyl benzene	sec-Butyl Benzene
09/07/17	MW-3	**1400**	**100**	<21	**110**	**280**	<21	**50**	<21
01/10/18	MW-3	**1400**	**120**	<21	**130**	**360**	<21	**40**	**25**
04/11/18	MW-3	**1300**	**140**	<21	**150**	**350**	<21	**30**	<21
12/27/18	GRAB01	**51**	**14**	**1.8**	**3.9**	**10**	<0.5	<0.5	<0.5
01/21/19	GRAB02	<1.1	<1.1	**5**	**1.7**	**3.6**	**34**	<1.1	<1.1
07/18/19	GRAB03	<21	<21	<21	<21	**61**	<21	<21	<21
Tier 1 ESLs:		--	--	7.55	--	--	0.5	--	--
Surface Water ESL:		--	--	160	--	--	10000	--	--
AF = 0.001 ESLs:		--	--	n/a	--	--	n/a	--	--
AF = 0.0005 ESLs:		--	--	n/a	--	--	n/a	--	--

NOTES:

(1) All values are in units of µg/L. Only constituents detected in at least one sample are shown.
(2) "<" indicates the constituent was not detected, the associated value is the reporting limit.
(3) "*" = Pre-ISCO results for MW-3 are included for comparative purposes.
(4) "Tier 1 ESLs" and "Surface Water ESL" are from SFBay RWQCB, Jan. 2019.
(5) "AF=0.001 ESLs", and "AF=0.0005 ESLs" are statistically significant predictor of vapor intrusion potential for generic groundwater, and for groundwater samples at sites underlain by clay rich sediments samples, respectively, without near surface biodegradation effects[2].

[2] USEPA OSWER, March 16, 2012. "EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings", 188p, EPA 530-R-10-002.

Table 3: Pre-, and Post-ISCO Groundwater Indicator Parameters

Date	Well	Cond. (µS)	TDS (ppm)	ORP	pH	Temp. (°F)
09/07/17	MW-3*	3120	2356	-136	7.32	67.64
01/10/18	MW-3*	2934	2254	-144	7.23	66.20
12/27/18	GRAB01	4765	3825	173	7.26	65.12
01/21/19	GRAB02	10.32	899.6	226	6.63	66.92
07/18/19	GRAB03	13.73	12.13	-66	6.32	--

NOTES:

(1) Indicator parameters were measured in the field with a handheld multimeter.

(2) Pre-ISCO data collected from MW-3 are included for comparative purposes.

TABLE 4: Summary of Laboratory Analytical Results for Soil Vapor Samples

Date	Sample ID	TPH_G	Benzene	Toluene	Ethyl Benzene	o-Xylene	m,p-Xylene	Naph-thalene	Oxygen (%)	Ethyl Acetate	Tetra hydrofuran	2-Propanol
11/20/18	SG-20A	--	**590**	**2400 B**	**4600**	**4300**	**8400**	**170**	--	--	--	--
12/18/18	SG-20A*	--	**65**	**250**	**540**	**600**	**1000**	**17**	--	--	--	--
02/06/19	SG-20B	--	**1600**	**2200**	**3000**	**10000**	**6600**	**12**	--	--	--	--
04/23/19	SG-20B	--	<13000	<15000	<17000	<17000	<17000	<21000	**17**	<14000	<12000	**1600000**
07/30/19	SG-20B	**1650000**	<3800	<4500	<5200	<5200	<5200	<6300	**11**	**7300**	**35000**	<30000
07/29/19	SG-20B	--	<7.3	<1.3	**8.1**	**55**	**6.5**	<0.89	--	--	--	--
07/29/19	SG-20C	--	**130**	**9.8**	**26**	**290**	**280**	**6.9**	--	--	--	--
07/29/19	SG-21	--	<7.3	<1.3	**37**	**29**	**120**	<0.89	--	--	--	--
07/29/19	SG-22	--	<7.3	**2.3**	**21**	**21**	**75**	<0.89	--	--	--	--
07/29/19	SG-23	--	<7.3	**3**	**19**	**24**	**68**	<0.89	--	--	--	--
07/29/19	SG-24	--	<7.3	**2.4**	**1.6**	<0.89	<0.96	<0.89	--	--	--	--
07/29/19	SG-25	--	<7.3	<1.3	**5.9**	**6**	**20**	<0.89	--	--	--	--
07/29/19	SG-26	--	<7.3	<1.3	**1.6**	<0.89	<0.96	<0.89	--	--	--	--
07/29/19	SG-27	--	**17**	**3.2**	**7.1**	<0.89	**1.3**	<0.89	--	--	--	--
07/29/19	SG-28	--	<7.3	<1.3	<0.96	<0.89	<0.96	<0.89	--	--	--	--
07/29/19	SG-29	--	<7.3	**1.5**	<0.96	<0.89	<0.96	<0.89	--	--	--	--
07/29/19	SG-30	--	<7.3	<1.3	<0.96	<0.89	<0.96	<0.89	--	--	--	--
07/29/19	SG-31	--	<7.3	**1.7**	<0.96	<0.89	<0.96	<0.89	--	--	--	--
07/29/19	BLK	--	<7.3	<1.3	<0.95	<0.89	<0.95	<0.89	--	--	--	--
Tier 1 ESL Sub-Slab Vapor:		3333	3.23	10428	37.4	--	3476.2	2.75	--	--	--	--
Tier 1 ESL Indoor Air:		100	0.0968	312.86	1.123	--	104.29	0.083	--	--	--	--

NOTES:

(1) All values are in units of µg/m^3 except oxygen which is in units of %.

(2) All samples were collected by 'passive' method except those with results for oxygen which were collected by 'active' method.

(3) "*" – well inactive and may be impacted by grout from nearby injection boreholes. Sample may not be representative.

(4) "B" – indicates analyte was detected at a concentration below the practical quantitation limit.

(5) "Tier 1 ESL SubSlab Vapor" values are calculated as AF=0.03 (see SF Bay RWQCB, Jan. 25, 2019)

Table 5: Low-Threat UST Closure Policy Compliance Check List

Site Information	
Site ID:	SCVWDID No. 07S1E03F03f; Farmer's Supply (T10000001657)
Address:	1936 Alum Rock Ave, San Jose, CA
Date:	August 2019

General Criteria – All eight criteria must be satisfied by candidate sites.	Eight of eight criteria below are satisfied.
Criteria	**Site Specific Compliance**
(a) The unauthorized release is located within the service area of a public water system.	OK. Site located within Santa Clara County Water Service District.
(b) The unauthorized release consists only of petroleum.	OK.
(c) The primary source of release has been mitigated (e.g., leaking UST, lines, dispenser).	OK. UST and dispensers removed circa 1984.
(d) Free product has been removed to the maximum extent practicable.	OK.
(e) A conceptual site model that assesses the nature, extent, and mobility of the release has been developed.	OK.
(f) The secondary source (NAPL) in soil or groundwater has been removed to the extent practicable.	OK. Limited excavation, extended DPVE test, and ISCO technologies all applied at the site.
(g) Soil or groundwater has been tested for methyl tert-butyl ether (MTBE) and results reported in accordance with Health and Safety Code section 25296.15.	OK.
(h) Nuisance as defined by Water Code section 13050 does not exist at the site (is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property).	OK. Site specific conditions meet media specific criteria listed below.

Continued….

Table 5: Low-Threat UST Closure Policy Compliance Check List (continued)

Groundwater Specific Criteria – A contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent and meet the criteria in one of five groups.	Current dissolved-phase total BTEX+MTBE+Naph (GRAB03) is 32 µg/L, a decreasing concentration trend is evident (see Table 2), and one of 5 groups of criteria below is satisfied.
Criteria	**Site Specific Compliance**
1(a) - **Contaminant plume < 100 feet in length:** 1(b)- There is no free product. 1(c)- Nearest existing water supply well or surface water body is > 250 feet from plume boundary.	1(a) OK: MW4 to MW6 = 75 ft 1(b) OK 1(c) NOT OK: 176 ft to Silver Creek, > 2000 ft to supply well
2(a) - **Contaminant plume < 250 feet in length:** 2(b) - There is no free product. 2(c) - Nearest existing water supply well or surface water body is > 1,000 feet from plume boundary. 2(d) - Dissolved benzene is < 3,000 µg/L, and dissolved MTBE is < 1,000 µg/L.	2(a) OK 2(b) OK 2(c) NOT OK: 176 ft to Silver Creek, > 2000 ft to supply well 2(d) OK
3(a) - **Contaminant plume < 250 feet in length:** 3(b) - Free product has been removed to the extent practicable and does not extend off-site. 3(c) - The plume has been stable or decreasing for a minimum of five years. 3(d) - Nearest existing water supply well or surface water body is > 1,000 feet from plume boundary. 3(e) - The property owner is willing to accept a land use restriction if required by the regulatory agency as a condition for closure.	3(a) OK 3(b) OK 3(c) OK 3(d) NOT OK: 176 ft to Silver Creek, > 2000 ft to supply well 3(e) NOT OK: Property owner prefers not to accept land use restriction.
4(a) - **Contaminant plume < 1,000 feet in length:** 4(b) - There is no free product. 4(c) - Nearest existing water supply well or surface water body is > 1,000 feet from plume boundary. 4(d) - Dissolved benzene is < 1,000 µg/L, and dissolved MTBE is < 1,000 µg/L.	4(a) OK 4(b) OK 4(c) NOT OK: 176 ft to Silver Creek, > 2000 ft to supply well 4(d) OK
5(a) - **The regulatory agency determines:** Based on an analysis of site-specific conditions under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame.	OK: Criteria in 1, 2, & 4 above all fail due only to proximity of Silver Creek. However, MW6 was located between Silver Creek and the source area, and MW6 groundwater quality met surface water ESLs.

Continued….

Table 5: Low-Threat UST Closure Policy Compliance Check List (continued)

Vapor Intrusion Potential Criteria – One of four groups of criteria must be met at each site.	One of four groups of criteria below is satisfied.
Criteria	**Site Specific Compliance**
1(a) **- Un-Weathered LNAPL in Groundwater.** Depth to groundwater is ≥ 30 feet below building foundation and combined TPHG and TPHD in that 30-foot zone is <100 mg/kg. 1(b) **- Un-Weathered LNAPL in Soil.** Combined TPH_G and TPH_D in soil is <100 mg/kg within a 30-foot radial distance from building foundation. 1(c) **- Dissolved Benzene in Groundwater**. • Dissolved benzene is < 100 µg/L and at least 5-feet of unsaturated soil above water table / below building foundation has combined TPH_G and TPH_D of < 100 mg/kg with oxygen below 4% or not measured. • Dissolved benzene is > 100 µg/L but < 1000 µg/L and at least 10-feet of unsaturated soil above water table / below building foundation has combined TPH_G and TPH_D of < 100 mg/kg with oxygen below 4% or not measured. • Dissolved benzene is < 1000 µg/L and at least 5-feet of unsaturated soil above water table / below building foundation has combined TPH_G and TPH_D of < 100 mg/kg with oxygen measured above 4%.	1(a) OK: Un-weathered LNAPL does not exist. 1(b) OK: Un-weathered LNAPL does not exist. 1(c) OK: • dissolved benzene = <21 µg/L • soil TPH_G+TPH_D[3] < 100 mg/kg • oxygen 11% • depth to groundwater ~8 ft BGL
2 - Direct Measurement of Soil Gas Concentrations: Soil gas samples collected from 5-feet BGL or 5-feet below existing slab must meet criteria as follows: Residential Exposure Scenario: Benzene <85 µg/m^3, Ethylbenzene <1,100 µg/m^3, and Naphthalene <93 µg/m^3. Commercial Exposure Scenario: Benzene <280 µg/m^3, Ethylbenzene <3,600 µg/m^3, and Naphthalene <310 µg/m^3.	OK: • benzene = <21 µg/m^3 • ethylbenzene = 8.9 µg/m^3 • naphthalene = 0.89 µg/m^3
3 - Site specific assessment of risk: Approved site-specific assessment shows acceptable risk to human health.	NOT APPLICABLE
4 - Institutional and/or engineering controls: Exposure is mitigated or controlled by physical means.	NOT APPLICABLE

Continued….

[3] WellTest, Inc., June 3, 2016. "Secondary-Source and Free-Product Removal Documentation Report", 61p, https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1084448277/T10000001657.PDF

Table 5: Low-Threat UST Closure Policy Compliance Check List (continued)

Direct Contact and Outdoor Air Criteria – One of three groups of criteria must be met at each site.	One of three groups of criteria below is satisfied.
Criteria	**Site Specific Compliance**
1 - Maximum concentrations in soil shall be less than those see below simultaneously for both the 0-5 and 5-10 ft BGL intervals under the appropriate exposure scenario.	OK: Source area was over-excavated to 14 ft BGL[4]. Jan 2016 post-excavation samples do not exceed values listed below.
2 - Maximum concentrations of petroleum constituents in soil are below risk-based concentrations for protection of human health.	NOT OK: Two of nine post-excavation samples have 1 or more exceedance of Tier 1 ESLs for either benzene and ethylbenzene, and/or MTBE[7].
3 - The regulatory agency determines petroleum constituents in soil contribute no significant risk due to the results of institutional and/or engineering controls implemented at the site.	NOT APPLICABLE

Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health due to Volatilization to Outdoor Air

	Residential		**Commercial/ Industrial**		**Utility Worker**
	0-5 ft BGL	**5-10 ft BGL**	**0-5 ft BGL**	**5-10 ft BGL**	**0-10 ft BGL**
Benzene	1.9	2.8	8.2	12	14
Ethylbenzene	21	32	89	134	314
Naphthalene	9.7	9.7	45	45	219
PAH[2]	0.063	NA	0.68	NA	4.5

NOTES:

(1) All values are in units of mg/kg

(2) Based on benzo(a)pyrene toxicity equivalent for seven carcinogenic poly-aromatic hydrocarbons (PAHs). Analysis for PAH is only necessary when waste oil or Bunker C fuel are constituents of concern.

(3) The area of impacted soil where a particular exposure occurs is 25 by 25 meters (approximately 82 by 82 feet) or less.

(4) NA = not applicable

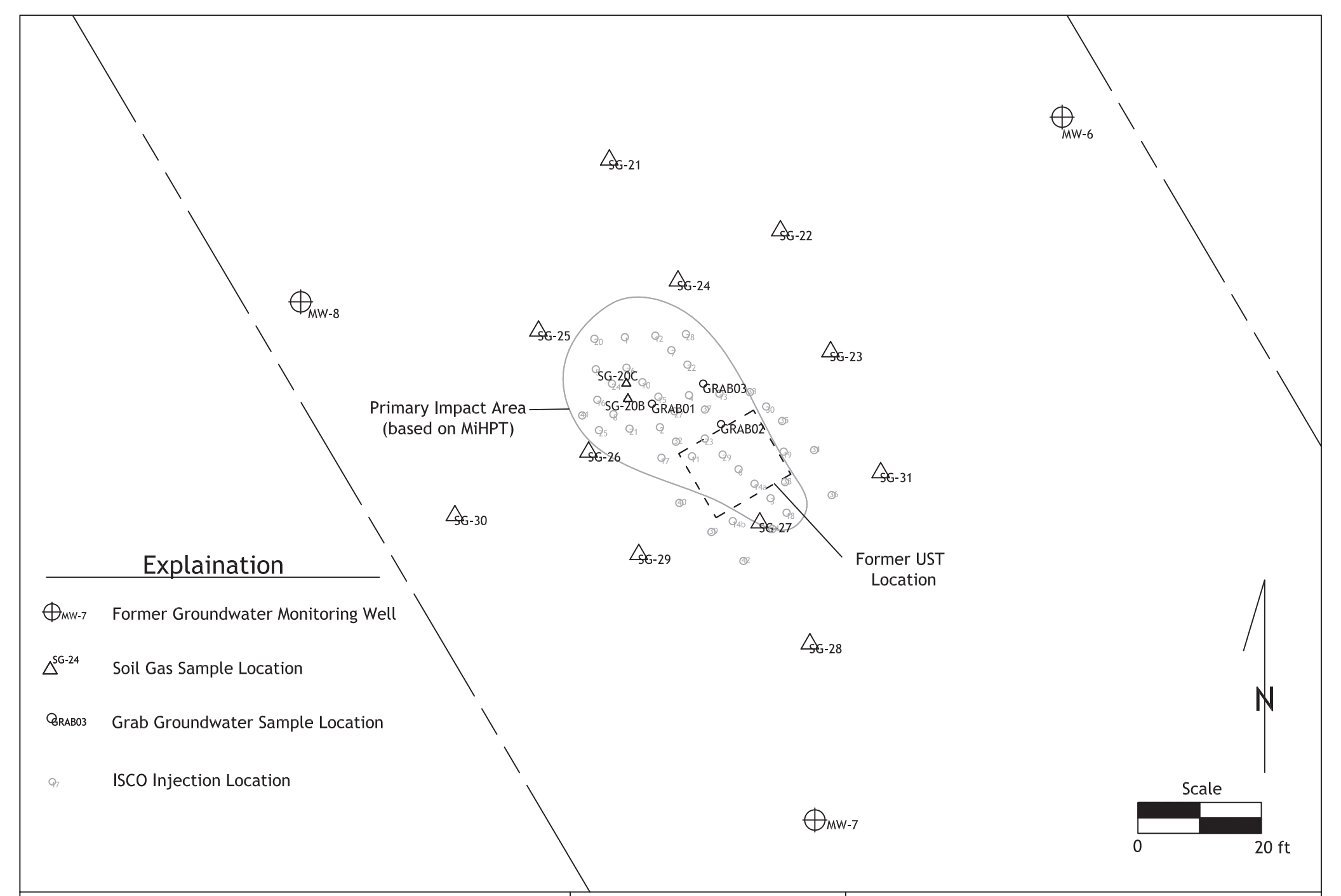
NOTES:

(1) General and media specific criteria are those identified in the CA State Water Board Policy for Low-Threat Underground Storage Tank (UST) Case Closure[5].

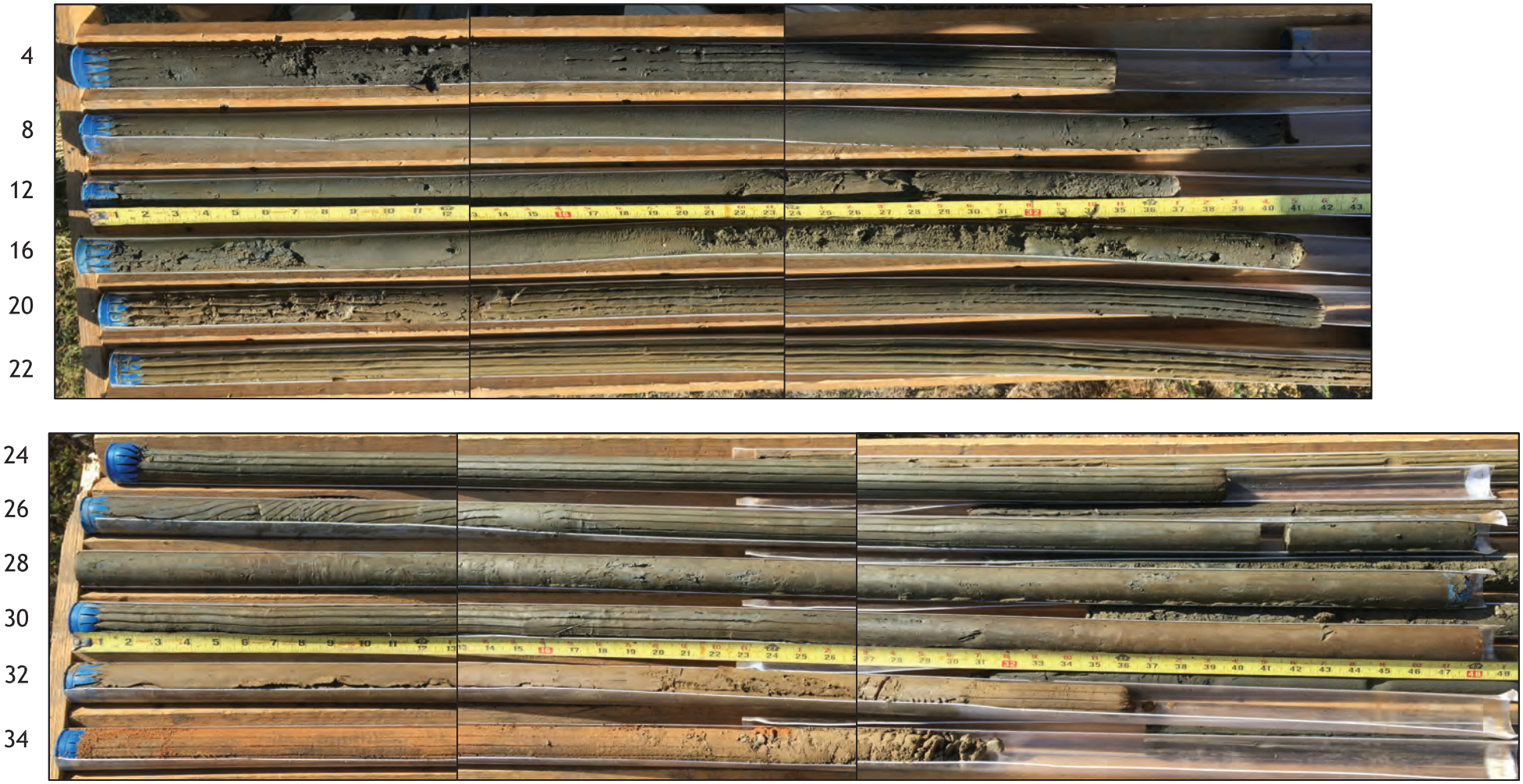
[4] WellTest, Inc., June 3, 2016. "Secondary-Source and Free-Product Removal Documentation Report", 61p, https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1084448277/T10000001657.PDF

[5] https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf

FIGURES



Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 1: Site Map

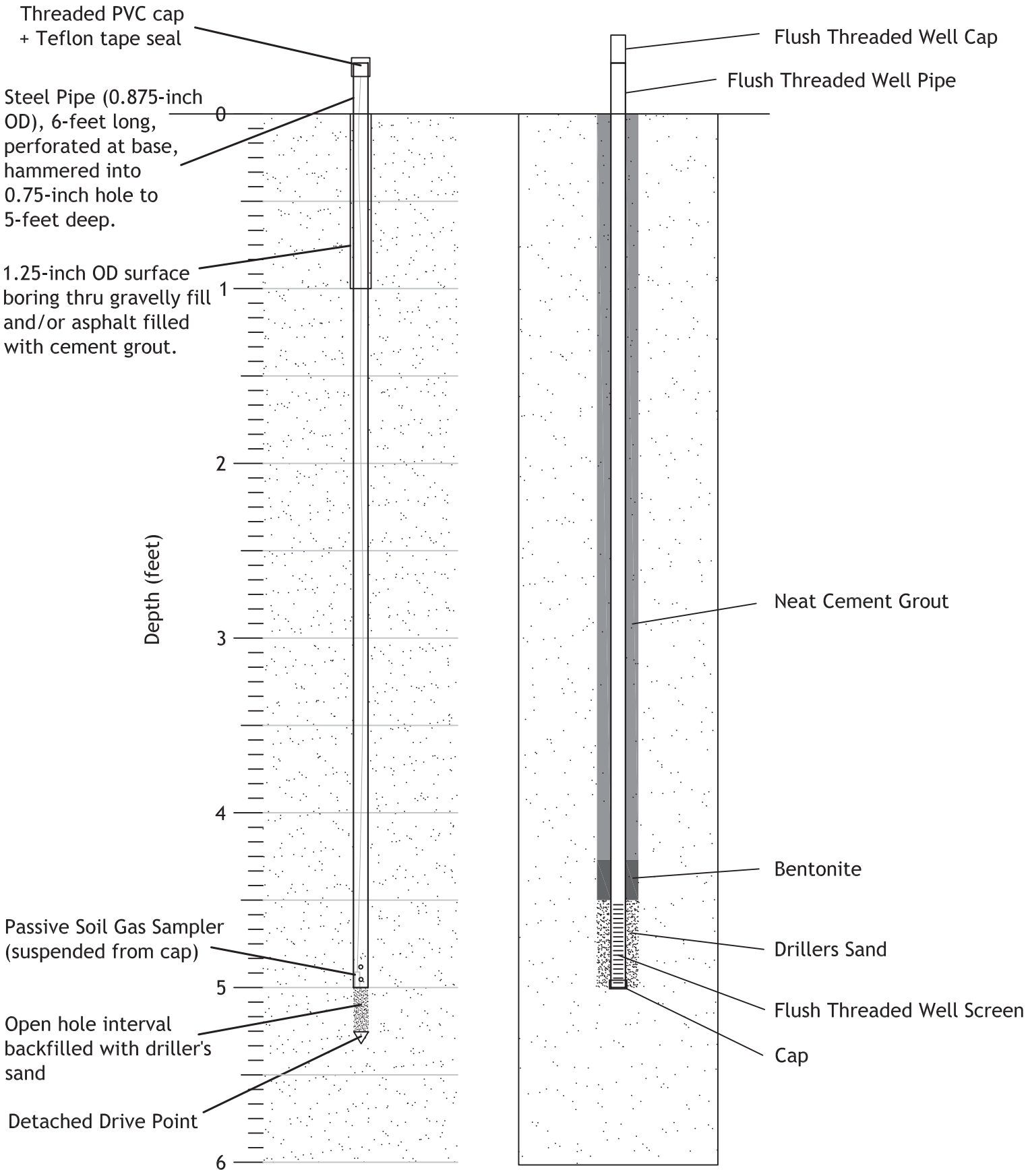


NOTES:

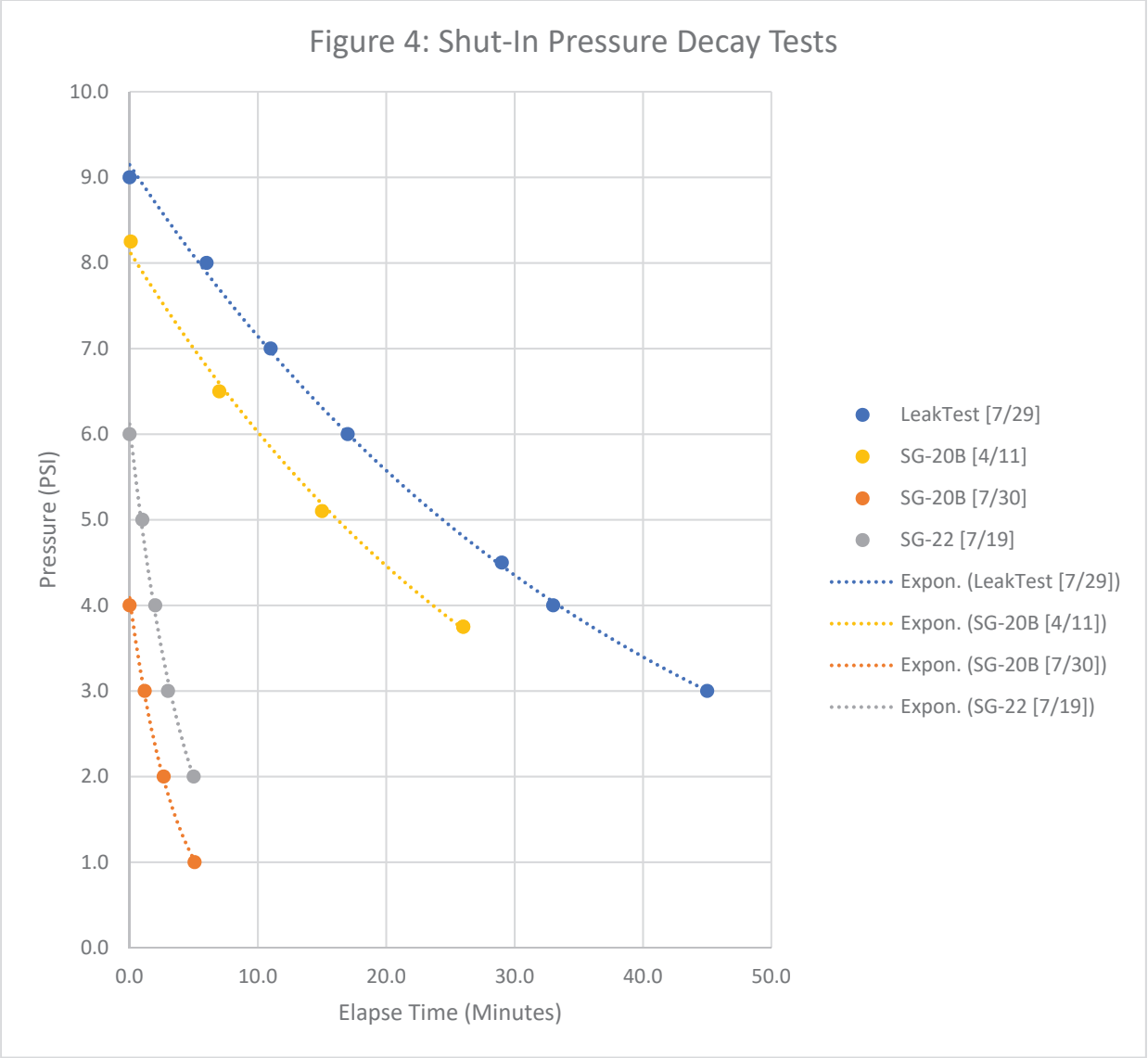
(1) Numbers at left indicate total depth at base of core (feet BGL).

(2) Above 20 ft BGL core recovery was less than 1:1, and below 20 ft BGL core recovery was greater than 1:1.

Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 2: GRAB03 Soil Core July 18, 2019



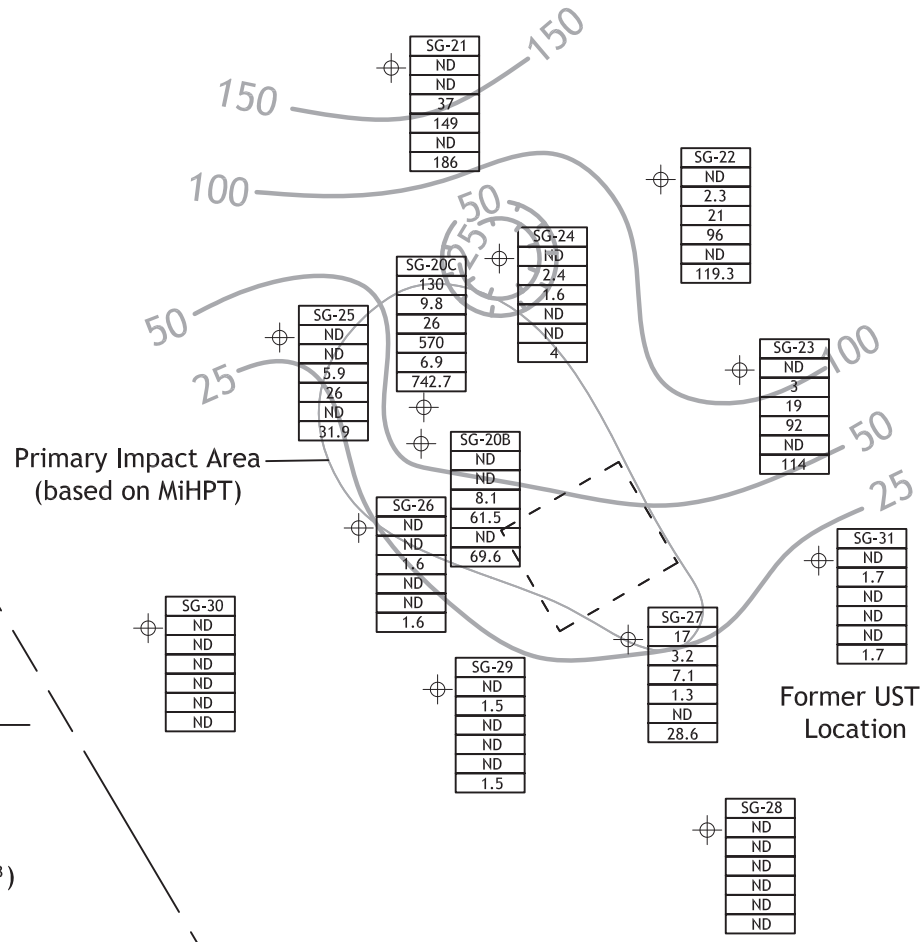
Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 3: Soil Gas Well/Probe Construction



NOTES:

(1) Graph shows difference between SG-20B shut-in pressure tests conducted during April 2019 and July 2019.

(2) Pressure shut-in test for equipment and SG-22 shown for reference.



Explanation

SG-20C
130
9.8
26
570
6.9
742.7

Sample ID
Benzene Conc. (ug/m³)
Toluene Conc. (ug/m³)
Ethylbenzene Conc. (ug/m³)
Xylenes Conc. (ug/m³)
Naphtalene Conc. (ug/m³)
Total BTEXN Conc. (ug/m³)

25 Total BTEXN Isoconcentration Contour

NOTE: SG-20C not used in isoconcentration contouring.

N

Scale
0 20 ft

Ryan Geologic & Environmental Services, Inc. PO Box 525; McCloud, California 96057 530.925.4932	1936 Alum Rock Ave San Jose, CA	Figure 5: Soil Vapor Survey Results July 29, 2019

APPENDIX A: Groundwater Monitoring Well Destruction Permits

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D 2019071900 2

Well Owner:	**Property Owner:**	Name of Business/Residence at Site:
1936 Alum Rock Avenue LLC	1936 Alum Rock Avenue LLC	VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022	Telephone No.: 208.461.0022	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant:	Drilling Company:	
Ryan Geologic & Environmental Services, Inc.	Cascade Drilling	
Address: PO Box 525	Address: 3000 Duluth Street	
City, State, Zip McCloud, CA 96057	City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.:	Owner/Consultant Well No.:	Original Well Construction Permit No.:
07S01E03F014	MW-8	C20160927005
Well Casing Depth: 28 FT BGL	**Total Boring Depth:** 28 FT BGL	**Well Casing Diameter:** 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.:	Caseworker Name:
Farmer's Supp SCVWDID No. 07S1E03F03f	Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:			
1.	Outer conductor casing?	☐ Yes	☐ No
2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

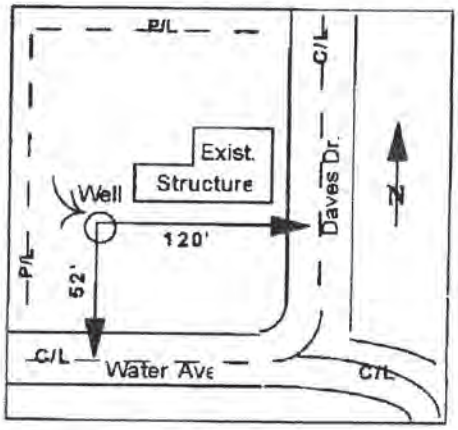
WELL DESTRUCTION APPLICATION

SITE PLAN

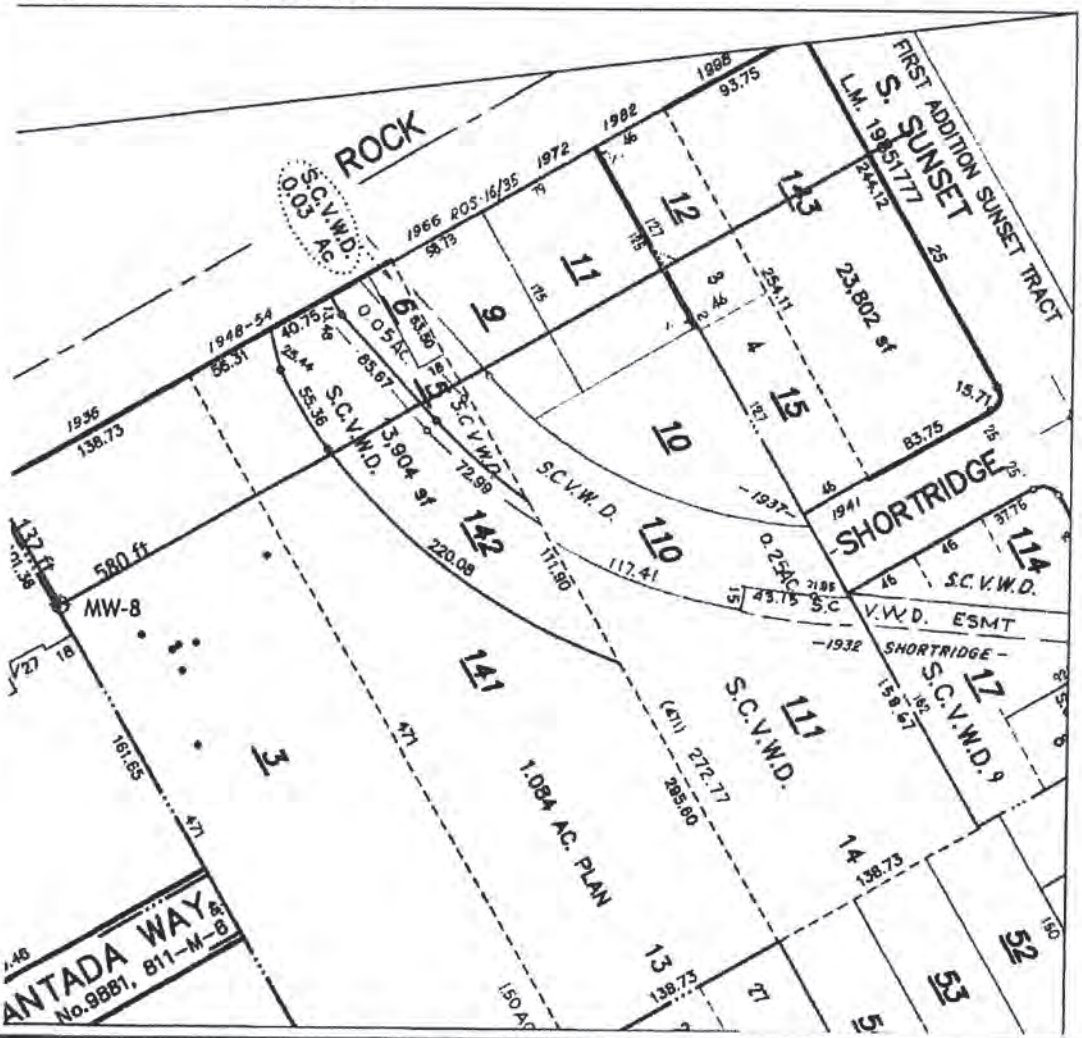
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.6 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope	Date: 6/17/2019
Signature of Property Owner/Agent:	Print Name: Caleb Roope	Date: 6/17/2019
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 28 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by: Charles W. Kanter			Date: 7/17/19
District Permit No.: D2019071900 2	Date Issued: 7/19/19	Expiration Date: 7/20/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials.** An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

Project: WellTest, Inc. (Project #5201) Project Name: Farmers Supply Project Location: 1936 Alum Rock Boulevard, San Jose, CA	**Log of Well MW-8** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **19 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

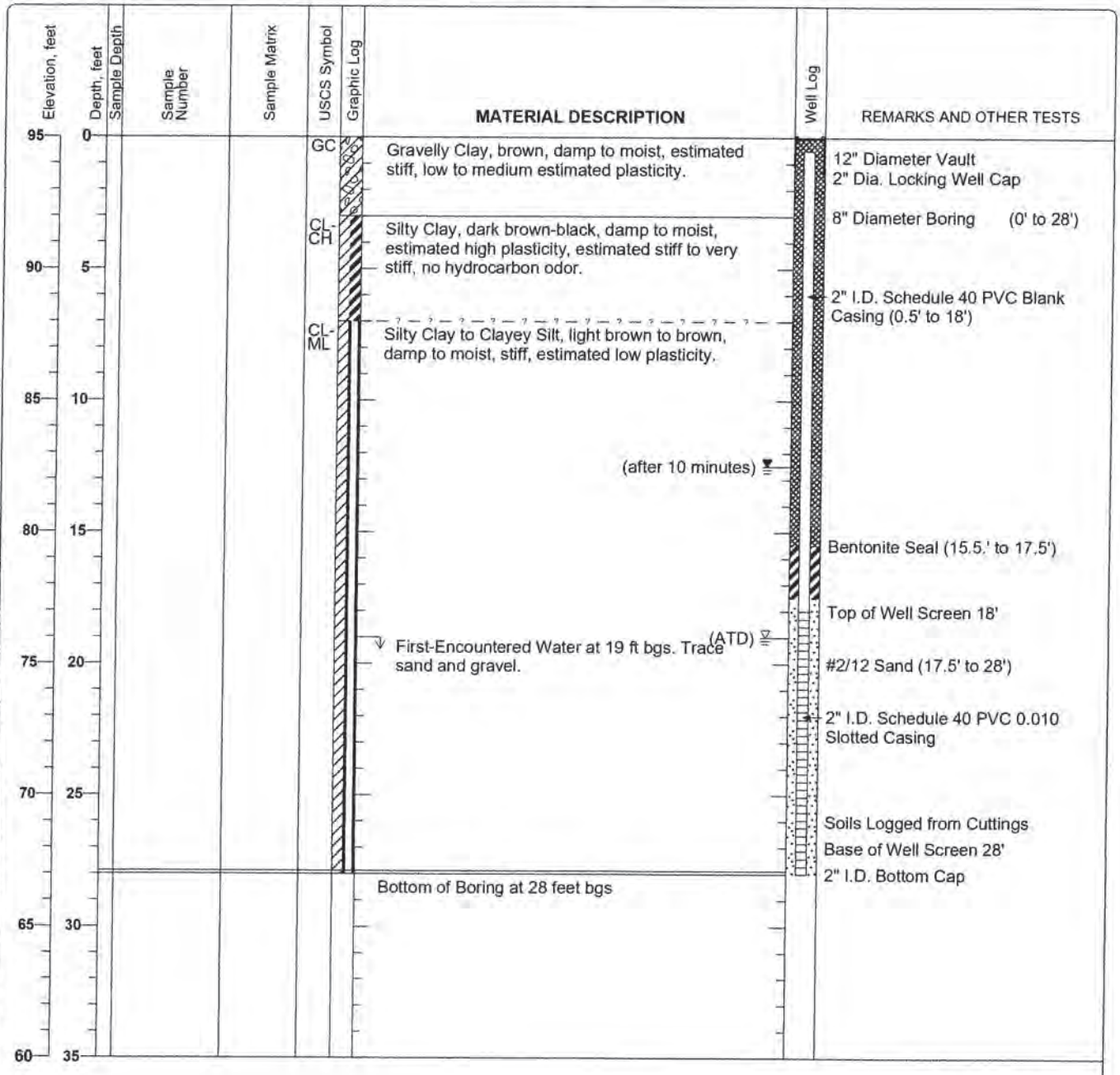


Figure C-5

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-8.bgs [07-10-11.tpl]

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C20160927005	
Well Owner: DAVID MIJARES	Owner Well No.: MW-8	Well Registration No.: 07S01E03F014	
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE	
Drilling Company: EXPLORATION GEOSERVICES	Consultant: WELLTEST		

Cond. Bore:	Conductor Depth:	Conductor Diameter & Material:	TD:	Boring Diameter:	BOC:
—	—	—	28'	8"	28'

Casing Diameter & Material:	Slot Size:	Screen Interval(s):	Filter Pack Material:	Filter Pack Interval(s):	Bent:	Seal Depth:
2" PVC	0.010"	18-28'	2/12 SAND	17.5-28'	15.5-17.5'	17.5'

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 125 ft. N/S S-SE ℄ ALUM ROCK AVE 305 ft. E/W E-NE ℄ MC CREERY AVE

GPS Coordinates: Lat. Long.

Comments:

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

07S01E03IF014

BLUE LAGOON AQUARIUM

APN 481-19-003
1936 ALUM ROCK AVE.
SAN JOSE, CA 95116

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 300 — 600 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined

Parcels

9/27/2016

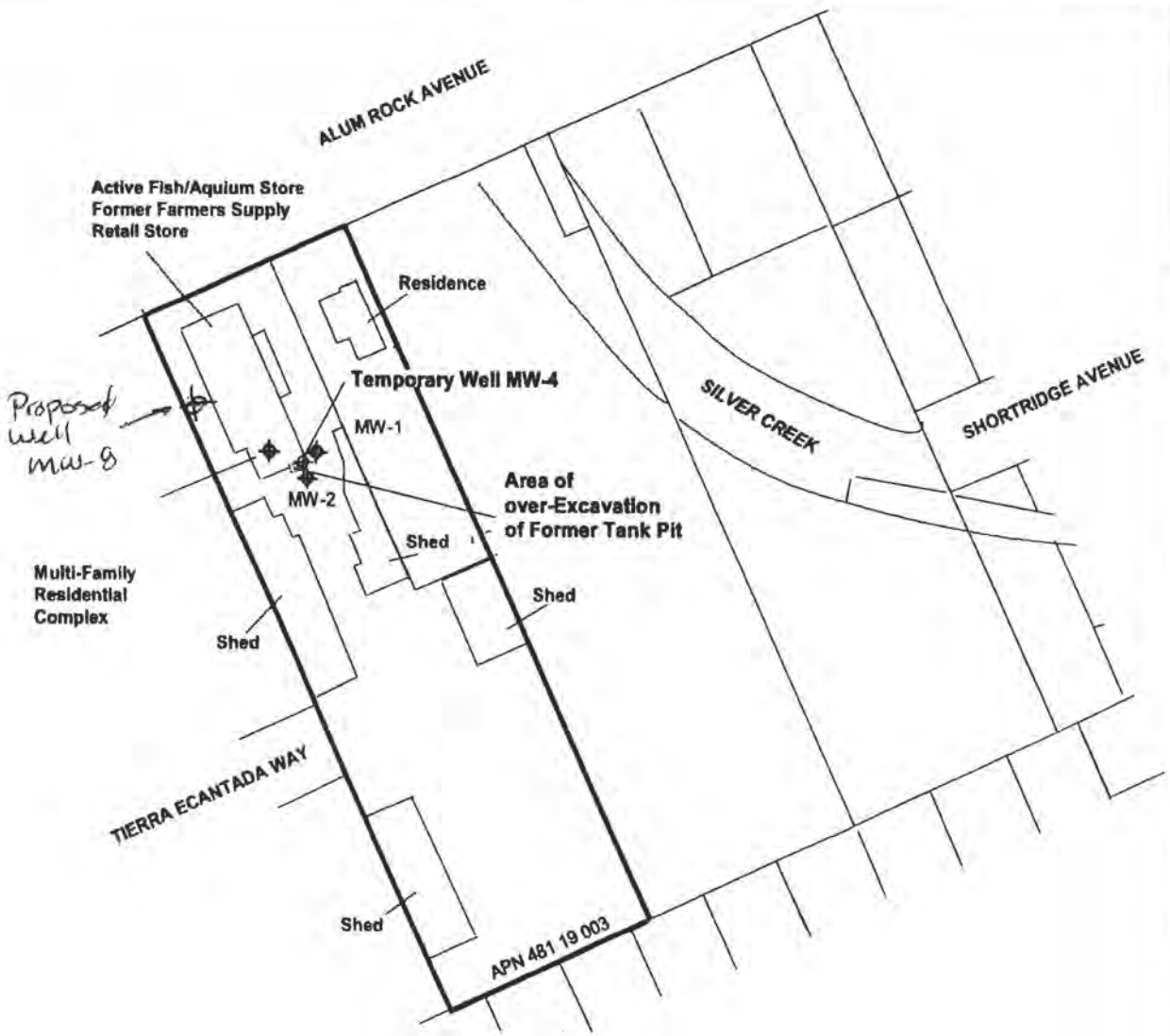
ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-1	07W00280	07S01E03F008	A
2	MW-3	07W00279	07S01E03F007	A
3	MW-2	07W00281	07S01E03F009	A

LEGEND

- Groundwater Monitoring Well
- Temporary Groundwater Monitoring Well
- Area of January 2016 Over-Excavation of former Gasoline UST Pit

Groundwater Flow Direction Rose Diagram
Rose Diagram Derived with a 3-Point Solution using Water Level Data Obtained from Wells MW-1, MW-2, and MW-3 on the Following Dates:

09/30/11
10/22/11
11/29/11
01/23/12
04/30/12
06/07/12
12/30/13



0 100

APPROXIMATE SCALE IN FEET

ALL LOCATIONS ARE APPROXIMATE. BASEMAP FROM OFFICE OF COUNTY ASSESSOR - SANTA CLARA COUNTY, CA (EFFECTIVE ROLL YEAR 2010-2011)

WellTest, Inc.
License No. 843074
P.O. Box 8548
San Jose, CA 95155
Phone (408) 287-2175

EXTENDED SITE MAP -- SHOWING A-ZONE MONITORING WELLS (MW-1, MW-2, MW-3 AND MW-4) AND THE AREA OF THE 14-FT LONG, 12-FT WIDE, AND 14.5-FEET DEEP EXCAVATION (JANUARY 2016)

FARMERS SUPPLY
1936 ALUM ROCK AVENUE
SAN JOSE, CALIFORNIA

FIGURE 2

File: 5007/Figure 2

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328539

Page 1 of 3

Owner's Well Number MW-8

Date Work Began 10/01/2016 Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927005 Permit Date 9/27/16

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F01H

Latitude N | Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		See Attached Well Log

Total Depth of Boring 28 Feet

Total Depth of Completed Well 28 Feet

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude Deg Min Sec N Longitude Deg Min Sec W

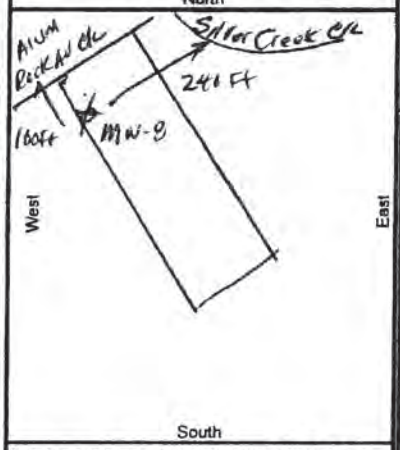
Datum NAD83 Dec. Lat. 37.3547067 Dec. Long. -121.8506408

APN Book 481 Page 19 Parcel 003

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 20 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	18	8	Blank	Sch 40 PVC	0.154	2.375		
18	28	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	15.5	Cement	Neat Cement
15.5	17.5	Bentonite	Hydrated Bentonite
17.5	28.0	Filter Pack	#2/12 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc.
Person, Firm or Corporation

PO Box 8548 San Jose CA 95155
Address City State Zip

Signed Employee for Employer
C-57 Licensed Water Well Contractor

11/10/16 Date Signed

484288 C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Project: WellTest, Inc. (Project #5201) Project Name: Farmers Supply Project Location: 1936 Alum Rock Boulevard, San Jose, CA	**Log of Well MW-8** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **19 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

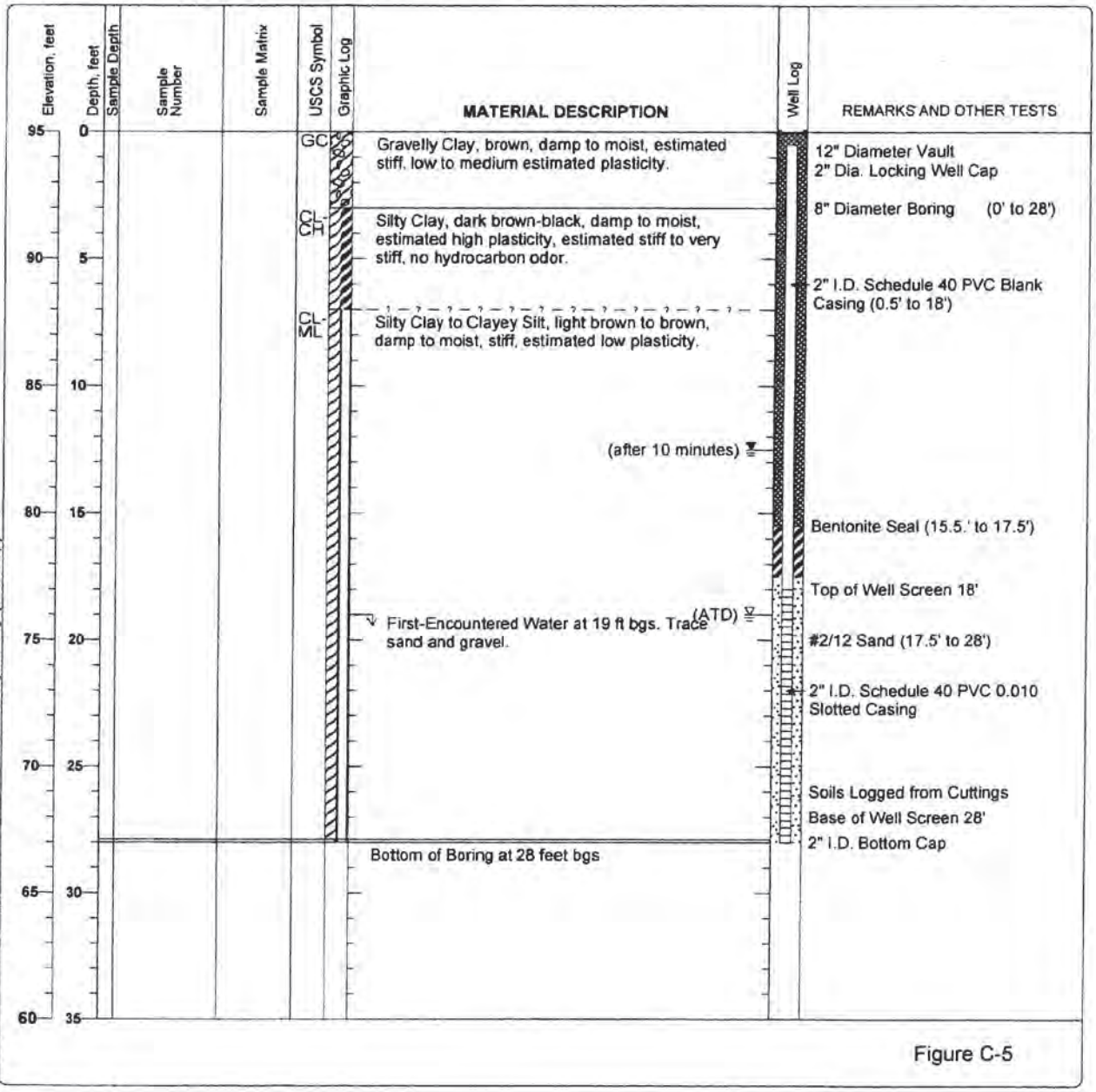
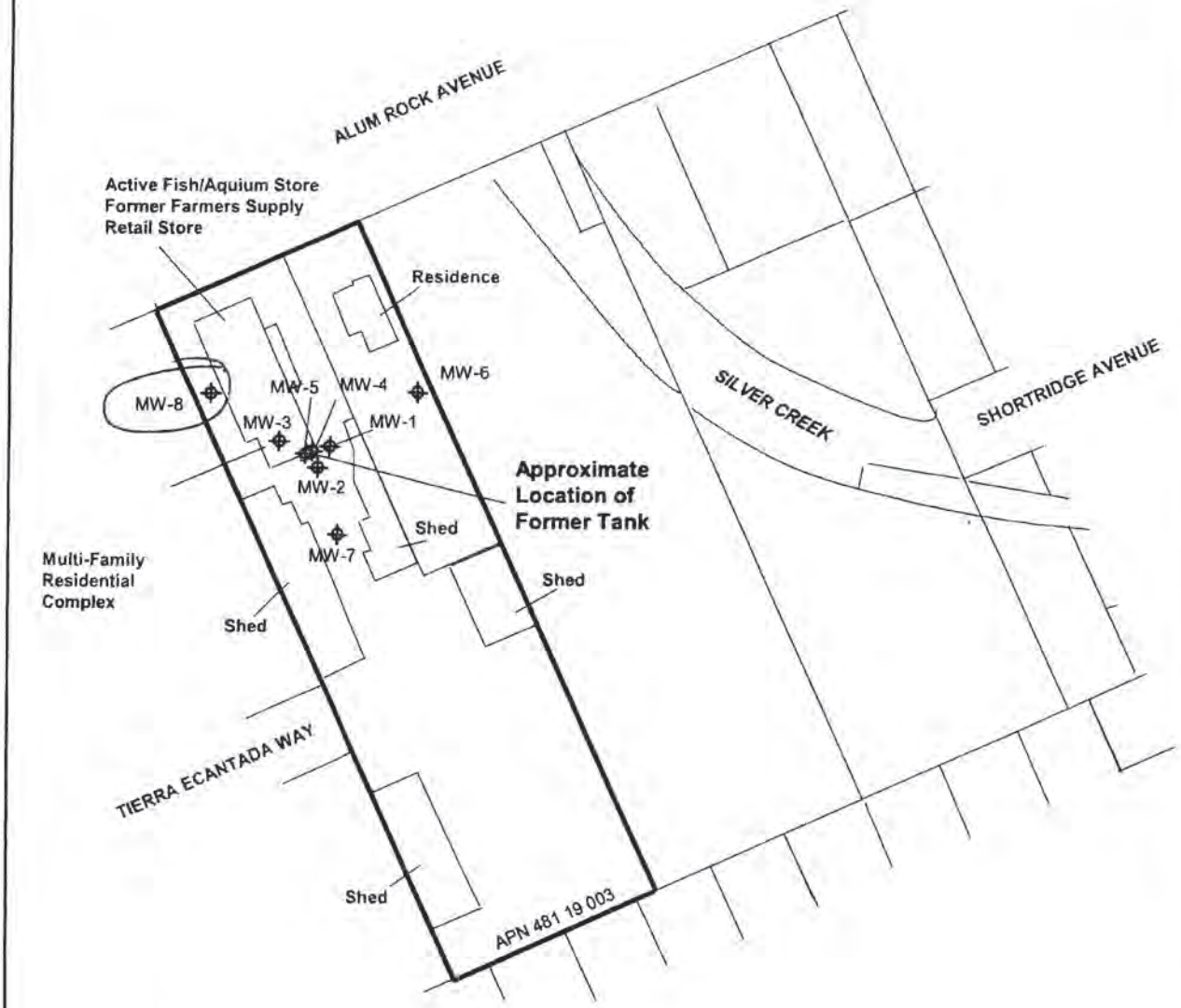


Figure C-5

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-8.bgs [07-10-11.tpl]



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C20160927005	
Well Owner: DAVID MIJARES	Owner Well No.: MW-8	Well Registration No.: 07S01E03F014	
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE	
Drilling Company: EXPLORATION GEOSERVICES	Consultant: WELLTEST		

Cond. Bore:	Conductor Depth:	Conductor Diameter & Material:	TD:	Boring Diameter:	BOC:
—	—	—	28'	8"	28'

Casing Diameter & Material:	Slot Size:	Screen Interval(s):
2" PVC	0.010"	18-28'

Filter Pack Material:	Filter Pack Interval(s):	Bent:	Seal Depth:
2/12 SAND	17.5-28'	15.5-17.5'	17.5'

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 125 ft. N/S S-SE ℄ ALUM ROCK AVE 305 ft. E/W E-NE ℄ MC CREERY AVE

GPS Coordinates: Lat. Long.

Comments:

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

TO BE COMPLETED BY DISTRICT

District Permit No.: C2016092700S	Date Issued: 9-27-16	Well Registration No.: 07S01E03F014
Geologic Setting:	Expiration Date: 9-27-17	Driller's Log No.:

TO BE COMPLETED BY OWNER AND DRILLER

Well Owner: Mr. David Mijares	Property Owner: Mr. David Mijares	Name of Business at Well Site: Blue Lagoon Aquarium
Well Owner's Mailing Address: 1639 Trona Way City, State, Zip San Jose, CA 95125-5055	Property Owner's Mailing Address: 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003
Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No.: 408-836-6358

Owner's/Consultant's Well No.: MW-8 | Assessor's Parcel No. of **Well Site**: Book 481 Page 19 Parcel 003

Consultant (Company): WellTest, Inc.	Drilling Company: Exploration Geoservices, Inc.	
Address: P.O. Box 8545 City, State, Zip San Jose, CA 95155-8545	Address: 1535 Industrial Avenue City, State, Zip San Jose, CA 95112	
Telephone No.: 408-287-2175 Office; 408-460-1884 Mobile	Telephone No.: 408-280-6822	C-57 License No.: 484288
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Case Name/No.: Farmers Supply/07S1E03F03f	Caseworker Name: Aaron Costa
Oversight Agency: Santa Clara County DEH	Caseworker Telephone No.: 408-918-1954

Signature of Responsible Professional | 09-21-2016 Date | William R. Dugan Print Name | (No substitution of signature will be accepted)

Civil Engineer Registration No. | OR | PG #6253 Geologist Registration No.

Estimated Depth of Completed Well: ☒ Less than 50 feet ☐ 50 to 300 feet ☐ Over 300 feet ☐ Other:

Well is to be constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On District property* *See General Condition page 2

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

Other wells exist on this property? ☒ Yes ☐ No If yes, status: ☒ Active ☐ Inactive ☐ Abandoned

RECEIVED
SEP 21 2016
S.C.V.W.D.
WELLS

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Ordinance 90-1, the District Well Standards, and the conditions of this permit (see page 2). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ. I also understand that it is my responsibility, as the well owner, to notify the District of any changes in the purpose of this well, from which, is indicated on this application.

Signature of Property Owner/Agent:	Date: 09/21/2016	Print Name of Property Owner/Agent: William R. Dugan (as Agent)
Signature of Well Owner/Agent::	Date: 09/21/2016	Print Name of Well Owner/Agent: William R. Dugan (as Agent)
Signature of Well Driller/Agent:	Date: 09/21/2016	Print Name of Driller/Agent: William R. Dugan (as Agent)
Signature of Consultant/Agent:	Date: 09/21/2016	Print Name of Consultant/Agent: William R. Dugan (as Agent)

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District Well Inspection Department prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

DISTRICT WELL PERMIT NO.: C20160927005

Based on information on this application and attachment(s) hereto (if any) and subject to approval noted below, permission is hereby granted to construct (drill) the described well. Permission to start work may be withheld until a field check verifies all statements made on application by permittee and is also subject to the "General" and "Special" Conditions stated below.

SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVAL (Water Supply Well Only)

NOTE: Department of Environmental Health approval must be granted before this application will be accepted by Santa Clara Valley Water District.

Approved by: , R.E.H.S	☐ Approved as submitted ☐ Approved as corrected
	Date:

SITE PLAN

A 8½" x 11" paper site plan **must** be attached to this application, including:

1. Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.
2. North arrow and scale
3. Location of proposed well with dimensions in feet from well to nearest cross streets.

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before construction of the annular seal.** An authorized District representative must be on site to witness the construction of the annular seal. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification, under penalty of perjury, that the well was constructed in accordance with the District Well Standards and with the permit conditions.

B. Permittee agrees to construct, operate, and maintain the well according to provisions of the latest District Ordinance and the latest published revisions of District Well Standards to the end that this well will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety, or welfare of the people of the District.

C. This permit is valid only for the purpose specified herein. Well construction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative finds that site conditions warrant such a change).

D. This permit is only valid for the Assessor's Parcel No. indicated on it.

E. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that was constructed under this permit must be destroyed in accordance with District and State Well Standards.

F. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).

G. Before the well constructed under this permit can be used as a drinking water source, its use must be approved by the regulatory agency with authority over such use (typically the Santa Clara County Department of Environmental Health or the State of California Department of Public Health). A completed Well Inventory Form must also be approved.

H. If the well constructed under this permit cannot be or is not being used for its intended purpose, permittee is hereby required to destroy the well according to the District Well Standards and under permit from the District. Any test holes drilled under this permit must be destroyed within 24 hours of completion of testing activities. Destruction activities must be completed according to District standards. District must be notified a minimum of 24 hours prior to destruction.

I. Within 30 days of the completion of the well construction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and mail the original to the District's Wells and Water Production Unit.

J. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees, free and harmless from any and all expense, cost, and liability in connection with or resulting from the granting or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

K. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

L. A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.

M. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials or waters generated during drilling, well construction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must not be allowed to move off the property where the work is being completed.

N. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with District.

O. This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension of the permit expiration date is granted by an authorized District representative.

P. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

Q. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

SPECIAL CONDITIONS

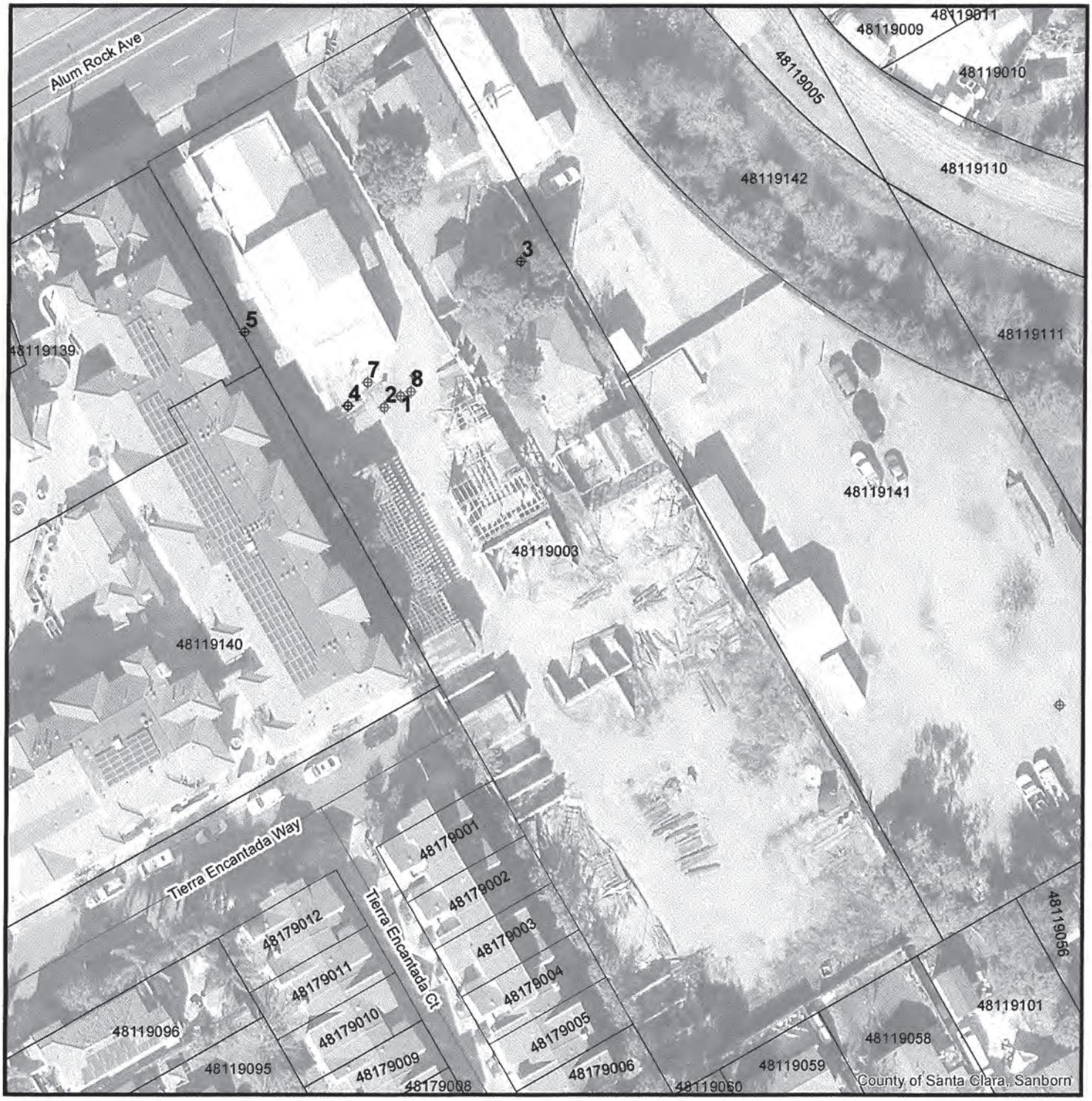
Community Projects Review Unit Approval (if needed):	CPRU Permit No.:
Approved by:	Date: 9-27-16

Please allow 10 working days to process this application.

1936 ALUM ROCK AVE., LLC

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

Valley Water
Clean Water · Healthy Environment · Flood Protection



Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

N W E S

7/19/2019

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	D20180918002-1	07S01E03F010	D
2	MW-5	D20180918001-1	07S01E03F011	D
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW1	D20180918005-1	07S01E03F008	D
7	MW3		07S01E03F007	D
8	MW2	D20180918004-1	07S01E03F009	D

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D20190749003

Well Owner: 1936 Alum Rock Avenue LLC	**Property Owner:** 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022	Telephone No.: 208.461.0022	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F013	Owner/Consultant Well No.: MW-7	Original Well Construction Permit No.: C20160927004
Well Casing Depth: 28 FT BGL	Total Boring Depth: 28 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

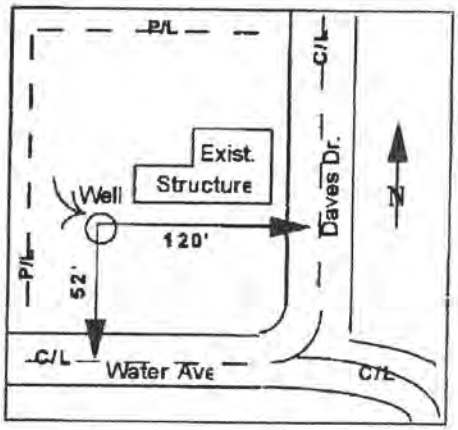
WELL DESTRUCTION APPLICATION

SITE PLAN

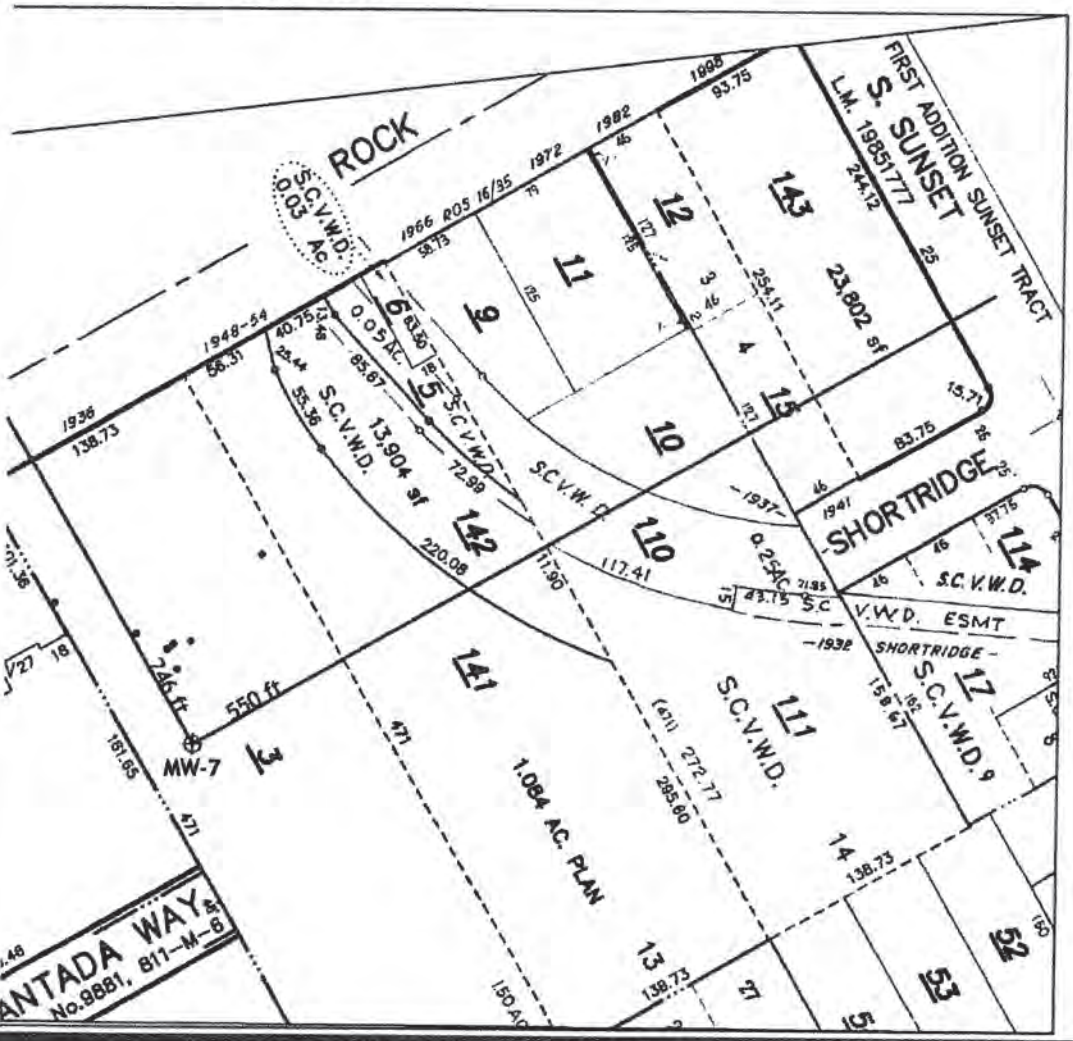
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.6 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature	Print Name:	Date:
Signature of Well Owner/Agent:	Caleb Roope	6/17/2019
Signature of Property Owner/Agent:	Caleb Roope	6/17/2019
Signature of Driller/Agent:	Ralph McGahey, V.P. Operations	9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Richard Ryan, PG	Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 28 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by: Charles E. Kanter — Date: 7/17/19

District Permit No.:	Date Issued:	Expiration Date:	Driller's Log No.:
D20190719003	7/19/19	7/19/20	

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

Project: WellTest, Inc. (Project #5201)
Project Name: Farmers Supply
Project Location: 1936 Alum Rock Boulevard, San Jose, CA

Log of Well MW-7

Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

Elevation, feet	Depth, feet	Sample Depth	Sample Number	Sample Matrix	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
95	0				GC		Gravelly Clay, brown, damp to moist, estimated stiff, low to medium estimated plasticity.		12" Diameter Vault 2" Dia. Locking Well Cap 8" Diameter Boring (0' to 28')
90	5				CL-CH		Silty Clay, dark brown-black, damp to moist, estimated high plasticity, estimated stiff to very stiff, no hydrocarbon odor.		2" I.D. Schedule 40 PVC Blank Casing (0.5' to 18')
85	10				CL-ML		Silty Clay to Clayey Silt, light brown to brown, damp to moist, stiff, estimated low plasticity.		(after 10 minutes)
80	15								Bentonite Seal (15.5.' to 17.5')
75	20						First-Encountered Water at 20 ft bgs. Trace sand and gravel.		Top of Well Screen 18' (ATD) #2/12 Sand (17.5' to 28')
70	25						Ocassional rounded gravel, trace sand.		2" I.D. Schedule 40 PVC 0.010 Slotted Casing Soils Logged from Cuttings Base of Well Screen 28'
65	30						Bottom of Boring at 28 feet bgs		2" I.D. Bottom Cap
60	35								

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-7.bgs (07-10-11.tpl]

Figure C-4

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C2016092700 4	
Well Owner: DAVID MIJARES	Owner Well No.: MW-7	Well Registration No.: 07S01EC3F013	
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE	
Drilling Company: EXPLORATION GEOSERVICES	Consultant: WELLTEST		
Cond. Bore: —	Conductor Depth: —	Conductor Diameter & Material: —	TD: 28'
Boring Diameter: 8"	BOC: 28'		
Casing Diameter & Material: 2" PVC	Slot Size: 0.010"	Screen Interval(s): 18-28'	
Filter Pack Material: 2/12 SAND	Filter Pack Interval(s): 17.5-28'	Bent: 15.5-17.5'	Seal Depth: 17.5'

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 240 ft. N/S S.SE ℄ ALUM ROCK AVE 335 ft. E/W E. NE ℄ McCREERY AVE

GPS Coordinates: Lat. Long.

Comments:

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

07S01E03F013

BLUE LAGOON AQUARIUM

APN 481-19-003
1936 ALUM ROCK AVE.
SAN JOSE, CA 95116

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 300 — 600 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/27/2016

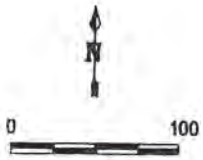
ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-1	07W00280	07S01E03F008	A
2	MW-3	07W00279	07S01E03F007	A
3	MW-2	07W00281	07S01E03F009	A

LEGEND

- Groundwater Monitoring Well
- Temporary Groundwater Monitoring Well
- Area of January 2016 Over-Excavation of former Gasoline UST Pit

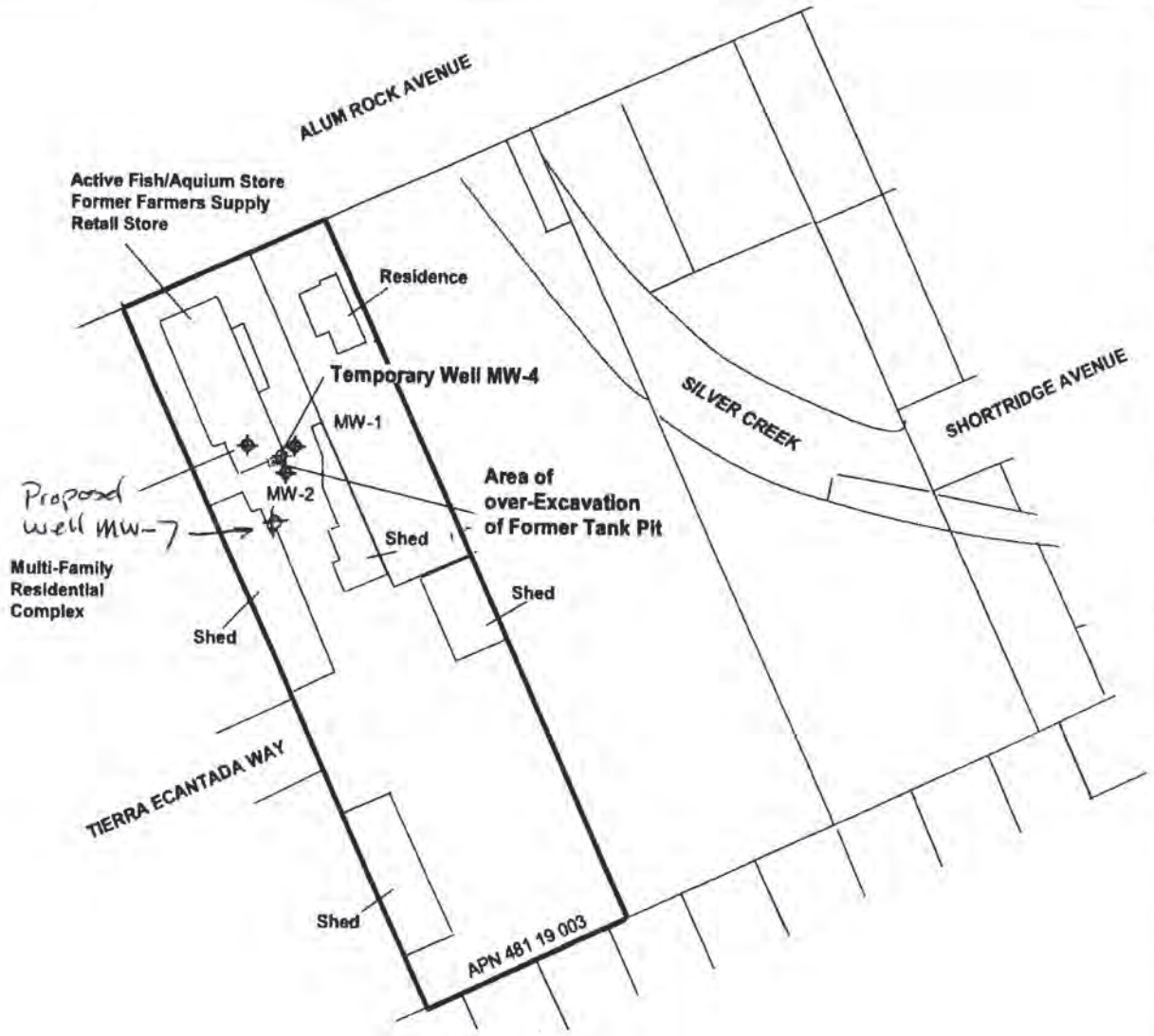
Groundwater Flow Direction Rose Diagram
Rose Diagram Derived with a 3-Point Solution using Water Level Data Obtained from Wells MW-1, MW-2, and MW-3 on the Following Dates:

09/30/11
10/22/11
11/29/11
01/23/12
04/30/12
06/07/12
12/30/13



APPROXIMATE SCALE IN FEET

ALL LOCATIONS ARE APPROXIMATE.
BASEMAP FROM OFFICE OF COUNTY ASSESSOR - SANTA CLARA COUNTY, CA (EFFECTIVE ROLL YEAR 2010-2011)



WellTest, Inc.
License No. 843074
P.O. Box 8548
San Jose, CA 95155
Phone (408) 287-2175

EXTENDED SITE MAP -- SHOWING A-ZONE MONITORING WELLS (MW-1, MW-2, MW-3 AND MW-4) AND THE AREA OF THE 14-FT LONG, 12-FT WIDE, AND 14.5-FEET DEEP EXCAVATION (JANUARY 2016)

FARMERS SUPPLY
1936 ALUM ROCK AVENUE
SAN JOSE, CALIFORNIA

FIGURE 2

File: 5007/Figure 2

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328536

Page 1 of 3

Owner's Well Number MW-7

Date Work Began 10/01/2016 Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927004 Permit Date 9/27/16

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F013

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		See Attached Well Log

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Total Depth of Boring 28 Feet

Total Depth of Completed Well 28 Feet

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude Deg Min. Sec. N Longitude Deg Min. Sec. W

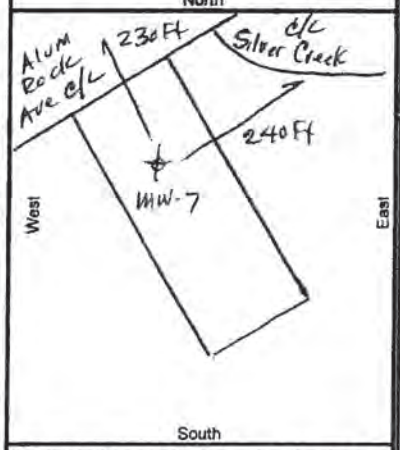
Datum NAD83 Dec. Lat. 37.3544776 Dec. Long. -121.8503498

APN Book 481 Page 19 Parcel 003

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. **Please be accurate and complete.**

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 20 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size If Any (Inches)
0	18	8	Blank	Sch 40 PVC	0.154	2.375		
18	28	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	15.5	Cement	Neat Cement
15.5	17.5	Bentonite	Hydrated Bentonite
17.5	28.0	Filter Pack	#2/12 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc.
Person, Firm or Corporation

PO Box 8548 San Jose CA 95155
Address City State Zip

Signed Exploratory For Environmental
C-57 Licensed Water Well Contractor

11/10/16 Date Signed

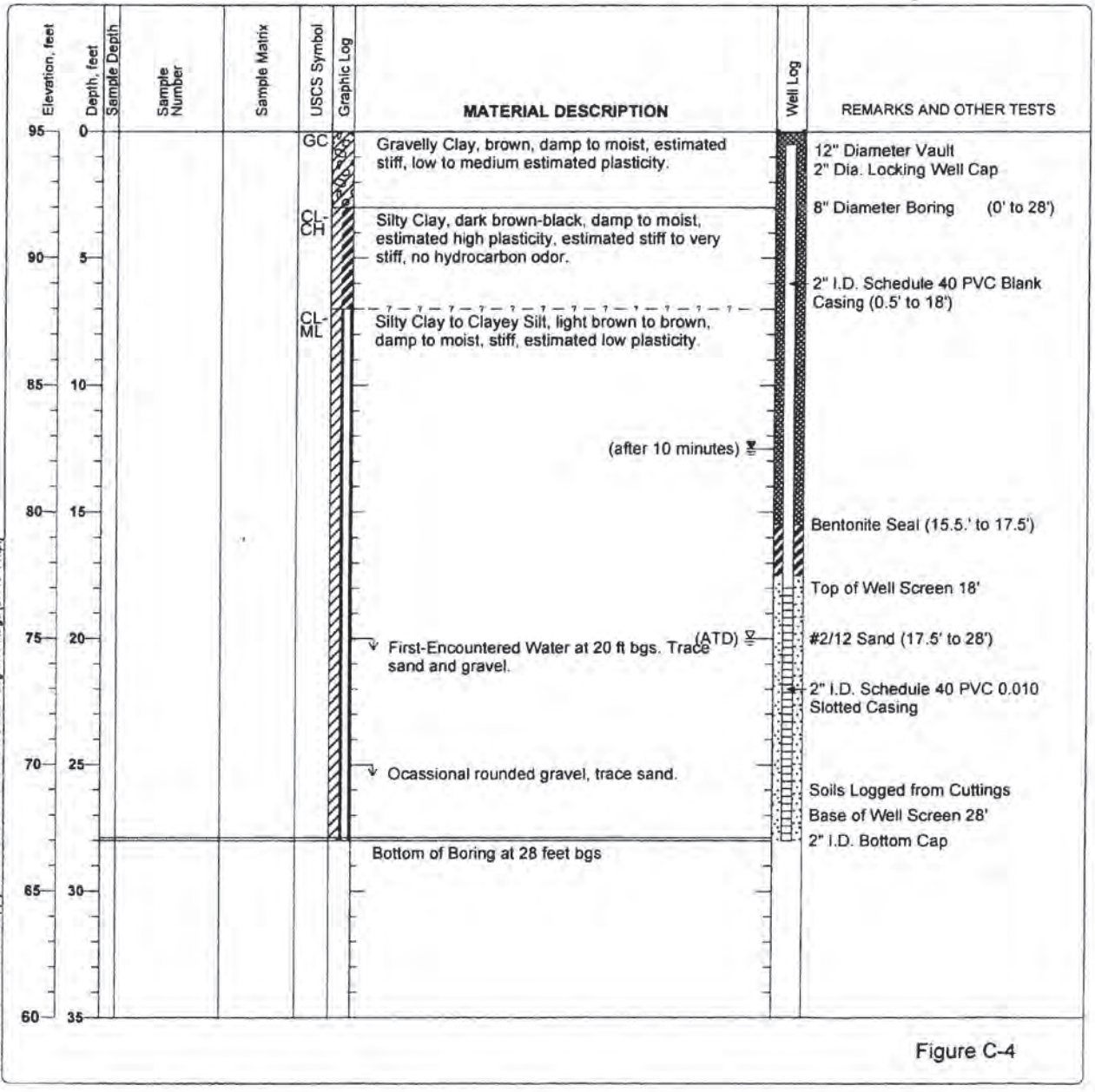
484288 C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

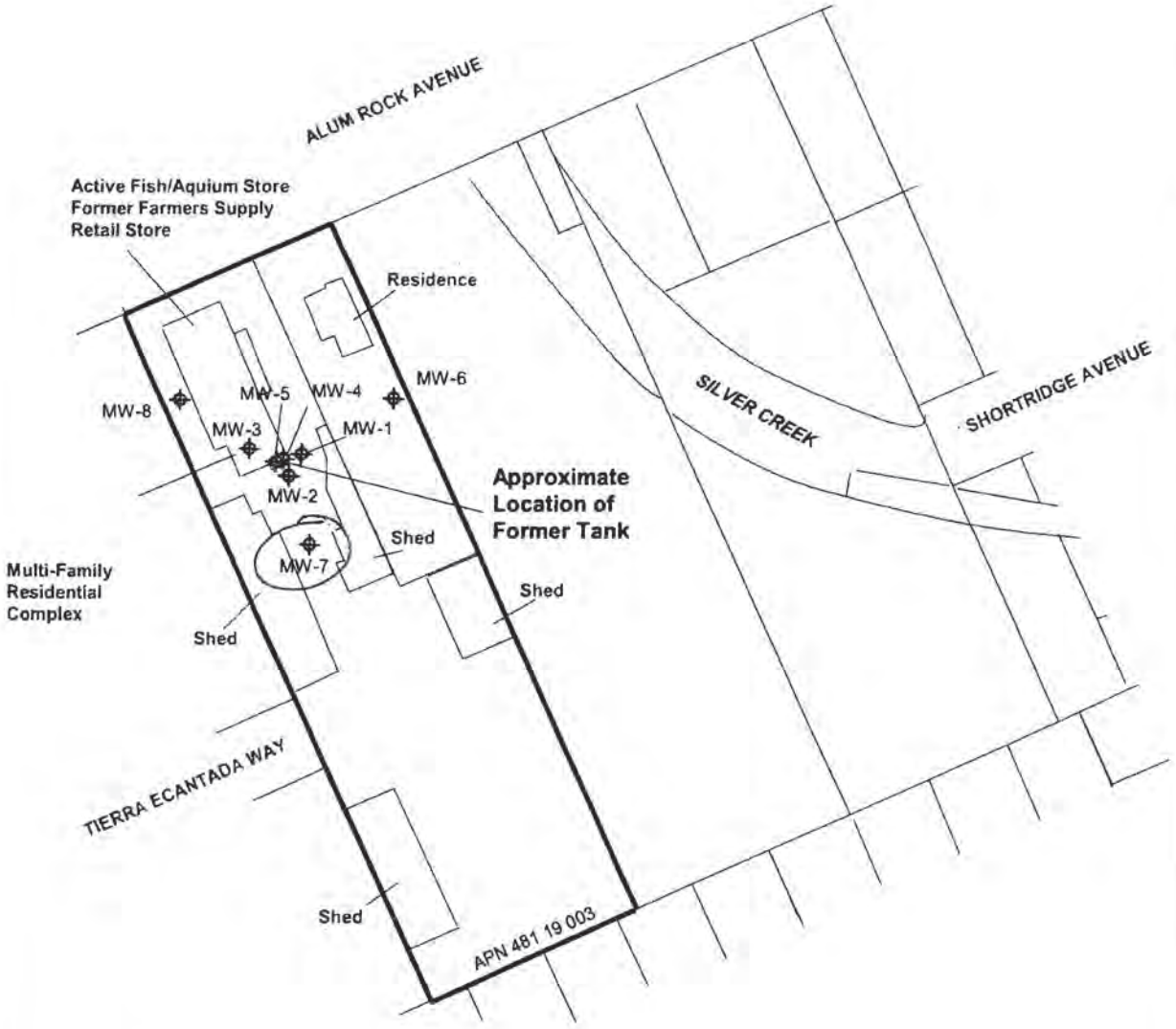
Project: WellTest, Inc. (Project #5201) Project Name: Farmers Supply Project Location: 1936 Alum Rock Boulevard, San Jose, CA	**Log of Well MW-7** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	



J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-7.bgs [07-10-11.tpl]

Figure C-4



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C20160927004	
Well Owner: DAVID MIJARES	Owner Well No.: MW-7	Well Registration No.: 07S01E03F013	
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE	
Drilling Company: EXPLORATION GEOSERVICES	Consultant: WELLTEST		
Cond. Bore: —	Conductor Depth: —	Conductor Diameter & Material: —	TD: 28'
Boring Diameter: 8"	BOC: 28'		
Casing Diameter & Material: 2" PVC	Slot Size: 0.010"	Screen Interval(s): 18-28'	
Filter Pack Material: 2/12 SAND	Filter Pack Interval(s): 17.5-28'	Bent: 15.5-17.5'	Seal Depth: 17.5'

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 240 ft. N/S S.SE ℄ ALUM ROCK AVE 335 ft. E/W E.NE ℄ McCREERY AVE

GPS Coordinates: Lat. Long.

Comments:

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

TO BE COMPLETED BY DISTRICT

District Permit No.: C2016092700 4	Date Issued: 9-27-16	Well Registration No.: 07S01E03F013
Geologic Setting: 1	Expiration Date: 9-27-17	Driller's Log No.:

TO BE COMPLETED BY OWNER AND DRILLER

Well Owner: Mr. David Mijares	Property Owner: Mr. David Mijares	Name of Business at Well Site: Blue Lagoon Aquarium
Well Owner's Mailing Address: 1639 Trona Way City, State, Zip San Jose, CA 95125-5055	Property Owner's Mailing Address: 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003	**Address of Well Site**: 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003
Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No.: 408-836-6358

Owner's/Consultant's Well No.: MW-7 | Assessor's Parcel No. of **Well Site**: Book 481 Page 19 Parcel 003

Consultant (Company): WellTest, Inc.	Drilling Company: Exploration Geoservices, Inc.	
Address: P.O. Box 8545 City, State, Zip San Jose, CA 95155-8545	Address: 1535 Industrial Avenue City, State, Zip San Jose, CA 95112	
Telephone No.: 408-287-2175 Office; 408-460-1884 Mobile	Telephone No.: 408-280-6822	C-57 License No.: 484288
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Case Name/No.: Farmers Supply/07S1E03F03f	Caseworker Name: Aaron Costa
Oversight Agency: Santa Clara County DEH	Caseworker Telephone No.: 408-918-1954

Signature of Responsible Professional | 09-21-2016 Date | William R. Dugan Print Name | (No substitution of signature will be accepted)

Civil Engineer Registration No. | OR | PG #6253 Geologist Registration No.

Estimated Depth of Completed Well: ☒ Less than 50 feet ☐ 50 to 300 feet ☐ Over 300 feet ☐ Other:

Well is to be constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On District property/easement* *See General Condition E, page 2

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

Other wells exist on this property? ☒ Yes ☐ No If yes, status: ☒ Active ☐ Inactive ☐ Abandoned

RECEIVED SEP 21 2016 S.C.V.W.D. WELLS

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and the conditions of this permit (see page 2). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ. I also understand that it is my responsibility, as the well owner, to notify the District of any changes in the purpose of this well, from which, is indicated on this application.

Signature of Property Owner/Agent:	Date: 09/21/2016	Print Name of Property Owner/Agent: William R. Dugan (as Agent)
Signature of Well Owner/Agent:	Date: 09/21/2016	Print Name of Well Owner/Agent: William R. Dugan (as Agent)
Signature of Well Driller/Agent:	Date: 09/21/2016	Print Name of Driller/Agent: William R. Dugan (as Agent)
Signature of Consultant/Agent:	Date: 09/21/2016	Print Name of Consultant/Agent: William R. Dugan (as Agent)

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District Well Inspection Department prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

DISTRICT WELL PERMIT NO.: C20160927004

Based on information on this application and attachment(s) hereto (if any) and subject to approval noted below, permission is hereby granted to construct (drill) the described well. Permission to start work may be withheld until a field check verifies all statements made on application by permittee and is also subject to the "General" and "Special" Conditions stated below.

SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVAL (Water Supply Well Only)

NOTE: Department of Environmental Health approval must be granted before this application will be accepted by Santa Clara Valley Water District.

Approved by: , R.E.H.S	☐ Approved as submitted ☐ Approved as corrected
	Date:

SITE PLAN

A 8½" x 11" paper site plan **must** be attached to this application, including:

1. Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.
2. North arrow and scale
3. Location of proposed well with dimensions in feet from well to nearest cross streets.

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before construction of the annular seal.** An authorized District representative must be on site to witness the construction of the annular seal. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification, under penalty of perjury, that the well was constructed in accordance with the District Well Standards and with the permit conditions.

B. Permittee agrees to construct, operate, and maintain the well according to provisions of the latest District Ordinance and the latest published revisions of District Well Standards to the end that this well will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety, or welfare of the people of the District.

C. This permit is valid only for the purpose specified herein. Well construction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative finds that site conditions warrant such a change).

D. This permit is only valid for the Assessor's Parcel No. indicated on it.

E. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that was constructed under this permit must be destroyed in accordance with District and State Well Standards.

F. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).

G. Before the well constructed under this permit can be used as a drinking water source, its use must be approved by the regulatory agency with authority over such use (typically the Santa Clara County Department of Environmental Health or the State of California Department of Public Health). A completed Well Inventory Form must also be approved.

H. If the well constructed under this permit cannot be or is not being used for its intended purpose, permittee is hereby required to destroy the well according to the District Well Standards and under permit from the District. Any test holes drilled under this permit must be destroyed within 24 hours of completion of testing activities. Destruction activities must be completed according to District standards. District must be notified a minimum of 24 hours prior to destruction.

I. Within 30 days of the completion of the well construction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and mail the original to the District's Wells and Water Production Unit.

J. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees, free and harmless from any and all expense, cost, and liability in connection with or resulting from the granting or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

K. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

L. A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.

M. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials or waters generated during drilling, well construction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must not be allowed to move off the property where the work is being completed.

N. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with District.

O. This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension of the permit expiration date is granted by an authorized District representative.

P. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

Q. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

SPECIAL CONDITIONS

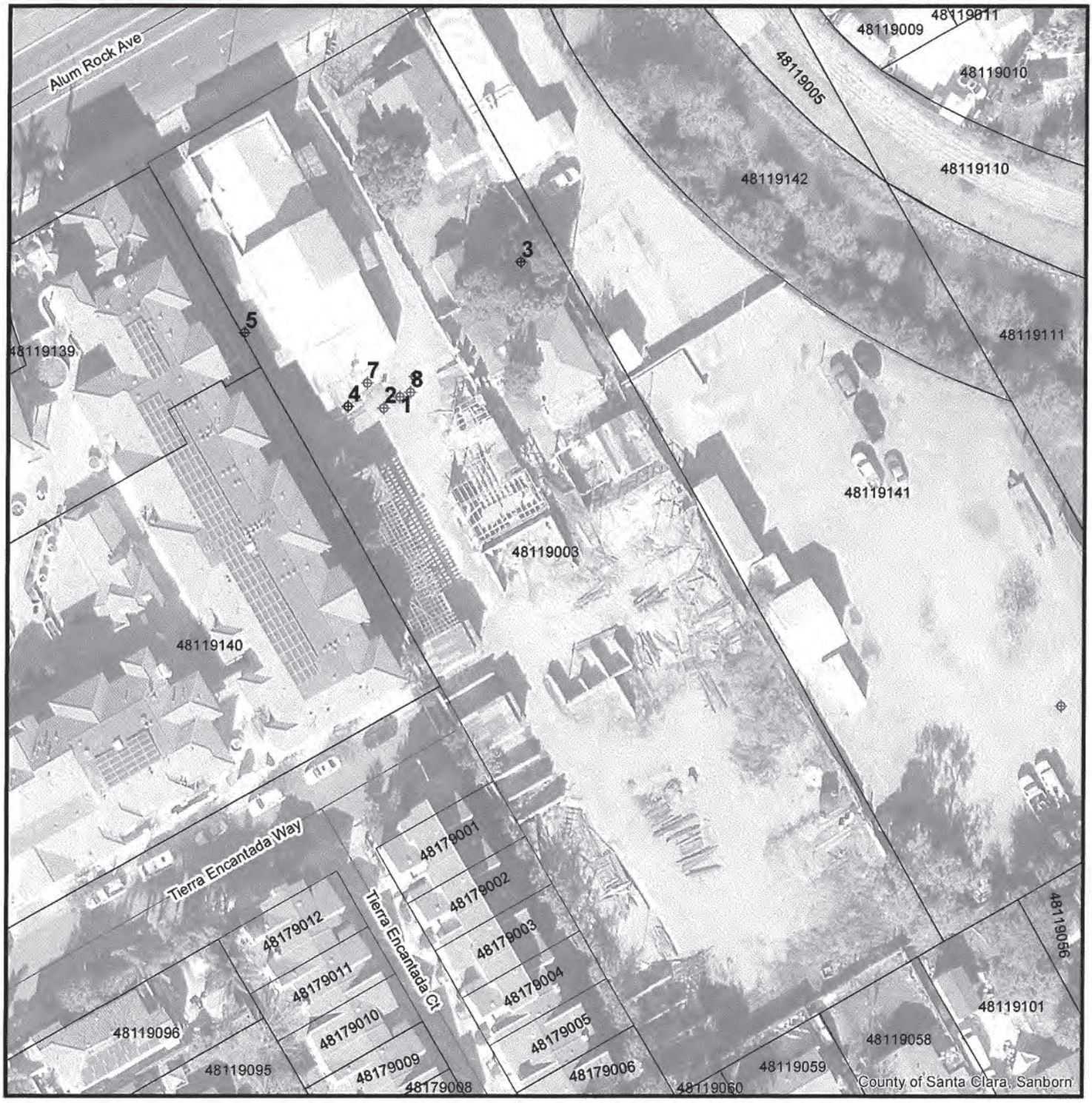
Community Projects Review Unit Approval (if needed):	CPRU Permit No.:
Approved by:	Date: 9-27-16

Please allow 10 working days to process this application.

1936 ALUM ROCK AVE., LLC

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

Valley Water
Clean Water · Healthy Environment · Flood Protection



Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

7/19/2019

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	D20180918002-1	07S01E03F010	D
2	MW-5	D20180918001-1	07S01E03F011	D
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW1	D20180918005-1	07S01E03F008	D
7	MW3		07S01E03F007	D
8	MW2	D20180918004-1	07S01E03F009	D

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2019071904

Well Owner: 1936 Alum Rock Avenue LLC	**Property Owner:** 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip: San Jose, CA 95116
Telephone No.: 208.461.0022	Telephone No.: 208.461.0022	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip: McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip: Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F012	Owner/Consultant Well No.: MW-6	Original Well Construction Permit No.: C20160927003
Well Casing Depth: 30 FT BGL	Total Boring Depth: 30 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:				
	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

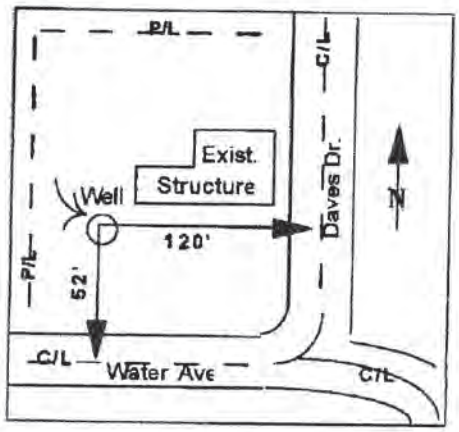
WELL DESTRUCTION APPLICATION

SITE PLAN

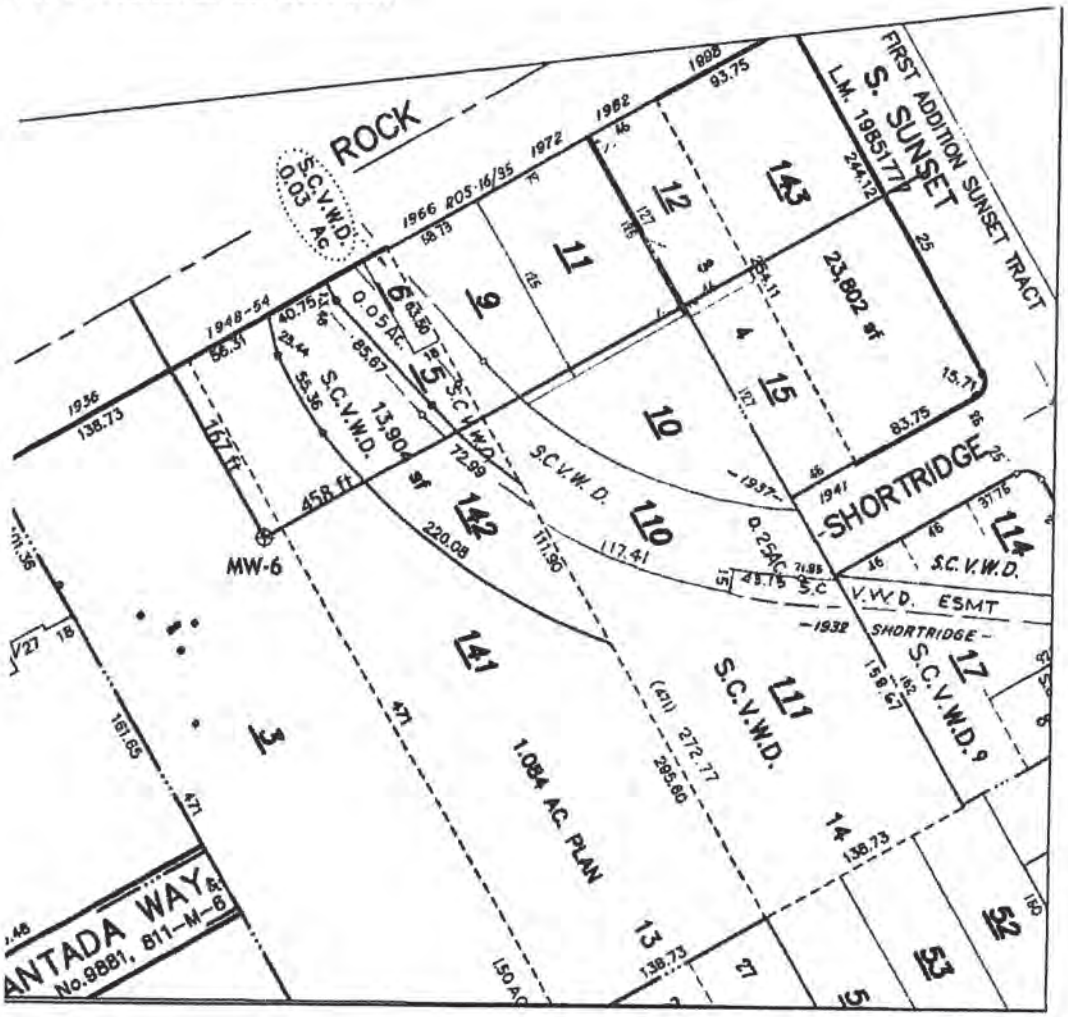
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application

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

WELL DESTRUCTION APPLICATION

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.9 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature	Print Name	Date
Signature of Well Owner/Agent:	Caleb Roope	6/17/2019
Signature of Property Owner/Agent:	Caleb Roope	6/17/2019
Signature of Driller/Agent:	Ralph McGahey, V.P. Operations	9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Richard Ryan, PG	Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☑ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☑ Drill out well to a total depth of 30 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling _____

☐ Other: _____

Permit Approved by: Charles E. Ramler — Date: 7/17/19

District Permit No.	Date Issued	Expiration Date	Driller's Log No.
D20190719004	7/19/19	7/19/20	

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials.** An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

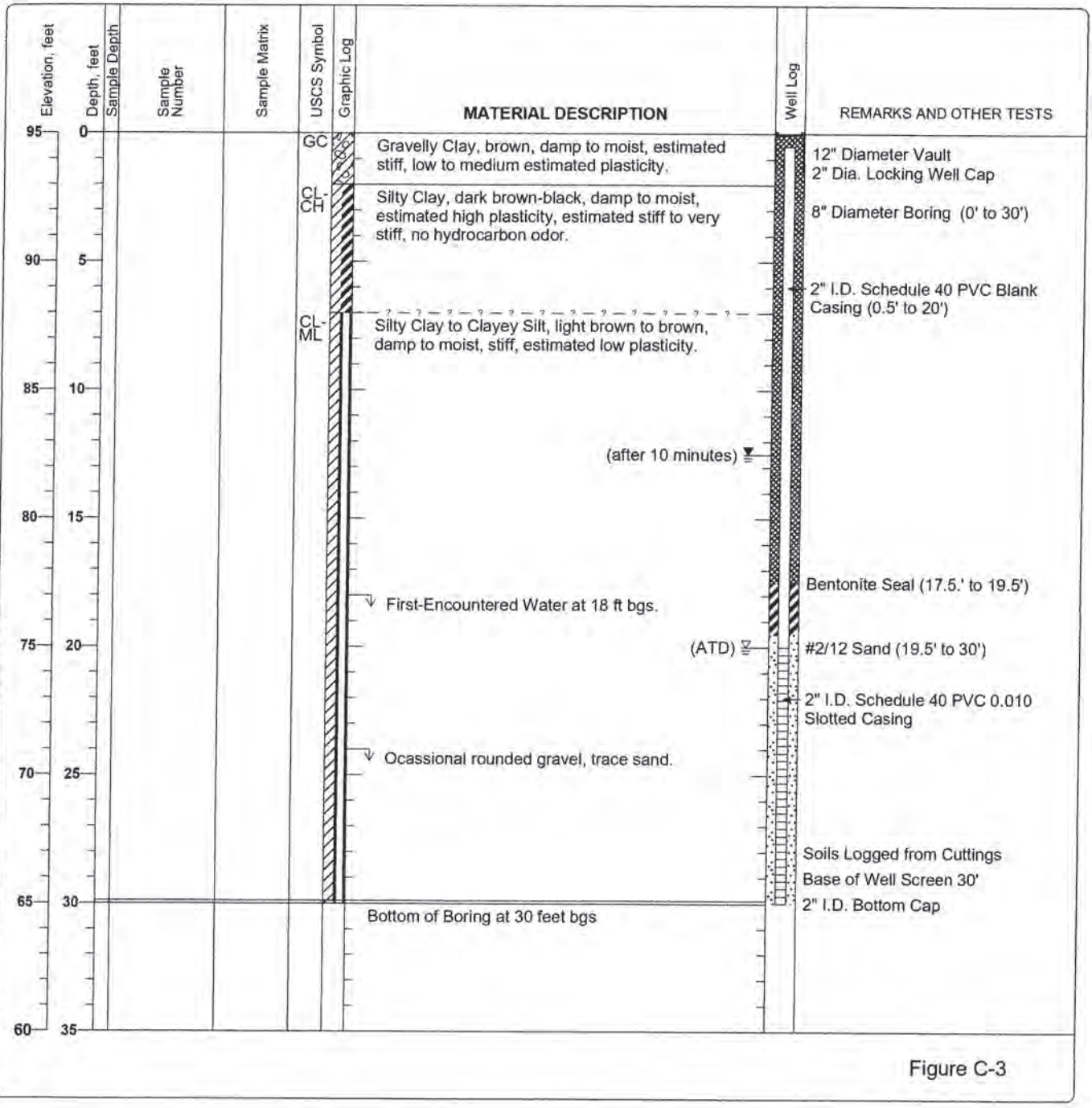
Please allow 10 working days to process this application.

Project: WellTest, Inc. (Project #5201)
Project Name: Farmers Supply
Project Location: 1936 Alum Rock Boulevard, San Jose, CA

Log of Well MW-6

Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **30**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	



J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-6.bgs [07-10-11.tpl]

Figure C-3

07S01E03F012

BLUE LAGOON AQUARIUM

APN 481-19-003
1936 ALUM ROCK AVE.
SAN JOSE, CA 95116

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 300 — 600 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/27/2016

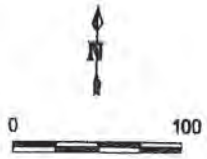
ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-1	07W00280	07S01E03F008	A
2	MW-3	07W00279	07S01E03F007	A
3	MW-2	07W00281	07S01E03F009	A

LEGEND

- Groundwater Monitoring Well
- Temporary Groundwater Monitoring Well
- Area of January 2016 Over-Excavation of former Gasoline UST Pit

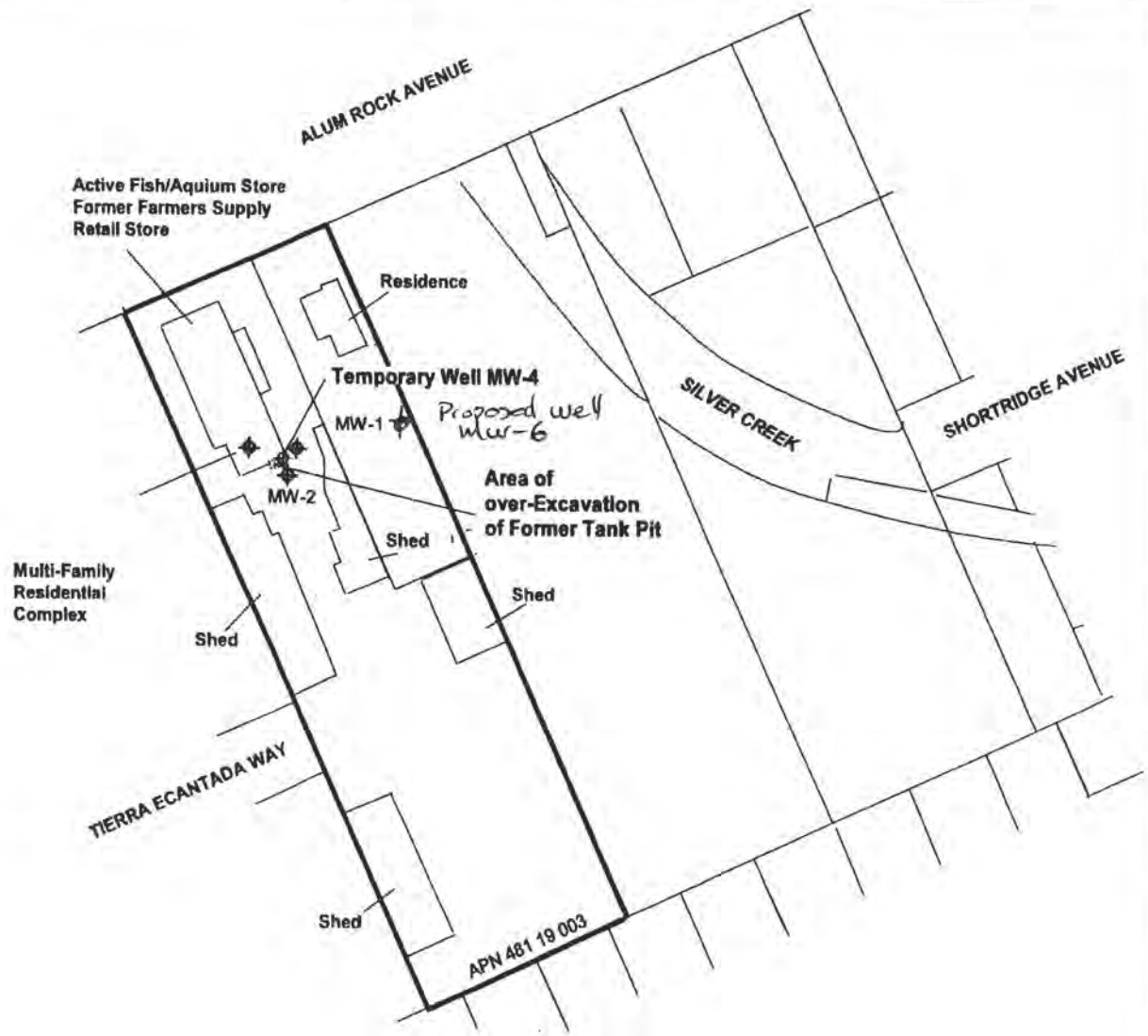
Groundwater Flow Direction Rose Diagram
Rose Diagram Derived with a 3-Point Solution using Water Level Data Obtained from Wells MW-1, MW-2, and MW-3 on the Following Dates:

09/30/11
10/22/11
11/29/11
01/23/12
04/30/12
06/07/12
12/30/13



APPROXIMATE SCALE IN FEET

ALL LOCATIONS ARE APPROXIMATE.
BASEMAP FROM OFFICE OF COUNTY ASSESSOR - SANTA CLARA COUNTY, CA (EFFECTIVE ROLL YEAR 2010-2011)



WellTest, Inc. License No. 843074 P.O. Box 8548 San Jose, CA 95155 Phone (408) 287-2175	**EXTENDED SITE MAP -- SHOWING A-ZONE MONITORING WELLS (MW-1, MW-2, MW-3 AND MW-4) AND THE AREA OF THE 14-FT LONG, 12-FT WIDE, AND 14.5-FEET DEEP EXCAVATION (JANUARY 2016)** FARMERS SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**FIGURE** **2**

File: 5007/Figure 2

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328534

Page 1 of 3

Owner's Well Number MW-6

Date Work Began 10/01/2016 Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927003 Permit Date 9/27/16

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F012

Latitude N ____ Longitude W ____

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify ____

Drilling Method ____ Drilling Fluid ____

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		See Attached Well Log

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Total Depth of Boring 30 Feet

Total Depth of Completed Well 30 Feet

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude ____ Deg ____ Min ____ Sec. N Longitude ____ Deg ____ Min ____ Sec. W

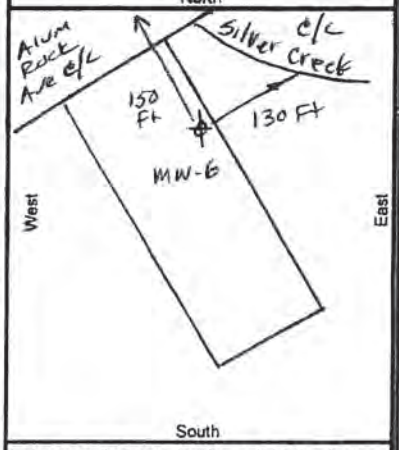
Datum NAD83 Dec. Lat. 37.3547898 Dec. Long. -121.8502136

APN Book 481 Page 19 Parcel 003

Township ____ Range ____ Section ____

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences rivers, etc and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other ____
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other ____

Water Level and Yield of Completed Well

Depth to first water 203 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type ____

Test Length ____ (Hours) Total Drawdown ____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size If Any (Inches)
0	20	8	Blank	Sch 40 PVC	0.154	2.375		
20	30	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	17.5	Cement	Neat Cement
17.5	19.5	Bentonite	Hydrated Bentonite
19.5	30.0	Filter Pack	#2/12 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc.
Person, Firm or Corporation

PO Box 8548 San Jose CA 95155
Address City State Zip

Signed [signature] for Exploration GeoServices 11/10/16 484288
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Project: WellTest, Inc. (Project #5201)
Project Name: Farmers Supply
Project Location: 1936 Alum Rock Boulevard, San Jose, CA

Log of Well MW-6

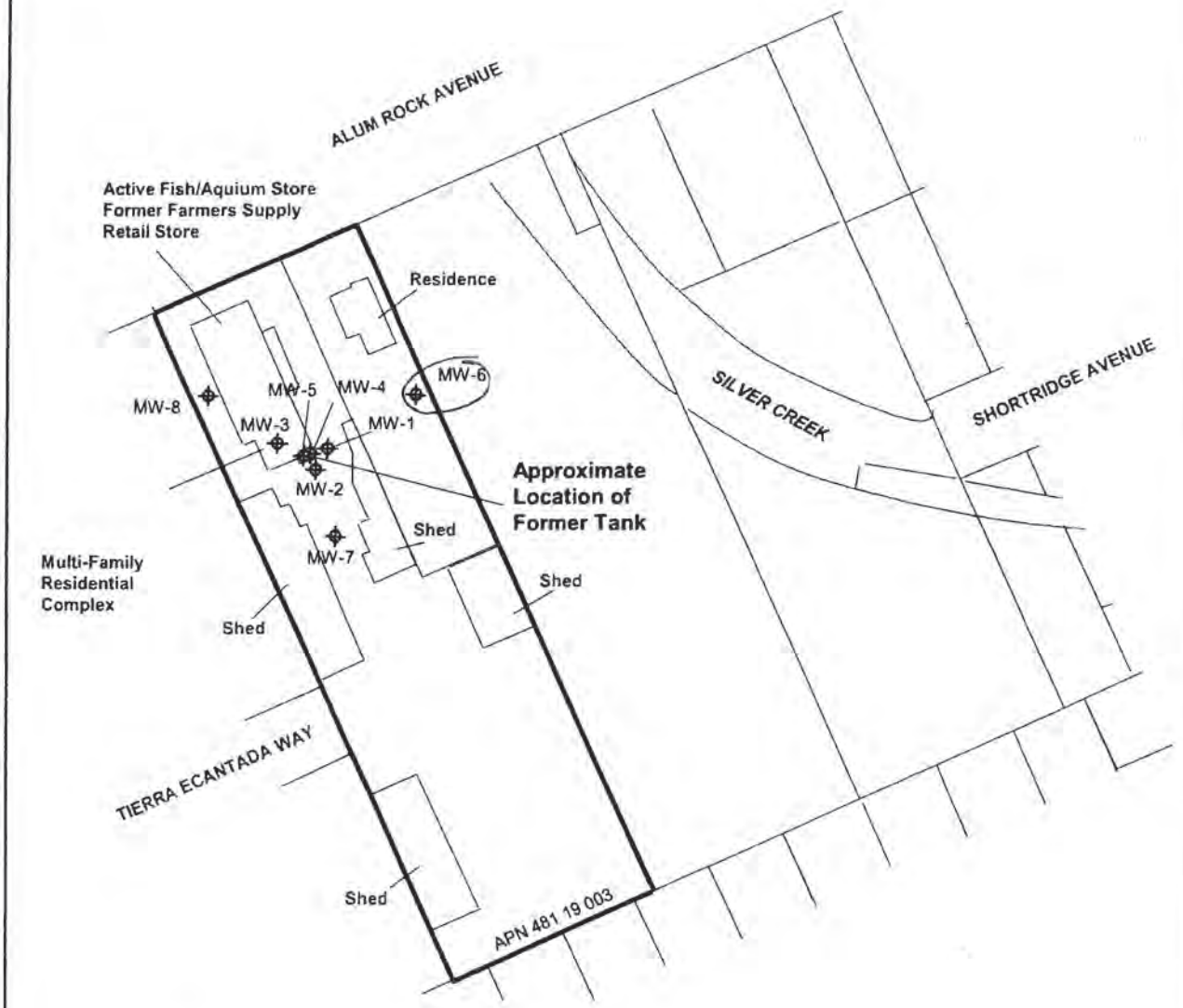
Sheet 1 of 1

Date(s) Drilled: **October 1, 2016**	Logged By: **Bill Dugan**	Checked By: **Bill Dugan**
Drilling Method: **Hollow Stem Auger**	Drill Bit Size/Type:	Total Depth of Borehole: **30**
Drill Rig Type: **Mobil B-40**	Drilling Contractor: **Exploration Geoservices, Inc.**	Approximate Surface Elevation: **95 feet USGS Quad**
Groundwater Level and Date Measured: **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s): **Soils Logged from Cuttings**	Hammer Data:
Borehole Backfill: **Well Completion**	Location: **See Figure 2 in WELLTEST Report #5201**	

Elevation, feet	Depth, feet	Sample Depth	Sample Number	Sample Matrix	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
95	0				GC		Gravelly Clay, brown, damp to moist, estimated stiff, low to medium estimated plasticity.		12" Diameter Vault 2" Dia. Locking Well Cap
					CL-CH		Silty Clay, dark brown-black, damp to moist, estimated high plasticity, estimated stiff to very stiff, no hydrocarbon odor.		8" Diameter Boring (0' to 30')
90	5								2" I.D. Schedule 40 PVC Blank Casing (0.5' to 20')
					CL-ML		Silty Clay to Clayey Silt, light brown to brown, damp to moist, stiff, estimated low plasticity.		
85	10								
							(after 10 minutes) ▽		
80	15								
							First-Encountered Water at 18 ft bgs.		Bentonite Seal (17.5.' to 19.5')
75	20						(ATD) ▽		#2/12 Sand (19.5' to 30')
									2" I.D. Schedule 40 PVC 0.010 Slotted Casing
70	25						Ocassional rounded gravel, trace sand.		
									Soils Logged from Cuttings
									Base of Well Screen 30'
65	30						Bottom of Boring at 30 feet bgs		2" I.D. Bottom Cap
60	35								

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-6.bgs [07-10-11.tpl]

Figure C-3



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C2016092 7003
Well Owner: DAVID MIJARES	Owner Well No.: MW-6	Well Registration No.: 07S01E03F012
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE
Drilling Company: EXPLORATION GEOSERVICES	Consultant: WELLTEST	

Cond. Bore: —	Conductor Depth: —	Conductor Diameter & Material: —	TD: 28'	Boring Diameter: 8"	BOC: 28'
Casing Diameter & Material: 2" PVC	Slot Size: 0.010"	Screen Interval(s): 18-28'			
Filter Pack Material: 2/2 SAND	Filter Pack Interval(s): 17.5-28'	Bent: 15.5-17.5'		Seal Depth: 17.5'	

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 160 ft. N/S S-SE ALUM ROCK AVE 425 ft. E/W N-NE & MCCREERY AVE

GPS Coordinates: Lat. Long.

Comments:

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

TO BE COMPLETED BY DISTRICT

District Permit No.: C2016092700 3	Date Issued: 9-27-16	Well Registration No.: 07S01E03F012
Geologic Setting:	Expiration Date: 9-27-17	Driller's Log No.:

TO BE COMPLETED BY OWNER AND DRILLER

Well Owner: Mr. David Mijares	Property Owner: Mr. David Mijares	Name of Business at Well Site: Blue Lagoon Aquarium
Well Owner's Mailing Address: 1639 Trona Way City, State, Zip San Jose, CA 95125-5055	Property Owner's Mailing Address: 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003
Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No.: 408-836-6358

Owner's/Consultant's Well No.: MW-6 | Assessor's Parcel No. of **Well Site**: Book 481 Page 19 Parcel 003

Consultant (Company): WellTest, Inc.	Drilling Company: Exploration Geoservices, Inc.	
Address: P.O. Box 8545 City, State, Zip San Jose, CA 95155-8545	Address: 1535 Industrial Avenue City, State, Zip San Jose, CA 95112	
Telephone No.: 408-287-2175 Office; 408-460-1884 Mobile	Telephone No.: 408-280-6822	C-57 License No.: 484288
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Case Name/No.: Farmers Supply/07S1E03F03f	Caseworker Name: Aaron Costa
Oversight Agency: Santa Clara County DEH	Caseworker Telephone No.: 408-918-1954

Signature of Responsible Professional | 09-21-2016 Date | William R. Dugan Print Name | (No substitution of signature will be accepted)

Civil Engineer Registration No. | OR | PG #6253 Geologist Registration No.

Estimated Depth of Completed Well: ☒ Less than 50 feet ☐ 50 to 300 feet ☐ Over 300 feet ☐ Other:

Well is to be constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On District property/easement*
*See General Condition E, page 2.

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

Other wells exist on this property? ☒ Yes ☐ No If yes, status: ☒ Active ☐ Inactive ☐ Abandoned

RECEIVED
SEP 21 2016
S.C.V.W.D.
WELLS

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District Ordinance 90-1, the District Well Standards, and the conditions of this permit (see page 2). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ. I also understand that it is my responsibility, as the well owner, to notify the District of any changes in the purpose of this well, from which, is indicated on this application.

Signature of Property Owner/Agent:	Date: 09/21/2016	Print Name of Property Owner/Agent: William R. Dugan (as Agent)
Signature of Well Owner/Agent::	Date: 09/21/2016	Print Name of Well Owner/Agent: William R. Dugan (as Agent)
Signature of Well Driller/Agent:	Date: 09/21/2016	Print Name of Driller/Agent: William R. Dugan (as Agent)
Signature of Consultant/Agent:	Date: 09/21/2016	Print Name of Consultant/Agent: William R. Dugan (as Agent)

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District Well Inspection Department prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

DISTRICT WELL PERMIT NO.: C2016092703

Based on information on this application and attachment(s) hereto (if any) and subject to approval noted below, permission is hereby granted to construct (drill) the described well. Permission to start work may be withheld until a field check verifies all statements made on application by permittee and is also subject to the "General" and "Special" Conditions stated below.

SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVAL (Water Supply Well Only)

NOTE: Department of Environmental Health approval must be granted before this application will be accepted by Santa Clara Valley Water District.

Approved by: , R.E.H.S	☐ Approved as submitted ☐ Approved as corrected
	Date:

SITE PLAN

A 8½" x 11" paper site plan **must** be attached to this application, including:

1. Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.
2. North arrow and scale
3. Location of proposed well with dimensions in feet from well to nearest cross streets.

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before construction of the annular seal.** An authorized District representative must be on site to witness the construction of the annular seal. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification, under penalty of perjury, that the well was constructed in accordance with the District Well Standards and with the permit conditions.

B. Permittee agrees to construct, operate, and maintain the well according to provisions of the latest District Ordinance and the latest published revisions of District Well Standards to the end that this well will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety, or welfare of the people of the District.

C. This permit is valid only for the purpose specified herein. Well construction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative finds that site conditions warrant such a change).

D. This permit is only valid for the Assessor's Parcel No. indicated on it.

E. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that was constructed under this permit must be destroyed in accordance with District and State Well Standards.

F. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).

G. Before the well constructed under this permit can be used as a drinking water source, its use must be approved by the regulatory agency with authority over such use (typically the Santa Clara County Department of Environmental Health or the State of California Department of Public Health). A completed Well Inventory Form must also be approved.

H. If the well constructed under this permit cannot be or is not being used for its intended purpose, permittee is hereby required to destroy the well according to the District Well Standards and under permit from the District. Any test holes drilled under this permit must be destroyed within 24 hours of completion of testing activities. Destruction activities must be completed according to District standards. District must be notified a minimum of 24 hours prior to destruction.

I. Within 30 days of the completion of the well construction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and mail the original to the District's Wells and Water Production Unit.

J. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees, free and harmless from any and all expense, cost, and liability in connection with or resulting from the granting or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

K. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

L. A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.

M. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials or waters generated during drilling, well construction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must not be allowed to move off the property where the work is being completed.

N. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with District.

O. This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension of the permit expiration date is granted by an authorized District representative.

P. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

Q. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

SPECIAL CONDITIONS

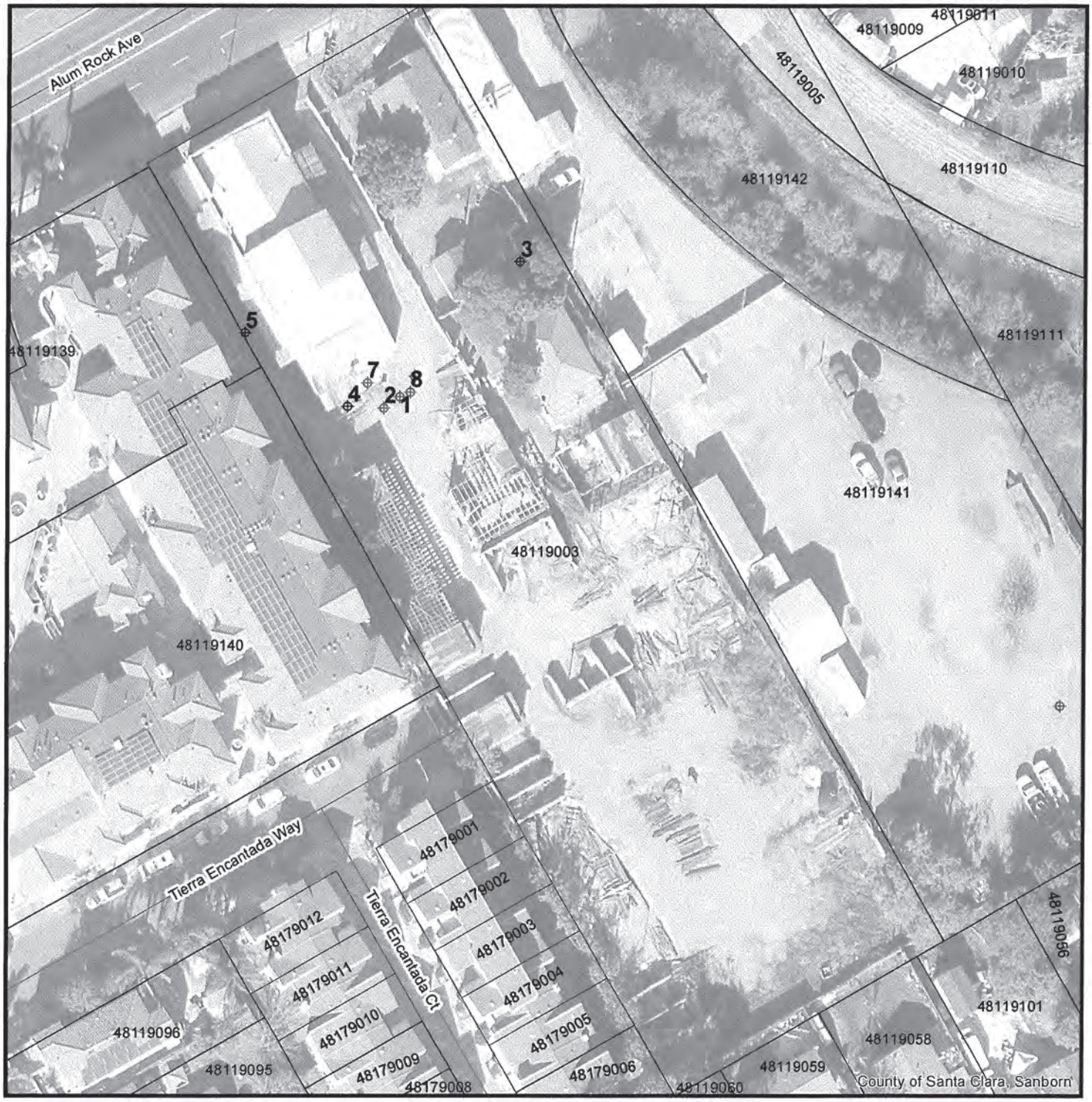
Community Projects Review Unit Approval (if needed):	CPRU Permit No.:
Approved by:	Date: 9-27-16

Please allow 10 working days to process this application.

1936 ALUM ROCK AVE., LLC

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

Valley Water
Clean Water · Healthy Environment · Flood Protection



Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

7/19/2019

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	D20180918002-1	07S01E03F010	D
2	MW-5	D20180918001-1	07S01E03F011	D
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW1	D20180918005-1	07S01E03F008	D
7	MW3		07S01E03F007	D
8	MW2	D20180918004-1	07S01E03F009	D

APPENDIX B: Laboratory Analytical Report Sheets

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8/14/2019
Mr. Richard Ryan
Ryan Geologic & Environmental Services, Inc.
PO Box 525

McCloud CA 96057

Project Name:
Project #: AR1936
Workorder #: 1908021

Dear Mr. Richard Ryan

The following report includes the data for the above referenced project for sample(s) received on 8/1/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive S.E. WMS are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Sarah Westerman

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1908021

Work Order Summary

CLIENT:	Mr. Richard Ryan Ryan Geologic & Environmental Services, Inc. PO Box 525 McCloud, CA 96057	**BILL TO:**	Mr. Neil OHara RNC Environmental 151 Nursery St Ashland, OR 97520
PHONE:		**P.O. #**	
FAX:		**PROJECT #**	AR1936
DATE RECEIVED:	08/01/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	08/14/2019		

FRACTION #	NAME	TEST
01A	SG-20B	Passive S.E. WMS
02A	SG-20C	Passive S.E. WMS
03A	SG-21	Passive S.E. WMS
04A	SG-22	Passive S.E. WMS
05A	SG-23	Passive S.E. WMS
06A	SG-24	Passive S.E. WMS
07A	SG-25	Passive S.E. WMS
08A	SG-26	Passive S.E. WMS
09A	SG-27	Passive S.E. WMS
10A	SG-29	Passive S.E. WMS
11A	SG-30	Passive S.E. WMS
12A	SG-31	Passive S.E. WMS
13A	SG-28	Passive S.E. WMS
14A	BLK	Passive S.E. WMS
15A	Lab Blank	Passive S.E. WMS
16A	LCS	Passive S.E. WMS
16AA	LCSD	Passive S.E. WMS

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 08/14/19

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
WMS Passive SE by Mod EPA TO-17
Ryan Geologic & Environmental Services, Inc.
Workorder# 1908021

Fourteen WMS-LU samples were received on August 01, 2019. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank and in sample BLK, a sampling duration of 37479 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If

the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
VOC BY PASSIVE SAMPLER - GC/MS

Client Sample ID: SG-20B

Lab ID#: 1908021-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethyl Benzene	0.050	0.95	0.43	8.1
m,p-Xylene	0.050	0.95	0.34	6.5
o-Xylene	0.050	0.89	3.1	55

Client Sample ID: SG-20C

Lab ID#: 1908021-02A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	7.3	3.5	130
Toluene	0.050	1.3	0.37	9.8
Ethyl Benzene	0.050	0.95	1.4	26
m,p-Xylene	0.050	0.95	14	280
o-Xylene	0.050	0.89	16	290
Naphthalene	0.050	0.89	0.39	6.9

Client Sample ID: SG-21

Lab ID#: 1908021-03A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethyl Benzene	0.050	0.95	1.9	37
m,p-Xylene	0.050	0.95	6.3	120
o-Xylene	0.050	0.89	1.6	29

Client Sample ID: SG-22

Lab ID#: 1908021-04A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Toluene	0.050	1.3	0.084	2.3
Ethyl Benzene	0.050	0.96	1.1	21
m,p-Xylene	0.050	0.96	3.9	75
o-Xylene	0.050	0.89	1.2	21

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Summary of Detected Compounds
VOC BY PASSIVE SAMPLER - GC/MS

Client Sample ID: SG-23

Lab ID#: 1908021-05A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Toluene	0.050	1.3	0.11	3.0
Ethyl Benzene	0.050	0.96	1.0	19
m,p-Xylene	0.050	0.96	3.6	68
o-Xylene	0.050	0.89	1.3	24

Client Sample ID: SG-24

Lab ID#: 1908021-06A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Toluene	0.050	1.3	0.090	2.4
Ethyl Benzene	0.050	0.96	0.083	1.6

Client Sample ID: SG-25

Lab ID#: 1908021-07A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethyl Benzene	0.050	0.96	0.31	5.9
m,p-Xylene	0.050	0.96	1.1	20
o-Xylene	0.050	0.89	0.34	6.0

Client Sample ID: SG-26

Lab ID#: 1908021-08A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethyl Benzene	0.050	0.96	0.083	1.6

Client Sample ID: SG-27

Lab ID#: 1908021-09A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Benzene	0.20	7.3	0.47	17
Toluene	0.050	1.3	0.12	3.2

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Summary of Detected Compounds
VOC BY PASSIVE SAMPLER - GC/MS

Client Sample ID: SG-27

Lab ID#: 1908021-09A

Ethyl Benzene	0.050	0.95	0.37	7.1
m,p-Xylene	0.050	0.95	0.070	1.3

Client Sample ID: SG-29

Lab ID#: 1908021-10A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Toluene	0.050	1.3	0.056	1.5

Client Sample ID: SG-30

Lab ID#: 1908021-11A

No Detections Were Found.

Client Sample ID: SG-31

Lab ID#: 1908021-12A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Toluene	0.050	1.3	0.065	1.7

Client Sample ID: SG-28

Lab ID#: 1908021-13A

No Detections Were Found.

Client Sample ID: BLK

Lab ID#: 1908021-14A

No Detections Were Found.

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Client Sample ID: SG-20B

Lab ID#: 1908021-01A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080807sim**	**Date of Collection: 7/29/19 9:35:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 12:19 PM**
		Date of Extraction: 8/8/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	Not Detected	Not Detected
Ethyl Benzene	0.050	0.95	0.43	8.1
m,p-Xylene	0.050	0.95	0.34	6.5
o-Xylene	0.050	0.89	3.1	55
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37479 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	91	70-130

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Client Sample ID: SG-20C

Lab ID#: 1908021-02A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080808sim**	**Date of Collection: 7/29/19 9:41:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 12:44 PM**	
		Date of Extraction: 8/8/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	3.5	130
Toluene	0.050	1.3	0.37	9.8
Ethyl Benzene	0.050	0.95	1.4	26
m,p-Xylene	0.050	0.95	14	280
o-Xylene	0.050	0.89	16	290
Naphthalene	0.050	0.89	0.39	6.9

Temperature = 77.0F , duration time = 37478 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	91	70-130

eurofins | Air Toxics

Client Sample ID: SG-21

Lab ID#: 1908021-03A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080809sim**	**Date of Collection: 7/29/19 8:30:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 01:09 PM**
		Date of Extraction: 8/8/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	Not Detected	Not Detected
Ethyl Benzene	0.050	0.95	1.9	37
m,p-Xylene	0.050	0.95	6.3	120
o-Xylene	0.050	0.89	1.6	29
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37401 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130

eurofins | Air Toxics

Client Sample ID: SG-22

Lab ID#: 1908021-04A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080810sim**	**Date of Collection: 7/29/19 8:33:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 01:34 PM**	
		Date of Extraction: 8/8/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	0.084	2.3
Ethyl Benzene	0.050	0.96	1.1	21
m,p-Xylene	0.050	0.96	3.9	75
o-Xylene	0.050	0.89	1.2	21
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37396 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130

eurofins | Air Toxics

Client Sample ID: SG-23

Lab ID#: 1908021-05A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080811sim**	**Date of Collection: 7/29/19 8:39:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 01:59 PM**
		Date of Extraction: 8/8/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	0.11	3.0
Ethyl Benzene	0.050	0.96	1.0	19
m,p-Xylene	0.050	0.96	3.6	68
o-Xylene	0.050	0.89	1.3	24
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37396 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130

eurofins | Air Toxics

Client Sample ID: SG-24

Lab ID#: 1908021-06A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080812sim**	**Date of Collection: 7/29/19 8:46:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 02:24 PM**
		Date of Extraction: 8/8/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	0.090	2.4
Ethyl Benzene	0.050	0.96	0.083	1.6
m,p-Xylene	0.050	0.96	Not Detected	Not Detected
o-Xylene	0.050	0.89	Not Detected	Not Detected
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37396 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

eurofins | Air Toxics

Client Sample ID: SG-25

Lab ID#: 1908021-07A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080813sim**	**Date of Collection: 7/29/19 8:51:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 02:50 PM**	
		Date of Extraction: 8/8/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	Not Detected	Not Detected
Ethyl Benzene	0.050	0.96	0.31	5.9
m,p-Xylene	0.050	0.96	1.1	20
o-Xylene	0.050	0.89	0.34	6.0
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37395 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

eurofins | Air Toxics

Client Sample ID: SG-26

Lab ID#: 1908021-08A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080814sim**	**Date of Collection: 7/29/19 8:55:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 03:15 PM**
		Date of Extraction: 8/8/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	Not Detected	Not Detected
Ethyl Benzene	0.050	0.96	0.083	1.6
m,p-Xylene	0.050	0.96	Not Detected	Not Detected
o-Xylene	0.050	0.89	Not Detected	Not Detected
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37393 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130

eurofins | Air Toxics

Client Sample ID: SG-27

Lab ID#: 1908021-09A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080815sim**	**Date of Collection: 7/29/19 9:05:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 03:40 PM**
		Date of Extraction: 8/8/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	0.47	17
Toluene	0.050	1.3	0.12	3.2
Ethyl Benzene	0.050	0.95	0.37	7.1
m,p-Xylene	0.050	0.95	0.070	1.3
o-Xylene	0.050	0.89	Not Detected	Not Detected
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37398 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

eurofins | Air Toxics

Client Sample ID: SG-29

Lab ID#: 1908021-10A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080816sim**	**Date of Collection: 7/29/19 9:15:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 04:05 PM**
		Date of Extraction: 8/8/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	0.056	1.5
Ethyl Benzene	0.050	0.96	Not Detected	Not Detected
m,p-Xylene	0.050	0.96	Not Detected	Not Detected
o-Xylene	0.050	0.89	Not Detected	Not Detected
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37395 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

eurofins | Air Toxics

Client Sample ID: SG-30

Lab ID#: 1908021-11A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080817sim**	**Date of Collection: 7/29/19 9:21:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 04:30 PM**	
		Date of Extraction: 8/8/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	Not Detected	Not Detected
Ethyl Benzene	0.050	0.96	Not Detected	Not Detected
m,p-Xylene	0.050	0.96	Not Detected	Not Detected
o-Xylene	0.050	0.89	Not Detected	Not Detected
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37389 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130

eurofins | Air Toxics

Client Sample ID: SG-31

Lab ID#: 1908021-12A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080818sim**	**Date of Collection: 7/29/19 9:28:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 04:55 PM**	
		Date of Extraction: 8/8/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	0.065	1.7
Ethyl Benzene	0.050	0.96	Not Detected	Not Detected
m,p-Xylene	0.050	0.96	Not Detected	Not Detected
o-Xylene	0.050	0.89	Not Detected	Not Detected
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37392 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

eurofins | Air Toxics

Client Sample ID: SG-28

Lab ID#: 1908021-13A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080819sim**	**Date of Collection: 7/29/19 9:11:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 05:21 PM**	
		Date of Extraction: 8/8/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	Not Detected	Not Detected
Ethyl Benzene	0.050	0.96	Not Detected	Not Detected
m,p-Xylene	0.050	0.96	Not Detected	Not Detected
o-Xylene	0.050	0.89	Not Detected	Not Detected
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37369 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

eurofins | Air Toxics

Client Sample ID: BLK

Lab ID#: 1908021-14A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080806sim**	**Date of Collection: 7/29/19 9:01:00 AM**
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 11:54 AM**
		Date of Extraction: 8/8/19

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	Not Detected	Not Detected
Ethyl Benzene	0.050	0.95	Not Detected	Not Detected
m,p-Xylene	0.050	0.95	Not Detected	Not Detected
o-Xylene	0.050	0.89	Not Detected	Not Detected
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37479 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1908021-15A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080805sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 11:29 AM**	
		Date of Extraction: 8/8/19	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Methyl tert-butyl ether	0.050	2.5	Not Detected	Not Detected
Benzene	0.20	7.3	Not Detected	Not Detected
Toluene	0.050	1.3	Not Detected	Not Detected
Ethyl Benzene	0.050	0.95	Not Detected	Not Detected
m,p-Xylene	0.050	0.95	Not Detected	Not Detected
o-Xylene	0.050	0.89	Not Detected	Not Detected
Naphthalene	0.050	0.89	Not Detected	Not Detected

Temperature = 77.0F , duration time = 37479 minutes.

Container Type: WMS-LU

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1908021-16A

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080803sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 10:36 AM**	
		Date of Extraction: 8/8/19	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	95	70-130
Benzene	98	70-130
Toluene	102	70-130
Ethyl Benzene	106	70-130
m,p-Xylene	100	70-130
o-Xylene	94	70-130
Naphthalene	22	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	91	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1908021-16AA

VOC BY PASSIVE SAMPLER - GC/MS

File Name:	**18080804sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/8/19 11:04 AM**	
		Date of Extraction: 8/8/19	

Compound	%Recovery	Method Limits
Methyl tert-butyl ether	94	70-130
Benzene	98	70-130
Toluene	102	70-130
Ethyl Benzene	106	70-130
m,p-Xylene	100	70-130
o-Xylene	94	70-130
Naphthalene	21	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130

Neil O'Hara
RNC Environmental, LLC
151 Nursery St
Ashland, OR 97520
Tel: (888) 485-3330
Email: neil@rnc-enviro.com

RE: AR1936

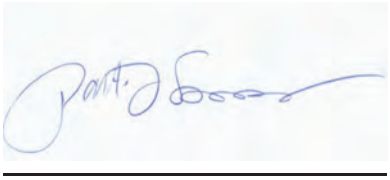
Work Order No.: 1907274

Dear Neil O'Hara:

Torrent Laboratory, Inc. received 1 sample(s) on July 30, 2019 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991 If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.



Patti L Sandrock
QA Officer

August 06, 2019
Date

Date: 8/6/2019

Client: RNC Environmental, LLC

Project: AR1936

Work Order: 1907274

CASE NARRATIVE

Unless otherwise indicated in the following narrative, no issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date Received: 07/30/19
Date Reported: 08/06/19

SG20 B

1907274-001

Parameters:	Analysis Method	DF	MDL	PQL	Results ug/m3
Oxygen	D1946	5	0.053	0.25	11%
Ethyl Acetate	ETO15	2400	1100	4300	7300
Tetrahydrofuran	ETO15	2400	1100	3500	35000
TPH-Gasoline	TO-15	2400	97000	420000	1650000

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 07/30/19, 12:17 pm
Date Reported: 08/06/19

Client Sample ID:	SG20 B	**Lab Sample ID:**	1907274-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Air
Project Number:	AR1936		
Date/Time Sampled:	07/30/19 / 11:45	**Certified Clean WO # :**	
Canister/Tube ID:		**Received PSI :**	
Collection Volume (L):		**Corrected PSI :**	
SDG:			

Prep Method:	FG-P	**Prep Batch Date/Time:**	8/1/19	4:00:00PM
Prep Batch ID:	1115345	**Prep Analyst:**	BALI	

Parameters:	Analysis Method	DF	MDL %	PQL %	Results %	Results ppbv	Q	Analyzed	Time	By	Analytical Batch
Oxygen	D1946	5.00	0.053	0.25	11			08/01/19	19:59	BA	441271

Prep Method:	TO15-P	**Prep Batch Date/Time:**	7/31/19	4:00:00PM
Prep Batch ID:	1115335	**Prep Analyst:**	BALI	

Parameters:	Analysis Method	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Q	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	ETO15	2,400	3800	5900	ND	ND		08/01/19	2:55	BA	441263
1,1-Difluoroethane	ETO15	2,400	830	32000	ND	ND		08/01/19	2:55	BA	441263
1,2-Dichlorotetrafluoroethane	ETO15	2,400	3400	8400	ND	ND		08/01/19	2:55	BA	441263
Chloromethane	ETO15	2,400	4900	9900	ND	ND		08/01/19	2:55	BA	441263
Vinyl Chloride	ETO15	2,400	540	3100	ND	ND		08/01/19	2:55	BA	441263
1,3-Butadiene	ETO15	2,400	820	2700	ND	ND		08/01/19	2:55	BA	441263
Bromomethane	ETO15	2,400	1600	4700	ND	ND		08/01/19	2:55	BA	441263
Chloroethane	ETO15	2,400	2000	3200	ND	ND		08/01/19	2:55	BA	441263
Trichlorofluoromethane	ETO15	2,400	1300	6700	ND	ND		08/01/19	2:55	BA	441263
1,1-Dichloroethene	ETO15	2,400	2000	4800	ND	ND		08/01/19	2:55	BA	441263
Freon 113	ETO15	2,400	2400	9200	ND	ND		08/01/19	2:55	BA	441263
Carbon Disulfide	ETO15	2,400	900	3700	ND	ND		08/01/19	2:55	BA	441263
2-Propanol (Isopropyl Alcohol)	ETO15	2,400	3100	30000	ND	ND		08/01/19	2:55	BA	441263
Methylene Chloride	ETO15	2,400	1700	25000	ND	ND		08/01/19	2:55	BA	441263
Acetone	ETO15	2,400	950	29000	ND	ND		08/01/19	2:55	BA	441263
trans-1,2-Dichloroethene	ETO15	2,400	1100	4800	ND	ND		08/01/19	2:55	BA	441263
Hexane	ETO15	2,400	1100	4200	ND	ND		08/01/19	2:55	BA	441263
MTBE	ETO15	2,400	1100	4300	ND	ND		08/01/19	2:55	BA	441263
tert-Butanol	ETO15	2,400	1500	3600	ND	ND		08/01/19	2:55	BA	441263
Diisopropyl ether (DIPE)	ETO15	2,400	1800	5000	ND	ND		08/01/19	2:55	BA	441263
1,1-Dichloroethane	ETO15	2,400	1300	4900	ND	ND		08/01/19	2:55	BA	441263
ETBE	ETO15	2,400	780	5000	ND	ND		08/01/19	2:55	BA	441263
cis-1,2-Dichloroethene	ETO15	2,400	2000	4800	ND	ND		08/01/19	2:55	BA	441263
Chloroform	ETO15	2,400	2300	5900	ND	ND		08/01/19	2:55	BA	441263
Vinyl Acetate	ETO15	2,400	1800	4200	ND	ND		08/01/19	2:55	BA	441263

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 07/30/19, 12:17 pm
Date Reported: 08/06/19

Client Sample ID:	SG20 B	**Lab Sample ID:**	1907274-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Air
Project Number:	AR1936		
Date/Time Sampled:	07/30/19 / 11:45	**Certified Clean WO # :**	
Canister/Tube ID:		**Received PSI :**	
Collection Volume (L):		**Corrected PSI :**	
SDG:			

Prep Method:	TO15-P	**Prep Batch Date/Time:**	7/31/19	4:00:00PM
Prep Batch ID:	1115335	**Prep Analyst:**	BALI	

Parameters:	Analysis Method	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Q	Analyzed	Time	By	Analytical Batch
Carbon Tetrachloride	ETO15	2,400	2700	7500	ND	ND		08/01/19	2:55	BA	441263
1,1,1-Trichloroethane	ETO15	2,400	1900	6600	ND	ND		08/01/19	2:55	BA	441263
2-Butanone (MEK)	ETO15	2,400	930	3500	ND	ND		08/01/19	2:55	BA	441263
Ethyl Acetate	ETO15	2,400	1100	4300	7300	2,027.78		08/01/19	2:55	BA	441263
Tetrahydrofuran	ETO15	2,400	1100	3500	35000	11,864.41		08/01/19	2:55	BA	441263
Benzene	ETO15	2,400	1000	3800	ND	ND		08/01/19	2:55	BA	441263
TAME	ETO15	2,400	1600	5000	ND	ND		08/01/19	2:55	BA	441263
1,2-Dichloroethane (EDC)	ETO15	2,400	1000	4900	ND	ND		08/01/19	2:55	BA	441263
Trichloroethylene	ETO15	2,400	1900	6400	ND	ND		08/01/19	2:55	BA	441263
1,2-Dichloropropane	ETO15	2,400	1800	5500	ND	ND		08/01/19	2:55	BA	441263
Bromodichloromethane	ETO15	2,400	1800	8000	ND	ND		08/01/19	2:55	BA	441263
1,4-Dioxane	ETO15	2,400	4300	8600	ND	ND		08/01/19	2:55	BA	441263
trans-1,3-Dichloropropene	ETO15	2,400	2500	5400	ND	ND		08/01/19	2:55	BA	441263
Toluene	ETO15	2,400	1800	4500	ND	ND		08/01/19	2:55	BA	441263
4-Methyl-2-Pentanone (MIBK)	ETO15	2,400	1800	4900	ND	ND		08/01/19	2:55	BA	441263
cis-1,3-Dichloropropene	ETO15	2,400	1000	5400	ND	ND		08/01/19	2:55	BA	441263
Tetrachloroethylene	ETO15	2,400	3500	8100	ND	ND		08/01/19	2:55	BA	441263
1,1,2-Trichloroethane	ETO15	2,400	1400	6600	ND	ND		08/01/19	2:55	BA	441263
Dibromochloromethane	ETO15	2,400	2700	10000	ND	ND		08/01/19	2:55	BA	441263
1,2-Dibromoethane (EDB)	ETO15	2,400	1800	9200	ND	ND		08/01/19	2:55	BA	441263
2-Hexanone	ETO15	2,400	1600	4900	ND	ND		08/01/19	2:55	BA	441263
Ethyl Benzene	ETO15	2,400	1500	5200	ND	ND		08/01/19	2:55	BA	441263
Chlorobenzene	ETO15	2,400	1400	5500	ND	ND		08/01/19	2:55	BA	441263
1,1,1,2-Tetrachloroethane	ETO15	2,400	2000	8200	ND	ND		08/01/19	2:55	BA	441263
m,p-Xylene	ETO15	2,400	2300	5200	ND	ND		08/01/19	2:55	BA	441263
o-Xylene	ETO15	2,400	730	5200	ND	ND		08/01/19	2:55	BA	441263
Styrene	ETO15	2,400	1100	5100	ND	ND		08/01/19	2:55	BA	441263
Bromoform	ETO15	2,400	3100	12000	ND	ND		08/01/19	2:55	BA	441263
1,1,2,2-Tetrachloroethane	ETO15	2,400	2000	8200	ND	ND		08/01/19	2:55	BA	441263
4-Ethyl Toluene	ETO15	2,400	1300	5900	ND	ND		08/01/19	2:55	BA	441263
1,3,5-Trimethylbenzene	ETO15	2,400	720	5900	ND	ND		08/01/19	2:55	BA	441263
1,2,4-Trimethylbenzene	ETO15	2,400	1400	5900	ND	ND		08/01/19	2:55	BA	441263
1,4-Dichlorobenzene	ETO15	2,400	1800	7200	ND	ND		08/01/19	2:55	BA	441263

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 07/30/19, 12:17 pm
Date Reported: 08/06/19

Client Sample ID:	SG20 B	**Lab Sample ID:**	1907274-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Air
Project Number:	AR1936		
Date/Time Sampled:	07/30/19 / 11:45	**Certified Clean WO # :**	
Canister/Tube ID:		**Received PSI :**	
Collection Volume (L):		**Corrected PSI :**	
SDG:			

Prep Method:	TO15-P	**Prep Batch Date/Time:**	7/31/19	4:00:00PM
Prep Batch ID:	1115335	**Prep Analyst:**	BALI	

Parameters:	Analysis Method	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Q	Analyzed	Time	By	Analytical Batch
1,3-Dichlorobenzene	ETO15	2,400	3200	7200	ND	ND		08/01/19	2:55	BA	441263
1,2-Dichlorobenzene	ETO15	2,400	2600	7200	ND	ND		08/01/19	2:55	BA	441263
Hexachlorobutadiene	ETO15	2,400	4500	13000	ND	ND		08/01/19	2:55	BA	441263
1,2,4-Trichlorobenzene	ETO15	2,400	5200	8900	ND	ND		08/01/19	2:55	BA	441263
Naphthalene	ETO15	2,400	3100	6300	ND	ND		08/01/19	2:55	BA	441263
(S) 4-Bromofluorobenzene	ETO15	2,400	50	150	92 %			08/01/19	2:55	BA	441263

Prep Method:	TO15-GRO	**Prep Batch Date/Time:**	7/31/19	2:23:00PM
Prep Batch ID:	1115367	**Prep Analyst:**	BALI	

Parameters:	Analysis Method	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Q	Analyzed	Time	By	Analytical Batch
TPH-Gasoline	TO-15	2,400	97000	420000	1650000	468,750.00	x	08/01/19	2:55	BA	441263

NOTE: x - Sample chromatogram does not resemble gasoline standard pattern. Reported value is the result of presence of unknown compounds within range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1907274	**Prep Method:**	TO15-P	**Prep Date:**	07/31/19	**Prep Batch:**	1115335
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	7/31/2019	**Analytical Batch:**	441263
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.32	0.50	ND	
1,1-Difluoroethane	0.13	5.0	ND	
1,2-Dichlorotetrafluoroethane	0.20	0.50	ND	
Chloromethane	0.99	2.0	ND	
Vinyl Chloride	0.088	0.50	ND	
1,3-Butadiene	0.15	0.50	ND	
Bromomethane	0.17	0.50	0.24	
Chloroethane	0.31	0.50	ND	
Trichlorofluoromethane	0.099	0.50	ND	
1,1-Dichloroethene	0.21	0.50	ND	
Freon 113	0.13	0.50	ND	
Carbon Disulfide	0.12	0.50	ND	
2-Propanol (Isopropyl Alcohol)	0.52	5.0	ND	
Methylene Chloride	0.20	3.0	ND	
Acetone	0.17	5.0	ND	
trans-1,2-Dichloroethene	0.12	0.50	ND	
Hexane	0.13	0.50	ND	
MTBE	0.12	0.50	ND	
tert-Butanol	0.20	0.50	ND	
Diisopropyl ether (DIPE)	0.18	0.50	ND	
1,1-Dichloroethane	0.13	0.50	ND	
ETBE	0.078	0.50	ND	
cis-1,2-Dichloroethene	0.21	0.50	ND	
Chloroform	0.20	0.50	ND	
Vinyl Acetate	0.22	0.50	ND	
Carbon Tetrachloride	0.18	0.50	ND	
1,1,1-Trichloroethane	0.15	0.50	ND	
2-Butanone (MEK)	0.13	0.50	ND	
Ethyl Acetate	0.13	0.50	ND	
Tetrahydrofuran	0.15	0.50	ND	
Benzene	0.14	0.50	ND	
TAME	0.16	0.50	ND	
1,2-Dichloroethane (EDC)	0.10	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
1,2-Dichloropropane	0.17	0.50	ND	
Bromodichloromethane	0.11	0.50	ND	
1,4-Dioxane	0.50	1.0	ND	
trans-1,3-Dichloropropene	0.23	0.50	ND	
Toluene	0.20	0.50	ND	
4-Methyl-2-Pentanone (MIBK)	0.18	0.50	ND	
cis-1,3-Dichloropropene	0.093	0.50	ND	
Tetrachloroethylene	0.22	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1907274	**Prep Method:**	TO15-P	**Prep Date:**	07/31/19	**Prep Batch:**	1115335
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	7/31/2019	**Analytical Batch:**	441263
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
1,1,2-Trichloroethane	0.11	0.50	ND	
Dibromochloromethane	0.13	0.50	ND	
1,2-Dibromoethane (EDB)	0.096	0.50	ND	
2-Hexanone	0.16	0.50	ND	
Ethyl Benzene	0.15	0.50	ND	
Chlorobenzene	0.13	0.50	ND	
1,1,1,2-Tetrachloroethane	0.12	0.50	ND	
m,p-Xylene	0.23	0.50	ND	
o-Xylene	0.070	0.50	ND	
Styrene	0.11	0.50	ND	
Bromoform	0.13	0.50	ND	
1,1,2,2-Tetrachloroethane	0.12	0.50	ND	
4-Ethyl Toluene	0.11	0.50	ND	
1,3,5-Trimethylbenzene	0.061	0.50	ND	
1,2,4-Trimethylbenzene	0.12	0.50	ND	
1,4-Dichlorobenzene	0.12	0.50	ND	
1,3-Dichlorobenzene	0.22	0.50	ND	
1,2-Dichlorobenzene	0.18	0.50	ND	
Hexachlorobutadiene	0.17	0.50	ND	
1,2,4-Trichlorobenzene	0.29	0.50	ND	
Naphthalene	0.24	0.50	ND	
Cyclohexane	0.50	0.50	ND	
Benzyl Chloride	0.20	0.50	ND	
Heptane	0.13	0.50	ND	
(S) 4-Bromofluorobenzene			94	

Work Order:	1907274	**Prep Method:**	FG-P	**Prep Date:**	08/01/19	**Prep Batch:**	1115345
Matrix:	Air	**Analytical Method:**	D1946	**Analyzed Date:**	8/1/2019	**Analytical Batch:**	441271
Units:	ppmv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Carbon Dioxide	100	500	ND	
Ethene	110	500	ND	
Ethane	130	500	ND	
Hydrogen	180	500	ND	
Oxygen	110	500	ND	
Nitrogen	260	500	ND	
Methane	23	50	ND	
Carbon Monoxide	200	500	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1907274	**Prep Method:**	TO15-GRO	**Prep Date:**	07/31/19	**Prep Batch:**	1115367
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	7/31/2019	**Analytical Batch:**	441263
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH-Gasoline	11	50	ND		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1907274	**Prep Method:**	TO15-P	**Prep Date:**	07/31/19	**Prep Batch:**	1115335
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	7/31/2019	**Analytical Batch:**	441263
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.21	0.50	ND	8.00	95.3	92.6	2.79	65 - 135	30	
Benzene	0.14	0.50	ND	8.00	89.8	89.9	0.139	65 - 135	30	
Trichloroethylene	0.15	0.50	ND	8.00	93.6	93.9	0.267	65 - 135	30	
Toluene	0.20	0.50	ND	8.00	86.4	85.3	1.31	65 - 135	30	
Chlorobenzene	0.13	0.50	ND	8.00	86.5	86.9	0.433	65 - 135	30	
(S) 4-Bromofluorobenzene				20.0	98.1	97.7		50 - 150		

Work Order:	1907274	**Prep Method:**	FG-P	**Prep Date:**	08/01/19	**Prep Batch:**	1115345
Matrix:	Air	**Analytical Method:**	D1946	**Analyzed Date:**	8/1/2019	**Analytical Batch:**	441271
Units:	ppmv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Carbon Dioxide	100	500	ND	2500	95.5	87.4	8.73	65 - 135	30	
Ethene	110	500	ND	2500	79.8	73.5	8.33	65 - 135	30	
Ethane	130	500	ND	2500	79.9	73.6	8.33	65 - 135	30	
Hydrogen	180	500	ND	2500	99.1	96.0	3.28	65 - 135	30	
Oxygen	110	500	ND	2500	114	104	9.17	65 - 135	30	
Nitrogen	260	500	ND	2500	87.6	81.7	7.09	65 - 135	30	
Methane	230	500	ND	2500	93.4	88.2	6.17	65 - 135	30	
Carbon Monoxide	200	500	ND	2500	93.5	86.6	7.54	65 - 135	30	

Work Order:	1907274	**Prep Method:**	TO15-GRO	**Prep Date:**	07/31/19	**Prep Batch:**	1115367
Matrix:	Air	**Analytical Method:**	ETO15	**Analyzed Date:**	8/1/2019	**Analytical Batch:**	441263
Units:	ppbv						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH-Gasoline	11	50	ND	418	78.0	86.3	8.00	65 - 135	30	

Torrent LABORATORY, INC.

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg/m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the analyte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: RNC Environmental, LLC

Project Name: AR1936

Work Order No.: 1907274

Date and Time Received: 7/30/2019 12:17:00PM

Received By: Navin Ghodasara

Physically Logged By: Navin Ghodasara

Checklist Completed By: Navin Ghodasara

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes
Container/Temp Blank temperature in compliance?	Temperature: 22.0 °C
Water-VOA vials have zero headspace?	No VOA vials submitted
Water-pH acceptable upon receipt?	N/A

pH Checked by: na

pH Adjusted by: na

Comments:

Torrent LABORATORY, INC.

Login Summary Report

Client ID:	TL6321	RNC Environmental, LLC	**QC Level:**	II
Project Name:	AR1936		**TAT Requested:**	5+ day:5
Project # :	AR1936		**Date Received:**	7/30/2019
Report Due Date:	8/6/2019		**Time Received:**	12:17 pm

Comments:

Work Order # : ***1907274***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1907274-001A	SG20 B	07/30/19 11:45	Air				VOC_A_TO15GRO VOC_A_FG D1946 VOC_A_TO15	

Sample Note: TPHg, VOCs, Oxygen.

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
FAX: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 1907274

Company Name: RNC ENVIRONMENTAL LLC ☐ ☒ Env. ☐ Special			Project #: AR1936 PO #:
Address: 151 NURSERY ST			Project Name:
City: ASHLAND	State: OR	Zip Code: 97520	Comments:
Telephone: 888.485.3330 Cell:			SAMPLER: RICH RYAN 530.926.4932
REPORT TO: NEIL O'HARA BILL TO:			EMAIL: NEIL@RNC-ENVIRO.COM ; RICH@RYANTES.COM

TURNAROUND TIME:
☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day
☐ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day
☐ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE:
☐ Storm Water ☑ Air
☐ Waste Water ☐ Wipe
☐ Ground Water ☐ Other
☐ Soil ☐ Product / Bulk

REPORT FORMAT:
☐ Level II - Std.
☐ Excel - EDD
☐ EDF ☐ Std.-EDD
☐ QC Level III
☐ QC Level IV

ANALYSIS REQUESTED

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	PAH 8270 + VOCs 8260	OXYGEN								REMARKS
001A		SG20B	7/30/19 1145	SOIL VAPOR	1	0.5 L TEDLAR	✓	✓								

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1	[signature]	RICH RYAN	7/30/19	1217	[signature]	NAVIN G.	7-30-19	1217
2	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:

Were Samples Received in Good Condition? ☒ Yes ☐ NO Samples on Ice? ☐ Yes ☒ NO Method of Shipment D/O Sample seals intact? ☐ Yes ☐ NO ☒ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Log In By: [signature] Date: 7-30-19 Labeled By: [signature] Date: 7-30-19 #2 Temp 22 °C

Neil O'Hara
RNC Environmental, LLC
151 Nursery St
Ashland, OR 97520
Tel: (888) 485-3330
Email: neil@rnc-enviro.com

RE: AR1936

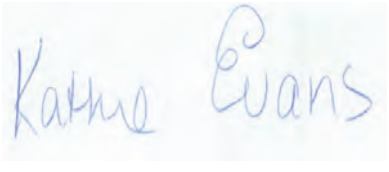
Work Order No.: 1907156

Dear Neil O'Hara:

Torrent Laboratory, Inc. received 1 sample(s) on July 18, 2019 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991 If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.



Kathie Evans
Project Manager

July 25, 2019
Date

Date: 7/25/2019

Client: RNC Environmental, LLC

Project: AR1936

Work Order: 1907156

CASE NARRATIVE

Unless otherwise indicated in the following narrative, no issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Analytical, Inc.

Torrent LABORATORY, INC.

Sample Result Summary

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date Received: 07/18/19
Date Reported: 07/25/19

GRAB 03 1907156-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
TPH(Gasoline)	8260TPH	42	1200	2100	2960	ug/L
Sulfate	E300.0	2000	1.0	1000	9100	mg/L
Ethylbenzene	SW8260B	42	8.2	21	32	ug/L
n-Propylbenzene	SW8260B	42	12	21	61	ug/L

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 07/18/19, 11:30 am
Date Reported: 07/25/19

Client Sample ID:	GRAB 03	**Lab Sample ID:**	1907156-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	07/18/19 / 10:11		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	7/18/19 10:35:00AM
Prep Batch ID:	1114942	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	42	11	21	ND		ug/L	07/18/19	17:37	NP	440878
Chloromethane	SW8260B	42	7.0	21	ND		ug/L	07/18/19	17:37	NP	440878
Vinyl Chloride	SW8260B	42	8.7	21	ND		ug/L	07/18/19	17:37	NP	440878
Bromomethane	SW8260B	42	8.9	21	ND		ug/L	07/18/19	17:37	NP	440878
Chloroethane	SW8260B	42	4.8	21	ND		ug/L	07/18/19	17:37	NP	440878
Trichlorofluoromethane	SW8260B	42	7.8	21	ND		ug/L	07/18/19	17:37	NP	440878
1,1-Dichloroethene	SW8260B	42	6.0	21	ND		ug/L	07/18/19	17:37	NP	440878
Freon 113	SW8260B	42	14	21	ND		ug/L	07/18/19	17:37	NP	440878
Methylene Chloride	SW8260B	42	5.5	42	ND		ug/L	07/18/19	17:37	NP	440878
trans-1,2-Dichloroethene	SW8260B	42	6.8	21	ND		ug/L	07/18/19	17:37	NP	440878
MTBE	SW8260B	42	3.2	21	ND		ug/L	07/18/19	17:37	NP	440878
tert-Butanol	SW8260B	42	120	210	ND		ug/L	07/18/19	17:37	NP	440878
DIPE	SW8260B	42	5.1	21	ND		ug/L	07/18/19	17:37	NP	440878
1,1-Dichloroethane	SW8260B	42	5.1	21	ND		ug/L	07/18/19	17:37	NP	440878
ETBE	SW8260B	42	2.7	21	ND		ug/L	07/18/19	17:37	NP	440878
cis-1,2-Dichloroethene	SW8260B	42	6.3	21	ND		ug/L	07/18/19	17:37	NP	440878
2,2-Dichloropropane	SW8260B	42	3.9	21	ND		ug/L	07/18/19	17:37	NP	440878
Bromochloromethane	SW8260B	42	6.3	21	ND		ug/L	07/18/19	17:37	NP	440878
Chloroform	SW8260B	42	5.1	21	ND		ug/L	07/18/19	17:37	NP	440878
Carbon Tetrachloride	SW8260B	42	6.6	21	ND		ug/L	07/18/19	17:37	NP	440878
1,1,1-Trichloroethane	SW8260B	42	6.8	21	ND		ug/L	07/18/19	17:37	NP	440878
1,1-Dichloropropene	SW8260B	42	7.8	21	ND		ug/L	07/18/19	17:37	NP	440878
Benzene	SW8260B	42	2.7	21	ND		ug/L	07/18/19	17:37	NP	440878
TAME	SW8260B	42	3.0	21	ND		ug/L	07/18/19	17:37	NP	440878
1,2-Dichloroethane	SW8260B	42	4.6	21	ND		ug/L	07/18/19	17:37	NP	440878
Trichloroethylene	SW8260B	42	6.1	21	ND		ug/L	07/18/19	17:37	NP	440878
Dibromomethane	SW8260B	42	4.5	21	ND		ug/L	07/18/19	17:37	NP	440878
1,2-Dichloropropane	SW8260B	42	3.7	21	ND		ug/L	07/18/19	17:37	NP	440878
Bromodichloromethane	SW8260B	42	3.2	21	ND		ug/L	07/18/19	17:37	NP	440878
cis-1,3-Dichloropropene	SW8260B	42	3.3	21	ND		ug/L	07/18/19	17:37	NP	440878
Toluene	SW8260B	42	6.0	21	ND		ug/L	07/18/19	17:37	NP	440878
Tetrachloroethylene	SW8260B	42	10.	21	ND		ug/L	07/18/19	17:37	NP	440878
trans-1,3-Dichloropropene	SW8260B	42	9.1	21	ND		ug/L	07/18/19	17:37	NP	440878
1,1,2-Trichloroethane	SW8260B	42	3.2	21	ND		ug/L	07/18/19	17:37	NP	440878
Dibromochloromethane	SW8260B	42	7.6	21	ND		ug/L	07/18/19	17:37	NP	440878
1,3-Dichloropropane	SW8260B	42	9.1	21	ND		ug/L	07/18/19	17:37	NP	440878

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 07/18/19, 11:30 am
Date Reported: 07/25/19

Client Sample ID:	GRAB 03	**Lab Sample ID:**	1907156-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	07/18/19 / 10:11		
SDG:			

Prep Method:	5030VOC	**Prep Batch Date/Time:**	7/18/19 10:35:00AM
Prep Batch ID:	1114942	**Prep Analyst:**	NPAR

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,2-Dibromoethane	SW8260B	42	3.3	21	ND		ug/L	07/18/19	17:37	NP	440878
Chlorobenzene	SW8260B	42	6.8	21	ND		ug/L	07/18/19	17:37	NP	440878
Ethylbenzene	SW8260B	42	8.2	21	**32**		ug/L	07/18/19	17:37	NP	440878
1,1,1,2-Tetrachloroethane	SW8260B	42	3.7	21	ND		ug/L	07/18/19	17:37	NP	440878
m,p-Xylene	SW8260B	42	17	42	ND		ug/L	07/18/19	17:37	NP	440878
o-Xylene	SW8260B	42	6.5	21	ND		ug/L	07/18/19	17:37	NP	440878
Styrene	SW8260B	42	4.6	21	ND		ug/L	07/18/19	17:37	NP	440878
Bromoform	SW8260B	42	3.2	21	ND		ug/L	07/18/19	17:37	NP	440878
Isopropyl Benzene	SW8260B	42	9.1	21	ND		ug/L	07/18/19	17:37	NP	440878
n-Propylbenzene	SW8260B	42	12	21	**61**		ug/L	07/18/19	17:37	NP	440878
Bromobenzene	SW8260B	42	6.3	21	ND		ug/L	07/18/19	17:37	NP	440878
1,1,2,2-Tetrachloroethane	SW8260B	42	3.3	21	ND		ug/L	07/18/19	17:37	NP	440878
2-Chlorotoluene	SW8260B	42	11	21	ND		ug/L	07/18/19	17:37	NP	440878
1,3,5-Trimethylbenzene	SW8260B	42	10	21	ND		ug/L	07/18/19	17:37	NP	440878
1,2,3-Trichloropropane	SW8260B	42	6.1	21	ND		ug/L	07/18/19	17:37	NP	440878
4-Chlorotoluene	SW8260B	42	9.0	21	ND		ug/L	07/18/19	17:37	NP	440878
tert-Butylbenzene	SW8260B	42	11	21	ND		ug/L	07/18/19	17:37	NP	440878
1,2,4-Trimethylbenzene	SW8260B	42	9.7	21	ND		ug/L	07/18/19	17:37	NP	440878
sec-Butyl Benzene	SW8260B	42	12	21	ND		ug/L	07/18/19	17:37	NP	440878
p-Isopropyltoluene	SW8260B	42	11	21	ND		ug/L	07/18/19	17:37	NP	440878
1,3-Dichlorobenzene	SW8260B	42	7.0	21	ND		ug/L	07/18/19	17:37	NP	440878
1,4-Dichlorobenzene	SW8260B	42	7.4	21	ND		ug/L	07/18/19	17:37	NP	440878
n-Butylbenzene	SW8260B	42	11	21	ND		ug/L	07/18/19	17:37	NP	440878
1,2-Dichlorobenzene	SW8260B	42	6.7	21	ND		ug/L	07/18/19	17:37	NP	440878
1,2-Dibromo-3-Chloropropane	SW8260B	42	32	84	ND		ug/L	07/18/19	17:37	NP	440878
Hexachlorobutadiene	SW8260B	42	26	84	ND		ug/L	07/18/19	17:37	NP	440878
1,2,4-Trichlorobenzene	SW8260B	42	39	84	ND		ug/L	07/18/19	17:37	NP	440878
Naphthalene	SW8260B	42	51	84	ND		ug/L	07/18/19	17:37	NP	440878
1,2,3-Trichlorobenzene	SW8260B	42	51	84	ND		ug/L	07/18/19	17:37	NP	440878
(S) Dibromofluoromethane	SW8260B		61.2 - 131		**114**		%	07/18/19	17:37	NP	440878
(S) Toluene-d8	SW8260B		75.1 - 127		**94.5**		%	07/18/19	17:37	NP	440878
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		**97.7**		%	07/18/19	17:37	NP	440878

NOTE: Reporting limits were raised due to matrix nature (Very smelly).

Prep Method:	5030GRO	**Prep Batch Date/Time:**	7/18/19 10:35:00AM
Prep Batch ID:	1114943	**Prep Analyst:**	NPAR

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 07/18/19, 11:30 am
Date Reported: 07/25/19

Client Sample ID:	GRAB 03	**Lab Sample ID:**	1907156-001A
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	07/18/19 / 10:11		
SDG:			

Prep Method:	5030GRO	**Prep Batch Date/Time:**	7/18/19	10:35:00AM
Prep Batch ID:	1114943	**Prep Analyst:**	NPAR	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	42	1200	2100	**2960**	x	ug/L	07/18/19	17:37	NP	440878
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		**59.2**		%	07/18/19	17:37	NP	440878

NOTE: x - Sample chromatogram does not resemble gasoline standard pattern. Reported value is the result of presence of unknown compounds within range of C5-C12 quantified as Gasoline.

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Neil O'Hara
RNC Environmental, LLC

Date/Time Received: 07/18/19, 11:30 am
Date Reported: 07/25/19

Client Sample ID:	GRAB 03	**Lab Sample ID:**	1907156-001B
Project Name/Location:	AR1936	**Sample Matrix:**	Groundwater
Project Number:			
Date/Time Sampled:	07/18/19 / 10:11		
SDG:			

Prep Method:	300.0P	**Prep Batch Date/Time:**	7/18/19	1:00:00PM
Prep Batch ID:	1114931	**Prep Analyst:**	IRNAZ	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Sulfate	E300.0	2000	1.0	1000	**9100**		mg/L	07/19/19	12:20	IZ	440868

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1907156	**Prep Method:**	300.0P	**Prep Date:**	07/18/19	**Prep Batch:**	1114931
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	7/18/2019	**Analytical Batch:**	440868
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Sulfate	0.00050	0.50	0.033	

Work Order:	1907156	**Prep Method:**	5030VOC	**Prep Date:**	07/18/19	**Prep Batch:**	1114942
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	7/18/2019	**Analytical Batch:**	440878
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.26	0.50	ND	
Chloromethane	0.17	0.50	ND	
Vinyl Chloride	0.21	0.50	ND	
Bromomethane	0.21	0.50	ND	
Chloroethane	0.11	0.50	ND	
Trichlorofluoromethane	0.19	0.50	ND	
1,1-Dichloroethene	0.14	0.50	ND	
Freon 113	0.34	0.50	ND	
Methylene Chloride	0.13	1.0	ND	
trans-1,2-Dichloroethene	0.16	0.50	ND	
MTBE	0.077	0.50	ND	
tert-Butanol	2.9	5.0	ND	
DIPE	0.12	0.50	ND	
1,1-Dichloroethane	0.12	0.50	ND	
ETBE	0.064	0.50	ND	
cis-1,2-Dichloroethene	0.15	0.50	ND	
2,2-Dichloropropane	0.094	0.50	ND	
Bromochloromethane	0.15	0.50	ND	
Chloroform	0.12	0.50	ND	
Carbon Tetrachloride	0.16	0.50	ND	
1,1,1-Trichloroethane	0.16	0.50	ND	
1,1-Dichloropropene	0.19	0.50	ND	
Benzene	0.065	0.50	ND	
TAME	0.072	0.50	ND	
1,2-Dichloroethane	0.11	0.50	ND	
Trichloroethylene	0.15	0.50	ND	
Dibromomethane	0.11	0.50	ND	
1,2-Dichloropropane	0.089	0.50	ND	
Bromodichloromethane	0.076	0.50	ND	
cis-1,3-Dichloropropene	0.078	0.50	ND	
Toluene	0.14	0.50	ND	
Tetrachloroethylene	0.24	0.50	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1907156	**Prep Method:**	5030VOC	**Prep Date:**	07/18/19	**Prep Batch:**	1114942
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	7/18/2019	**Analytical Batch:**	440878
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
trans-1,3-Dichloropropene	0.22	0.50	ND	
1,1,2-Trichloroethane	0.076	0.50	ND	
Dibromochloromethane	0.18	0.50	ND	
1,3-Dichloropropane	0.22	0.50	ND	
1,2-Dibromoethane	0.079	0.50	ND	
Chlorobenzene	0.16	0.50	ND	
Ethylbenzene	0.20	0.50	ND	
1,1,1,2-Tetrachloroethane	0.087	0.50	ND	
m,p-Xylene	0.39	1.0	ND	
o-Xylene	0.15	0.50	ND	
Styrene	0.11	0.50	ND	
Bromoform	0.076	0.50	ND	
Isopropyl Benzene	0.22	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
Bromobenzene	0.15	0.50	ND	
1,1,2,2-Tetrachloroethane	0.079	0.50	ND	
2-Chlorotoluene	0.25	0.50	ND	
1,3,5-Trimethylbenzene	0.24	0.50	ND	
1,2,3-Trichloropropane	0.15	0.50	ND	
4-Chlorotoluene	0.22	0.50	ND	
tert-Butylbenzene	0.26	0.50	ND	
1,2,4-Trimethylbenzene	0.23	0.50	ND	
sec-Butyl Benzene	0.30	0.50	ND	
p-Isopropyltoluene	0.27	0.50	ND	
1,3-Dichlorobenzene	0.17	0.50	ND	
1,4-Dichlorobenzene	0.18	0.50	ND	
n-Butylbenzene	0.27	0.50	ND	
1,2-Dichlorobenzene	0.16	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.76	2.0	ND	
Hexachlorobutadiene	0.62	2.0	ND	
1,2,4-Trichlorobenzene	0.93	2.0	ND	
Naphthalene	1.2	2.0	ND	
1,2,3-Trichlorobenzene	1.2	2.0	ND	
(S) Dibromofluoromethane			106	
(S) Toluene-d8			96.9	
(S) 4-Bromofluorobenzene			100	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	1907156	**Prep Method:**	5030GRO	**Prep Date:**	07/18/19	**Prep Batch:**	1114943
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	7/18/2019	**Analytical Batch:**	440878
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH(Gasoline)	29	50	ND		
(S) 4-Bromofluorobenzene			83.5		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1907156	**Prep Method:**	300.0P	**Prep Date:**	07/18/19	**Prep Batch:**	1114931
Matrix:	Water	**Analytical Method:**	E300.0	**Analyzed Date:**	7/18/2019	**Analytical Batch:**	440868
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Sulfate	0.00050	0.50	0.033	2.5	101	101	0.396	80 - 120	20	

Work Order:	1907156	**Prep Method:**	5030VOC	**Prep Date:**	07/18/19	**Prep Batch:**	1114942
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	7/18/2019	**Analytical Batch:**	440878
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.9	94.9	101	6.86	61.4 - 129	30	
Benzene	0.16	0.50	ND	17.9	86.2	92.8	200	66.9 - 140	30	
Trichloroethylene	0.15	0.50	ND	17.9	73.3	82.3	11.5	69.3 - 144	30	
Toluene	0.14	0.50	ND	17.9	83.7	90.1	7.07	76.6 - 123	30	
Chlorobenzene	0.16	0.50	ND	17.9	77.3	83.2	7.67	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	91.0	96.8		61.2 - 131		
(S) Toluene-d8				17.9	89.1	94.4		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	85.8	90.7		64.1 - 120		

Work Order:	1907156	**Prep Method:**	5030GRO	**Prep Date:**	07/18/19	**Prep Batch:**	1114943
Matrix:	Water	**Analytical Method:**	SW8260B	**Analyzed Date:**	7/19/2019	**Analytical Batch:**	440878
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	29	50	ND	238	89.1	104	15.7	52.4 - 127	30	
(S) 4-Bromofluorobenzene				11.9	93.2	89.1		41.5 - 125		

Torrent LABORATORY, INC.

MS/MSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1907156	**Prep Method:**	300.0P	**Prep Date:**	07/18/19	**Prep Batch:**	1114931
Matrix:	**Water**	**Analytical Method:**	E300.0	**Analyzed Date:**	19-Jul-2019	**Analytical Batch:**	440868
Spiked Sample:	1907156-001B						
Units:	mg/L						

Parameters	MDL	PQL	Sample Conc.	Spike Conc.	MS % Recovery	MSD % Recovery	MS/MSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Sulfate	1.0	1000	9100	5000	94.5	89.0	1.46	75 - 125	20	

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg/m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

B - Indicates when the analyte is found in the associated method or preparation blank

D - Surrogate is not recoverable due to the necessary dilution of the sample

E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.

H- Indicates that the recommended holding time for the analyte or compound has been exceeded

J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative

NA - Not Analyzed

N/A - Not Applicable

ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.

NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added

R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts

S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative

X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: RNC Environmental, LLC

Project Name: AR1936

Work Order No.: 1907156

Date and Time Received: 7/18/2019 11:30:00AM

Received By: LR

Physically Logged By: Helena Ueng

Checklist Completed By: Helena Ueng

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes		
Container/Temp Blank temperature in compliance?		Temperature:	11.0 °C
Water-VOA vials have zero headspace?	Yes		
Water-pH acceptable upon receipt?	N/A		

pH Checked by: N/A

pH Adjusted by: N/A

Comments:

Sample chilling begun

Login Summary Report

Client ID:	TL6321	RNC Environmental, LLC	**QC Level:**	II
Project Name:	AR1936		**TAT Requested:**	5+ day:5
Project # :			**Date Received:**	7/18/2019
Report Due Date:	7/25/2019		**Time Received:**	11:30 am

Comments:

Work Order # : ***1907156***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
1907156-001A	GRAB 03	07/18/19 10:11	Water	09/01/19			VOC_W_8260B VOC_W_GRO	
Sample Note:	VOCs & TPHg (4 vials available)							
1907156-001B	GRAB 03	07/18/19 10:11	Water	09/01/19			Anion_W_300.0	
Sample Note:	Sulfate							

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
FAX: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 1907156

Company Name: RNC ENVIRONMENTAL, LLC | ☒ Env. ☐ DOD ☐ Food ☐ Special | Project Name: AR 1936

Address: 151 NURSERY ST | Project # A

City: ASHLAND | State: OR | Zip Code: 97520 | Comments:

Telephone: 888.485.3330 | Cell: | Email: NEIL@RNC-ENVIRO.COM, RICH@RYANGES.COM

REPORT TO: NEIL O'HARA | SAMPLER: RICH RYAN 530.925.4932 | P.O. # | QUOTE #

TURNAROUND TIME:
☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day
☐ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day
☒ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE:
☐ Storm Water ☐ Air
☐ Waste Water ☐ Wipe
☐ Ground Water ☐ Other
☐ Soil

REPORT FORMAT:
☐ Excel/ EDD
☐ EDF
☐ QC Level III
☐ QC Level IV

ANALYSIS REQUESTED

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	PRES.	~~BTEX, MTBE, NAPH~~ VOCs 8260	TPH GAS 8260	SULFATE						REMARKS
001A/B		GRAB 03	7/18/19 1011	WATER	5	40 VOA HCl PLASTIC	✓	✓	✓	✓						

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1		RICH RYAN	7/18/19	1113			7/18	11:30
2	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:

Were Samples Received in Good Condition? ☒ Yes ☐ NO | Samples on Ice? ☒ Yes ☐ NO | Method of Shipment: Tko | Sample seals intact? ☐ Yes ☐ NO ☒ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made. Temp. Gun # 2 Temp 11 °C Sample chilling began

Page ____ of ____

Log In By: _____ Date: _____ Labeled By: _____ Date: _____ Log In Reviewed By: _____ Date: _____

Rev 3.

I. Additional Documentation

Remedial Action Status Report #6: Addendum

1936 Alum Rock Avenue; San Jose, CA 95116

December 11, 2019

Prepared for

Santa Clara County Department of Environmental Health
Hazardous Materials Compliance Division – Site Mitigation Program
1555 Berger Drive #300
San Jose, CA 95112

On Behalf of

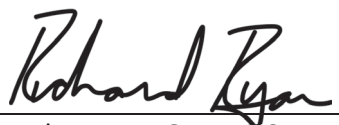
Pacific West Communities, Inc
430 East State Street, Suite 100
Eagle, ID 83616

Prepared by

Ryan Geologic & Environmental Services, Inc.
P.O. Box 525
McCloud, California 96057

and

RNC Environmental, LLC
151 Nursery Street
Ashland, Oregon 97520



Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

Neil O'Hara
RNC Environmental, LLC

Statement of Accuracy

I am the primary author of this document and have either performed all field activities documented herein or been present as a field supervisor while the activities were performed. I declare under penalty of perjury that the information, interpretations, and recommendations contained in this document are true and correct to the best of my knowledge and my professional experience.

Richard Ryan, P.G. #7786
Ryan Geologic and Environmental Services, Inc.

Acronyms

DWR	California Department of Water Resources
SCCDEH	Santa Clara County Dept. of Environmental Health
SCVWD	Santa Clara Valley Water District

List of Documents

Monitoring Well Destruction Permits (MW-1 through MW-8)

DWR Form 188 Well Destruction Completion Notices (MW-1 through MW-8)

SCVWD Well Destruction Completion Notices (MW-1 through MW-8)

Soil Disposal Documentation (waste soil generated during destruction of MW-1 through MW-8)

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2018D918005

Well Owner: 1936 Alum Rock Avenue LLC	Property Owner: 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	Address of Well Site: 1936 Alum Rock Avenue City, State, Zip: San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of Well Site: Book 481 Page 19 Parcel 003

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip: McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip: Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F008	Owner/Consultant Well No.: MW-1	Original Well Construction Permit No.: 07W00280
Well Casing Depth: 30 FT BGL	Total Boring Depth: 30 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:			
1.	Outer conductor casing?	☐ Yes	☐ No
2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: HSA

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

RECEIVED
SEP 13 2018
S.C.V.W.D.
WELLS

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

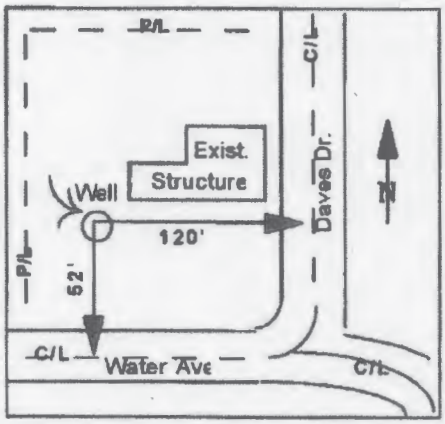
WELL DESTRUCTION APPLICATION

SITE PLAN

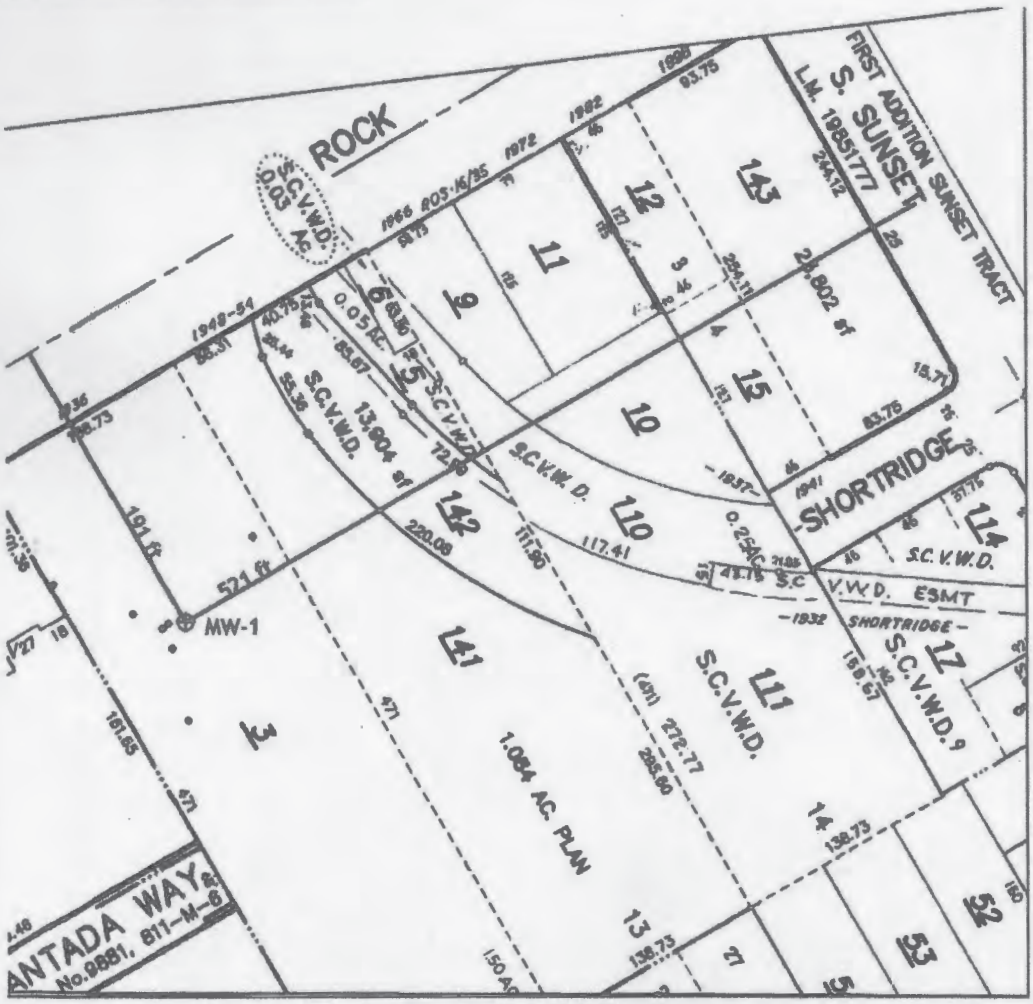
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California
Well Completion Report

Refer to Instruction Pamphlet
No. e053455

Page 1 of 2
Owner's Well Number MW1
Date Work Began 6/21/07 Date Work Ended 6/21/07
Local Permit Agency SCVWD
Permit Number 07W0280 Permit Date 4-23-07

DWR Use Only – Do Not Fill In
State Well Number/Site Number: 07S01F03F008
Latitude / Longitude
APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify
Drilling Method Hollow Stem Auger Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		SEE ATTACHED LOG

Total Depth of Boring 30' Feet
Total Depth of Completed Well 30' Feet

Well Owner

Name NORTHPOINT DEVELOPMENT
Mailing Address 160 W. SANTA CLARA ST. STE 200
City SAN JOSE State CA Zip 95113

Well Location

Address 1936 ALUM ROCK AVE.
City SAN JOSE County SANTA CLARA
Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W
Datum Decimal Lat. Decimal Long.
APN Book 481 Page 19 Parcel 003
Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 19.0 (Feet below surface)
Depth to Static Water Level 9.17 (Feet) Date Measured 7/5/07
Estimated Yield * (GPM) Test Type
Test Length (Hours) Total Drawdown (Feet)
*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size If Any (Inches)
0	15	8	PVC	SCH. 40		2	NA	NA
15	30	8	PVC	SCH. 40		2	MILLED	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	11	NEAT CEMENT	
11	14	BENTONITE	
14	30	SAND	#3/12

Attachments

☒ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other
Attach additional information, if it exists

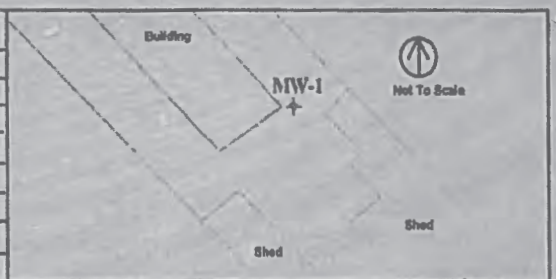
Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
Name EXPLORATION GEO SERVICES, INC. (EGI)
Person, Firm or Corporation
1535 INDUSTRIAL AVE Address SAN JOSE City CA State 95112 Zip
Signed [signature] (FOR EGI) 7/25/07 Date Signed
C-57 Licensed Water Well Contractor
484288 C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well Name	MW-1
Client	Northpoint
Location	1936 Alum Rock Ave., San Jose, CA
Date	06/21/07
Drilling Co.	Exploration Geoservices, Inc. (C-57# 484288)
Drilling Method	Hollow-Stem Augers (8")
Sampling Method	2" Split Spoon Sampler
Well Casing	2" Sch 40 PVC / 0.010 casing
Logged By	Forrest Cook PG # 8201



Sample ID	Sample Depth (feet)	Blows per 6 in.	Moisture Content	PID Reading	Depth in Feet	Graphic Log	Soil Description	Well Const.
					0		Asphalt (surface)	
					2		Silty Clay (CL), black, moist, soft, estimated low plasticity.	
MW-1d5.0	3.5-5.0	1 1 2	MOIST	NA	4			
					6			
					8		Silty Clay (CL/CH), light gray, moist, stiff, estimated medium to high plasticity. ▼ Stabalized water at 9.17 feet bgs (07/05/07)	
MW-1d10.0	8.5-10.0	4 5 8	MOIST	NA	10			
					12			
MW-1d15.0	13.5-15.0	5 6 8	MOIST	NA	14		Strong petroleum odor and discoloration.	
					16			
					18		▽ Initial Water at approximately 19.0 feet bgs.	
MW-1d20.0	18.5-20.0	5 7 10	MOIST to WET	NA	20		Silty Clay (CL), light gray with turquois mottling, wet, stiff to very stiff, estimated low plasticity, with root holes and trace gravels.	
					22			
MW-1d25.0	23.5-25.0	4 5 5	WET	NA	24		Strong petroleum odor and discoloration.	
					26			
					28			
MW-1d30.0	28.5-30.0	5 5 8	WET	NA	30		Total Depth Explored 30 feet bgs	
					32			
					34			
					36			
					38			
					40			

Bentonite
Neat Cement
0.010 Slot
#2/12 Sand

GEORESTORATION, INC.

WELL LOG [MW-1]
Page 1 of 1

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

WELL DESTRUCTION APPLICATION

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.9 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any):	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 30 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by:			Date: 9-17-18
District Permit No.: D2018D918D05	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

VACANT

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

D20180918005

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/17/2018

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	C20160927001-1	07S01E03F010	A
2	MW-5	C20160927002-1	07S01E03F011	A
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW-1	07W00280	07S01E03F008	A
7	MW-3	07W00279	07S01E03F007	A
8	MW-2	07W00281	07S01E03F009	A

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2018D918004

Well Owner: 1936 Alum Rock Avenue LLC	**Property Owner:** 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip: 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip: San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 003

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip: McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip: Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F009	Owner/Consultant Well No.: MW-2	Original Well Construction Permit No.: 07W00281
Well Casing Depth: 30 FT BGL	Total Boring Depth: 30 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:				
	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: HSA

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

RECEIVED
SEP 13 2018
S.C.V.W.D.
WELLS

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

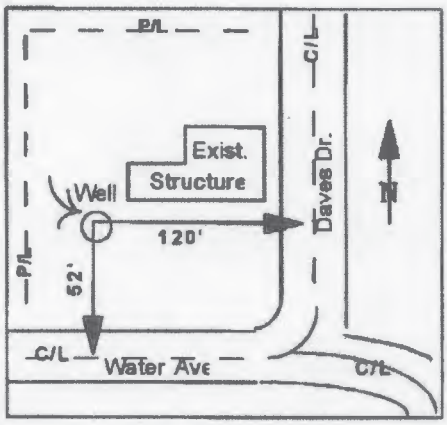
WELL DESTRUCTION APPLICATION

SITE PLAN

Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:

Please allow 10 working days to process this application.

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FCE 158A (07-12-04)

Inspector: Thiemann			Date of Inspection: 6/21/07		Permit: 07W00281
Well Owner: Northpoint Development		Owner Well No.: MW-2	Well Registration No.: 07S01E03F009		
Address of Well Site: 1936 Alum Rock Av				City or County: SJ	
Drilling Company: Exp Geo		Consultant: GeoRestoration			
Cond. Bore: / Conductor Depth:		Conductor Diameter & Material:	TD: 30	Boring Diameter: 8"	BOC: 30
Casing Diameter & Material: 2" PVC	Slot Size: 010	Screen Interval(s): 30 - 20			
Filter Pack Material: 2/12	Filter Pack Interval(s): 30 - 19		Bent: 19-16		Seal Depth: 19

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vedose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 195 ft.N / (S) Alum Rock Av | 533 ft.E / (W) Sunset Av

GPS Coordinates - Lat: 37 21 17.308 N Long: 121 51 00.721 W

Comments:

GPS plots off

Distribution: ORIGINAL-Permit File; YELLOW-City/County; PINK-Well File; GOLDENROD-Permittee

Tip: Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

Page 1 of 2

State of California
Well Completion Report

Refer to Instruction Pamphlet

No. 0053456

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F0019

Latitude / Longitude

APN/TRS/Other

Owner's Well Number MW2

Date Work Began 6/21/07 Date Work Ended 6/21/07

Local Permit Agency SCVWD

Permit Number 07W0281 Permit Date 4-23-07

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Hollow Stem Auger Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		SEE ATTACHED LOG

Total Depth of Boring 30 Feet

Total Depth of Completed Well 30 Feet

Well Owner

Name NORTHPOINT DEVELOPMENT

Mailing Address 1600 W. SANTA CLARA St., STE 200

City SAN JOSE State CA Zip 95113

Well Location

Address 1936 ALMA ROCK AVE

City SAN JOSE County SANTA CLARA

Latitude ___ ___ ___ N Longitude ___ ___ ___ W (Deg. Min. Sec.)

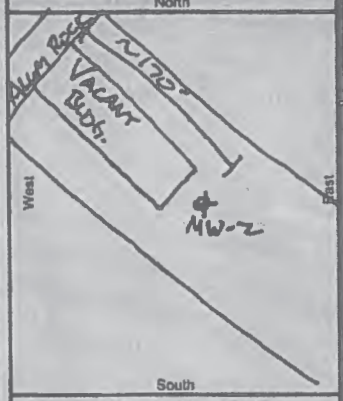
Datum ___ Decimal Lat. ___ Decimal Long. ___

APN Book 481 Page 19 Parcel 003

Township ___ Range ___ Section ___

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply ☐ Domestic ☐ Public ☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 21.0 (Feet below surface)

Depth to Static Water Level 8.68 (Feet) Date Measured 7/5/07

Estimated Yield * ___ (GPM) Test Type ___

Test Length ___ (Hours) Total Drawdown ___ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size If Any (Inches)
0	20	8	PVC	SCH. 40		2	NA	NA
20	30	8	PVC	SCH. 40		2	MILLED	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	16	NEAT CEMENT	
16	19	BENTONITE	
19	30	SAND	#2/12

Attachments

☒ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

Attach 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 EXPLORATION GEO SERVICES, INC. (EGI)
Person, Firm or Corporation

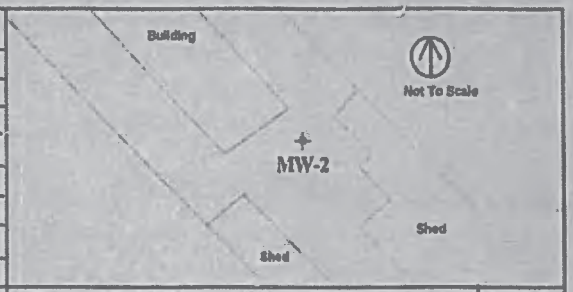
1535 INDUSTRIAL AVE SAN JOSE CA 95112
Address City State Zip

Signed [signature] (FOR EGI) 7/5/07 484288
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

* * * IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well Name	MW-2
Client	Northpoint
Location	1936 Alum Rock Ave., San Jose, CA
Date	06/21/07
Drilling Co.	Exploration Geoservices, Inc. (C-57# 484288)
Drilling Method	Hollow-Stem Augers (8")
Sampling Method	2" Split Spoon Sampler
Well Casing	2" Sch 40 PVC / 0.010 casing
Logged By	Forrest Cook PG # 8201



Sample ID	Sample Depth (feet)	Blows per 6 in.	Moisture Content	PID Reading
MW-2d5.0	3.5-5.0	6 8 9	MOIST	NA
MW-2d10.0	8.5-10.0	4 7 8	MOIST	NA
MW-2d15.0	13.5-15.0	5 8 8	MOIST	NA
MW-2d20.0	18.5-20.0	7 10 9	MOIST	NA
MW-2d25.0	23.5-25.0	5 5 6	WET	NA
MW-2d30.0	28.5-30.0	8 10 12	DAMP	NA

Depth in Feet: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40

Graphic Log

Soil Description

Asphalt (surface)

Silty Clay (CL), black, moist, very stiff, estimated low plasticity.

Silty Clay (CL/CH), light gray, moist, stiff to very stiff, estimated medium to high plasticity.

▼ Stabalized water at 8.68 feet bgs (07/05/07)

Strong petroleum odor starting at 19.0 feet bgs.

— Initial Water at approximately 21.0 feet bgs.

Silty Clay (CL), light gray with turquois mottling, wet, stiff, estimated low to medium plasticity, with root holes and trace gravels.

Strong petroleum odor and discoloration.

Clay (CH), light gray, damp, very stiff, estimated high plasticity.

Total Depth Explored 30 feet bgs

Well Const.

GEORESTORATION, INC.

WELL LOG [MW-2]
Page 1 of 1

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

WELL DESTRUCTION APPLICATION

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.9 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any):	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 30 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by:			Date: 9-17-18
District Permit No.: D20180918004	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

VACANT

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

D20180918004

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/17/2018

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	C20160927001-1	07S01E03F010	A
2	MW-5	C20160927002-1	07S01E03F011	A
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW-1	07W00280	07S01E03F008	A
7	MW-3	07W00279	07S01E03F007	A
8	MW-2	07W00281	07S01E03F009	A

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2018D918003

Well Owner:	**Property Owner:**	Name of Business/Residence at Site:
1936 Alum Rock Avenue LLC	1936 Alum Rock Avenue LLC	VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 003

☐ Well on District property/easement (See General Condition E.)

Consultant:	Drilling Company:	
Ryan Geologic & Environmental Services, Inc.	Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.:	Owner/Consultant Well No.:	Original Well Construction Permit No.:
07S01E25D033	MW-3	07W00279
Well Casing Depth: 29.5 FT BGL	**Total Boring Depth:** 29.5 FT BGL	**Well Casing Diameter:** 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.:	Caseworker Name:
Farmer's Supp SCVWDID No. 07S1E03F03f	Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:				
	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: HSA

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

RECEIVED
SEP 3
S.C.V.W.D.
WELLS

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

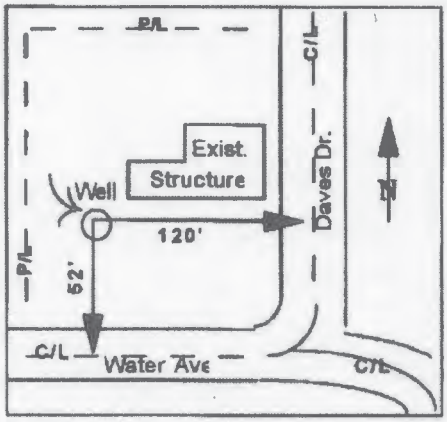
WELL DESTRUCTION APPLICATION

SITE PLAN

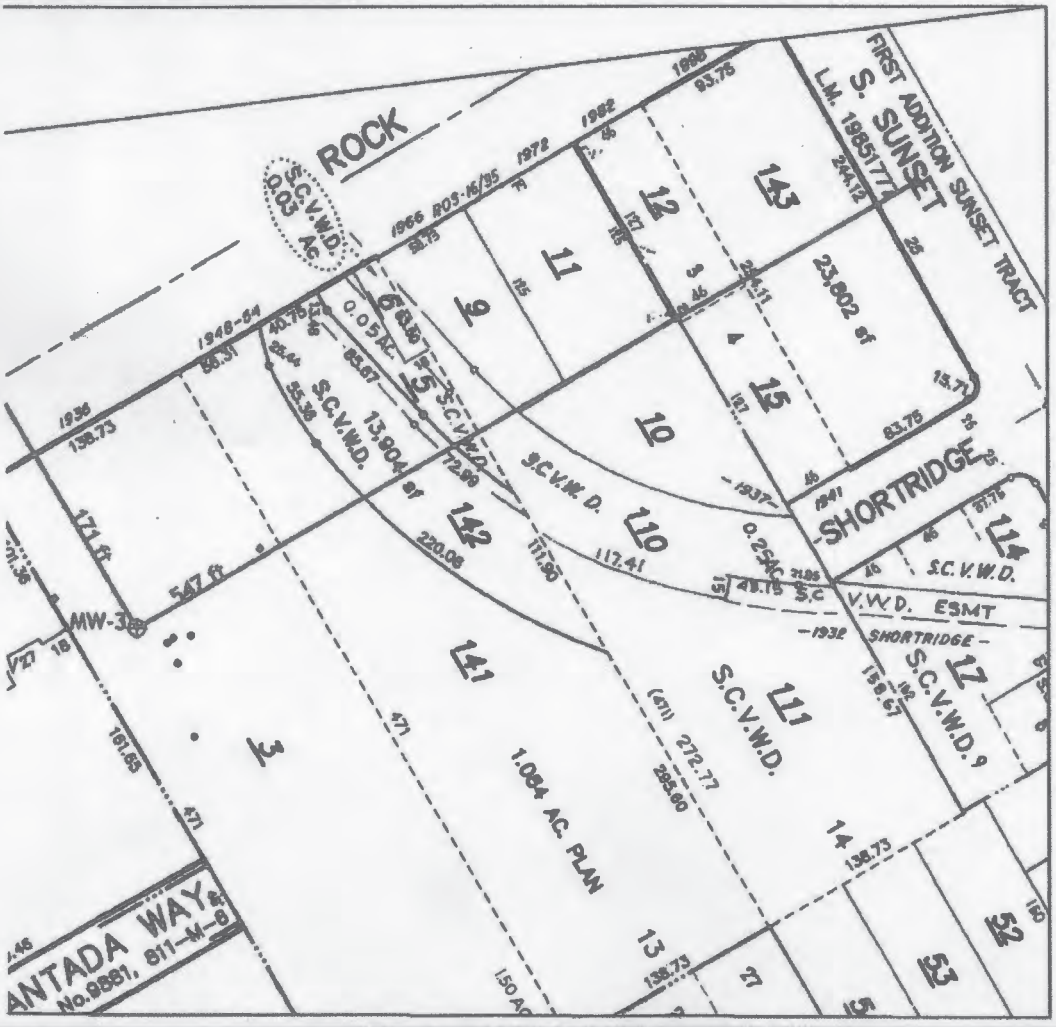
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FCE 158A (07-12-04)

Inspector: M. Clarke	Date of Inspection: 6/22/07	Permit: 07W00279	
Well Owner: Northpoint Development	Owner Well No.: MW-3	Well Registration No.: 07S01E03F007	
Address of Well Site: 1936 Alum Rock Ave		City or County: San Jose	
Drilling Company: Exploration Geo.	Consultant: Geo Restoration Inc.		

Cond. Bore:	Conductor Depth:	Conductor Diameter & Material:	TD: 29.5	Boring Diameter: 8"	BOC: 29.5'
Casing Diameter & Material: 2" pvc	Slot Size: 010	Screen Interval(s): 29.5 - 19.5'			
Filter Pack Material: #3 Sand	Filter Pack Interval(s): 29.5 - 18'	Bent: 18'-15'			Seal Depth: 18'

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 173 ft. N / (S) Alum Rock Ave 337 ft (E) W: MCCREERY AVE

GPS Coordinates - Lat: Long:

Comments: well inside building - no gps

Distribution: ORIGINAL-Permit File; YELLOW-City/County; PINK-Well File; GOLDENROD-Permittee

Santa Clara Valley Water District

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

WELL CONSTRUCTION APPLICATION

FC 158 (04-05-07)

TO BE COMPLETED BY DISTRICT

District Permit No.: 07W00279	Date Issued: 4-23-07	Well Registration No.:
Geologic Setting: 01	Expiration Date: 10-23-07	Driller's Log No.: e053454

TO BE COMPLETED BY OWNER AND DRILLER

Well Owner: Northpoint Development	Property Owner: Virgina Boyd & David Mijares	Name of Business at Well Site: Vacant (No Business at Site)
Well Owner's Mailing Address: 160 W Santa Clara St., Suite 700	Property Owner's Mailing Address: 438 Jackson Street	Address of Well Site: 1936 Alum Rock Avenue
City, State, Zip: San Jose, CA 95113	City, State, Zip: San Jose, CA 95112	City, State, Zip: San Jose, CA 95116-2003
Telephone No. & Contact Name: (408) 293-0234	Telephone No. & Contact Name: (408) 258-4077	Telephone No.: (408) 258-4077
Owner's/Consultant's Well No.: MW-3		Assessor's Parcel Number of Well Site: Book: 481 Page: 19 Parcel: 003

Consultant (Company): GeoRestoration, Inc.	Drilling Company: Exploration Geoservices, Inc.
Address: 585 Emory Street	Address: 1535 Industrial Avenue
City, State, Zip: San Jose, CA 95110-1822	City, State, Zip: San Jose, CA 95112
Telephone No.: (408) 292-8450	Telephone No.: (408) 280-6822 C-57 License No.: 484288
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Case Name/No.: Not Established as of 04/10/07 Caseworker Name: Nicole Pullman
Oversight Agency: Santa Clara County DEH Caseworker Telephone No.: (408) 918-1984

Type of monitoring device: ☒ Groundwater ☐ Vadose
Type of extraction device: ☒ Groundwater ☐ Vadose
Monitoring well use: ☒ Depth ☒ Quality ☐ Chloride
Nested/Multi-level Well: ☐ Yes ☒ No
Note: If Nested/Multi-level Well is proposed, a separate permit is needed for each casing.

Signature of Responsible Professional
(No substitution of signature will be accepted)

William R. Dugan
Print Name

P.G. 6253
Registration No. Civil Engineer OR Registration No. Geologist

Estimated Depth of Completed Well: ☒ Less than 50 ft. ☐ 50 to 300 ft. ☐ Over 300 ft. ☐ Other:
Purpose of Well: ☐ Domestic ☐ Municipal/Industrial ☐ Agricultural ☒ Monitoring ☐ Cathodic Protection ☐ Other:
*Monitoring wells are those constructed for the purpose of obtaining repetitive water level measurements and/or repetitive air samples for analysis.
Well is to be Constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On SCVWD property/easement*

Within 50 ft. of sanitary sewer ☐ Yes ☒ No
Within 100 ft. of a pit privy, septic tank, leachfield ☐ Yes ☒ No
Within 50 ft. of any existing well ☐ Yes ☒ No
Within 150 ft. of a cesspool or seepage pit ☐ Yes ☒ No
Other wells exist on this property? ☐ Yes ☒ No
Status: ☐ Active ☐ Inactive ☐ Abandoned
*See General Condition E, page 2.

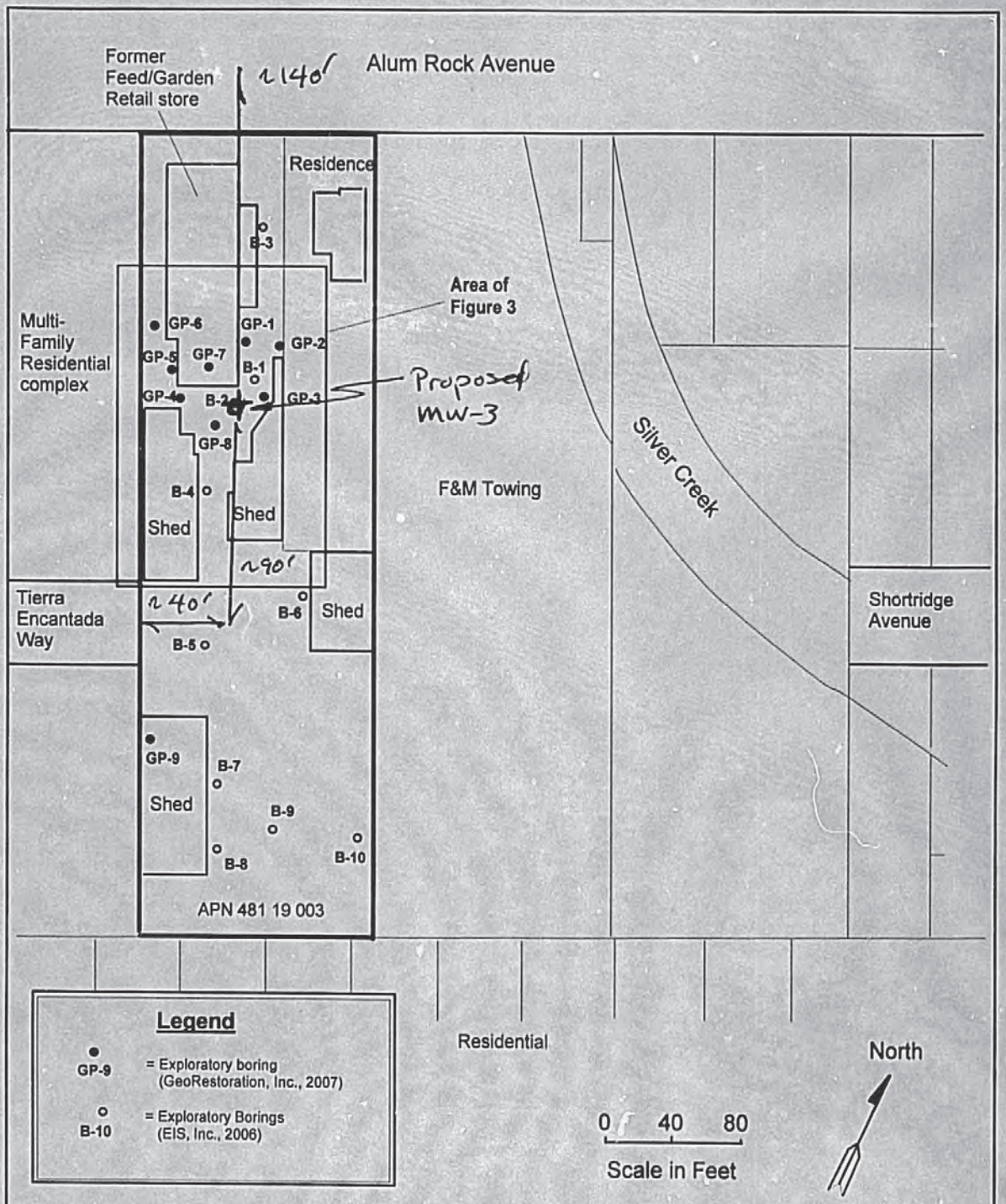
CERTIFICATION BY WELL OWNER/AGENT AND DRILLER/AGENT

I certify that the information given above is correct. I certify that the well will be constructed in compliance with the conditions of this permit (See Page 2), and Santa Clara Valley Water District Ordinance 90-1. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ. I understand that it is my responsibility as the well owner, to notify this District of any changes in the purpose of this well, from that, which is indicated on this application. NOTE: All applicable "original" signatures must be present before permit will be processed.

Signature	Date	Print Name
Signature of Property Owner/Agent	04/10/07	William R. Dugan (Agent) — Print Name of Property Owner/Agent
Signature of Well Owner/Agent	04/10/07	William R. Dugan (Agent) — Print Name of Well Owner/Agent
Signature of Well Driller/Agent	04/10/07	William R. Dugan (Agent) — Print Name of Driller/Agent

RECEIVED
APR 10 2007
S.C.V.W.D.
WELLS

IMPORTANT: A minimum 24 hour notice must be given to [illegible]
Call (408) 265-2607 Ext. 2660. For weekends, holidays, or after hours call [illegible]



GeoRestoration, Inc.
595 Emory Street
San Jose, CA 95110

Generalized Site Map
Las Brisas
1936 Alum Rock Avenue
San Jose, California

FIGURE 2

Santa Clara Valley Water District

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

WELL CONSTRUCTION APPLICATION

DISTRICT WELL PERMIT NO.: 07W00279

Based on information on this application and attachment(s) hereto (if any) and subject to approval noted below, permission is hereby granted to construct (drill) the described well. Permission to start work may be withheld until a field check verifies all statements made on application by Permitee and is also subject to the "General" and "Special" Conditions stated below.

COUNTY OF SANTA CLARA DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVAL
Domestic Water Supply Wells Only (Note: D. E. H. Approval must be granted before this application will be accepted by S.C.V.W.D.)
Date: _____ **Approved By:** _____ **, R.E.H.S.**
Approved As Submitted: ☐ **Approved As Corrected:** ☐

SITE PLAN
A SITE PLAN **MUST** BE ATTACHED TO THIS APPLICATION
THE SITE PLAN **MUST** BE SUBMITTED ON 8 ½" X 11" PAPER
THE SITE PLAN **MUST** CONTAIN:
1. Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.
2. North arrow and scale
3. Location of proposed well with dimensions in feet from well to nearest cross streets

GENERAL CONDITIONS

A. SCVWD (Telephone 408-265-2607, Ext. 2660) MUST BE NOTIFIED A MINIMUM OF ONE WORKING DAY BEFORE CONSTRUCTION OF THE ANNULAR SEAL. An authorized District representative must be on site to witness the construction of the annular seal. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the Permittee(s) to furnish certification, under penalty of perjury, that the well was constructed in accordance with the District Well Standards and with the permit conditions.
B. This Permit is valid only for the purpose specified herein. Well construction methods authorized under this Permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g. if the District representative finds that site conditions warrant such a change).
C. This Permit is only valid for the Assessor's Parcel Number indicated on it.
D. This Permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that was constructed under this permit must be destroyed in accordance with District and State Well Standards.
E. If any work associated with this permit will take place on SCVWD property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607 Ext. 2589).
F. Before the well constructed under this permit can be used as a drinking water source, its use must be approved by the regulatory agency with authority over such use (typically the Santa Clara County Department of Environmental Health or the State of California, Department of Water Resources, Office of Drinking Water). A completed Well Inventory Form must also be approved.
G. If the well constructed under this permit cannot be or is not being used for its intended purpose, permittee is hereby required to destroy the well according to the District Well Standards and under permit from the District. Any test holes drilled under this permit must be destroyed within 24-hours of completion of testing activities. Destruction activities must be completed according to SCVWD standards. SCVWD must be notified a minimum of 24-hours prior to destruction.
H. Within 30 days of the completion of the well construction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and mail the original to the District's Wells and Water Production Unit.
I. The Permittee(s) shall assume entire responsibility for all activities and uses under this Permit and shall indemnify, defend, and hold the District, its officers, agents, and employees, free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting or exercise of this Permit including, but not limited to, property damage, personal injury, and wrongful death.
J. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.
K. A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.
L. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all materials or waters generated during drilling, well construction, well development, pump testing, or other activities associated with this Permit, will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must not be allowed to move off the property where the work is being completed.
M. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with District.
N. This Permit shall expire if not exercised within 180 calendar days of its approval, unless an extension of the permit expiration date is granted by an authorized District representative.
O. This permit must be kept on-site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

Special Conditions:	
Community Projects Review Unit Approval (if needed)	CPRU Permit No.:
Approved By:	Date: 4-23-07

PLEASE ALLOW 10 WORKING DAYS TO PROCESS THIS APPLICATION

Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686

1936 Alum Rock Ave

PARCELS.SHP
WELLS.shp
Water Supply - Active
Water Supply - Standby
Water Supply - Inactive
Extraction (Tav) - Active
Extraction (Tav) - Inactive
Other - Active
Other - Inactive
Abandoned
Destroyed
Status Undetermined
Creeks01.shp
FUELLEAK.shp
RAILROAD.SHP
PIPELINE.shp
Raw
Treated
Shallow
VALFLOOR.SHP
Zone 1
Zone 2
Zone 3
Zone 4
Zone 5

Approximate Scale
100 0 100 200 Feet

o:\arcview.apr

April 23, 2007

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. 0065147 E053454

Page 1 of 2

Owner's Well Number MW-3

Date Work Began 06/22/2007 Date Work Ended 6/22/2007

Local Permit Agency SCVWD

Permit Number 07W00279 Permit Date 4/23/07

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F007

Latitude N / Longitude W

APN/TRS/Other

Geologic Log

Orientation ⊙ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		SEE ATTACHED LOG

Total Depth of Boring 29.5 Feet

Total Depth of Completed Well 29.5 Feet

Well Owner

Name NorthpointDevelopment

Mailing Address 160 W. Santa Clara St., Suite 700

City San Jose State CA Zip 95113

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

Datum Decimal Lat. Decimal Long.

APN Book 481 Page 19 Parcel 003

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

- ⊙ New Well
- ○ Modification/Repair
  - ○ Deepen
  - ○ Other
- ○ Destroy

Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

- ○ Water Supply
  - ☐ Domestic ☐ Public
  - ☐ Irrigation ☐ Industrial
- ○ Cathodic Protection
- ○ Dewatering
- ○ Heat Exchange
- ○ Injection
- ⊙ Monitoring
- ○ Remediation
- ○ Sparging
- ○ Test Well
- ○ Vapor Extraction
- ○ Other

Water Level and Yield of Completed Well

Depth to first water 19 (Feet below surface)

Depth to Static Water Level 9 (Feet) Date Measured 07/05/2007

Estimated Yield * (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	20	8	Blank	PVC Sch. 40		2		
20	30	8	Screen	PVC Sch. 40		2	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	16	Cement	Neat cement
16	19	Bentonite	Bentonite
19	30	Filter Pack	#2/12 Sand

Attachments

- ☑ Geologic Log
- ☐ Well Construction Diagram
- ☐ Geophysical Log(s)
- ☐ Soil/Water Chemical Analyses
- ☐ Other

Attach 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 Exploration GeoServices, Inc. (EGI)

Person, Firm or Corporation

1535 Industrial Ave Address San Jose City CA State 95112 Zip

Signed (For EGI) C-57 Licensed Water Well Contractor

11/30/07 Date Signed

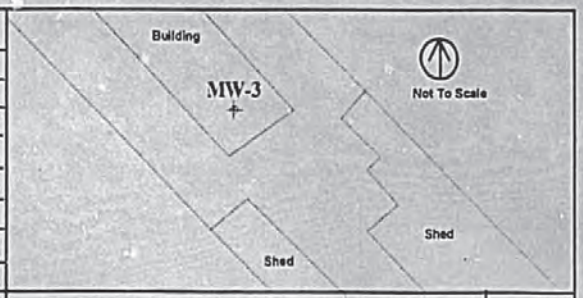
484288 C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

RECEIVED DEC 03 2007

Well Name	**MW-3**
Client	Northpoint
Location	1936 Alum Rock Ave., San Jose, CA
Date	06/22/07
Drilling Co.	Exploration Geoservices, Inc. (C-57# 484288)
Drilling Method	Hollow-Stem Augers (8")
Sampling Method	2" Split Spoon Sampler
Well Casing	2" Sch 40 PVC / 0.010 casing
Logged By	Forrest Cook PG # 8201



Sample ID	Sample Depth (feet)	Blows per 6 in.	Moisture Content	PID Reading	Depth in Feet	Graphic Log	Soil Description	Well Const.
					0		1 inch concrete slab (surface)	
					2		Silty Clay (CL), black to light brown, moist, siff, estimated low plasticity.	
MW-3d5.0	3.5-5.0	5 5 8	MOIST	NA	4			
					6			
					8		▼ Stabalized water at 8.94 feet bgs (07/05/07)	
MW-3d10.0	8.5-10.0	4 8 9	MOIST	NA	10		Silty Clay (CL/CH), light gray, moist, stiff to very stiff, estimated medium to high plasticity.	
					12			
MW-3d15.0	13.5-15.0	6 6 7	MOIST	NA	14		Strong petroleum odor from approximately 15 feet bgs to total depth explored.	
					16			
					18		▽ Initial Water at approximately 18.5 feet bgs.	
MW-3d20.0	18.5-20.0	5 8 7	WET	NA	20		Silty Clay (CL), light gray with turquois mottling, wet, stiff, estimated low to medium plasticity, with trace fine sand and gravel.	
					22			
MW-3d25.0	23.5-25.0	4 5 9	WET	NA	24			
					26			
MW-3d30.0	28.0-29.5	8 7 7	WET	NA	28			
					30		Total Depth Explored 29.5 feet bgs	
					32			
					34			
					36			
					38			
					40			

Bentonite
Neat Cement
0.010 Slot
#2/12 Sand

GEORESTORATION, INC.

WELL LOG [MW-3]

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.8 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 30 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by: B			Date: 9-17-18
District Permit No.: D20180918003	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

VACANT

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

D2018090018003

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/17/2018

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	C20160927001-1	07S01E03F010	A
2	MW-5	C20160927002-1	07S01E03F011	A
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW-1	07W00280	07S01E03F008	A
7	MW-3	07W00279	07S01E03F007	A
8	MW-2	07W00281	07S01E03F009	A

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2018D918002

Well Owner: 1936 Alum Rock Avenue LLC	**Property Owner:** 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F010	Owner/Consultant Well No.: MW-4	Original Well Construction Permit No.: C20160927001
Well Casing Depth: 28 FT BGL	Total Boring Depth: 28 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE

☐ Water Production	☒ Monitoring	☐ Remediation	☐ Dewatering	☐ Heat Exchange	☐ Injection	☐ Cathodic Protection	☐ Other
☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

RECEIVED
SEP 13 2018

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

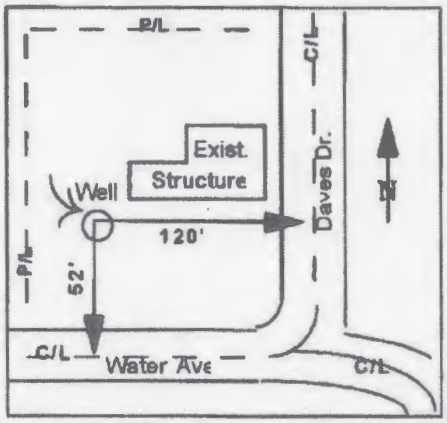
WELL DESTRUCTION APPLICATION

SITE PLAN

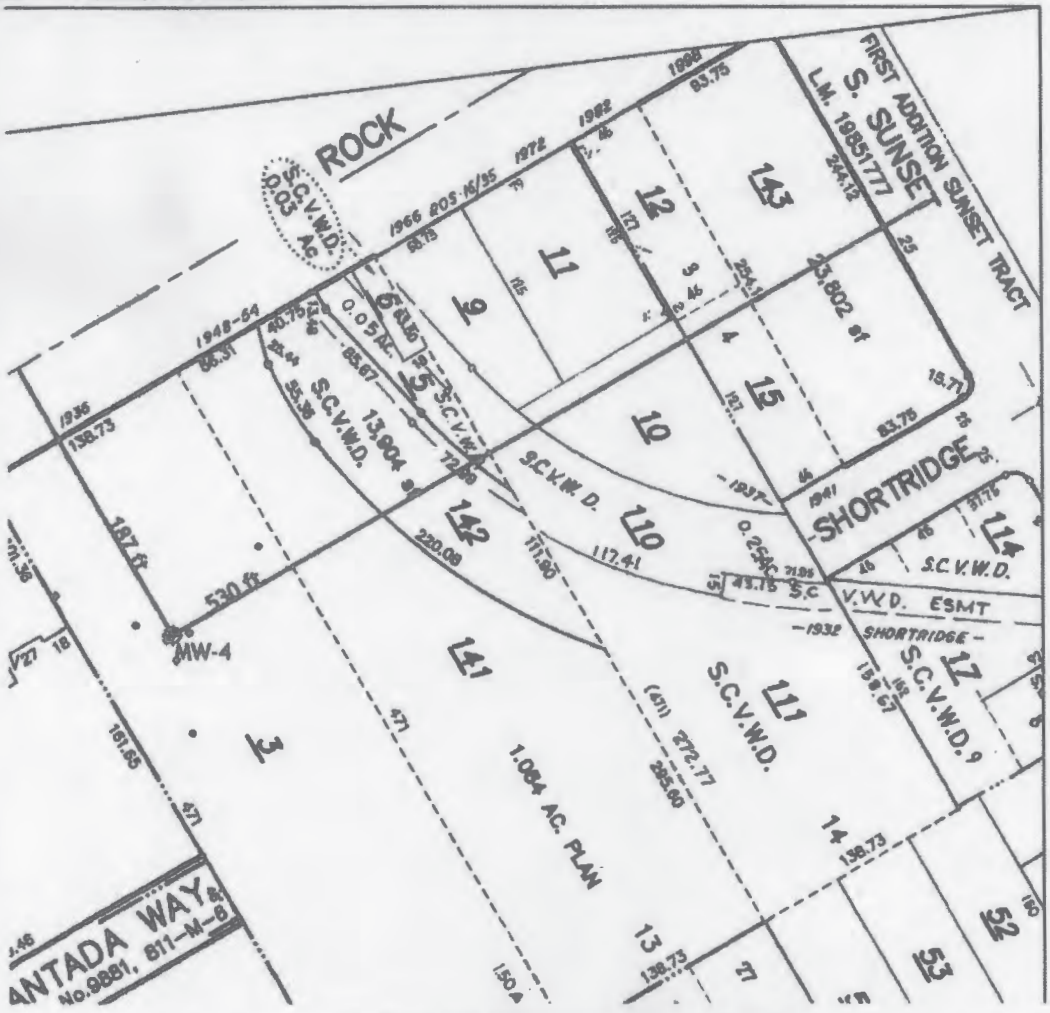
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328524

Page 1 of 3

Owner's Well Number MW-4

Date Work Began 10/01/2016 Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927001 Permit Date 9/27/16

DWR Use Only – Do Not Fill In

0 7 S 0 1 E 0 3 F 0 1 0

State Well Number/Site Number

Latitude N | Longitude W

APN/TRS/Other

Geologic Log

Orientation: ⦿ Vertical ○ Horizontal ○ Angle Specify ____

Drilling Method ____ Drilling Fluid ____

Depth from Surface Feet	to Feet	Description (Describe material, grain size, color, etc)
		See Attached Well Log

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Total Depth of Boring 28 Feet

Total Depth of Completed Well 28 Feet

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude ___ Deg. ___ Min. ___ Sec. N Longitude ___ Deg. ___ Min. ___ Sec. W

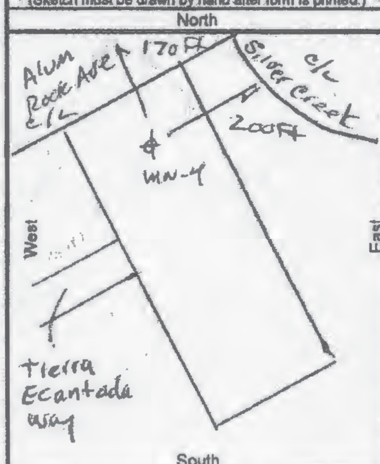
Datum NAD83 Dec. Lat. 37.3546412 Dec. Long. -121.8503941

APN Book 481 Page 19 Parcel 003

Township ____ Range ____ Section ____

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

- ⦿ New Well
- ○ Modification/Repair
  - ○ Deepen
  - ○ Other ____
- ○ Destroy
  Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

- ○ Water Supply
  - ☐ Domestic ☐ Public
  - ☐ Irrigation ☐ Industrial
- ○ Cathodic Protection
- ○ Dewatering
- ○ Heat Exchange
- ○ Injection
- ⦿ Monitoring
- ○ Remediation
- ○ Sparging
- ○ Test Well
- ○ Vapor Extraction
- ○ Other ____

Water Level and Yield of Completed Well

Depth to first water 20 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type ____

Test Length ____ (Hours) Total Drawdown ____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size If Any (Inches)
0	18	8	Blank	Sch 40 PVC	0.154	2.375		
18	28	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	15.5	Cement	Neat Cement
15.5	17.5	Bentonite	Hydrated Bentonite
17.5	28.0	Filter Pack	#2/12 Sand

Attachments

- ☑ Geologic Log
- ☑ Well Construction Diagram
- ☐ Geophysical Log(s)
- ☐ Soil/Water Chemical Analyses
- ☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc.
Person, Firm or Corporation

PO Box 8548 San Jose CA 95155
Address City State Zip

Signed [signature] for Exploratory Geoservices 11/10/16 484288
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

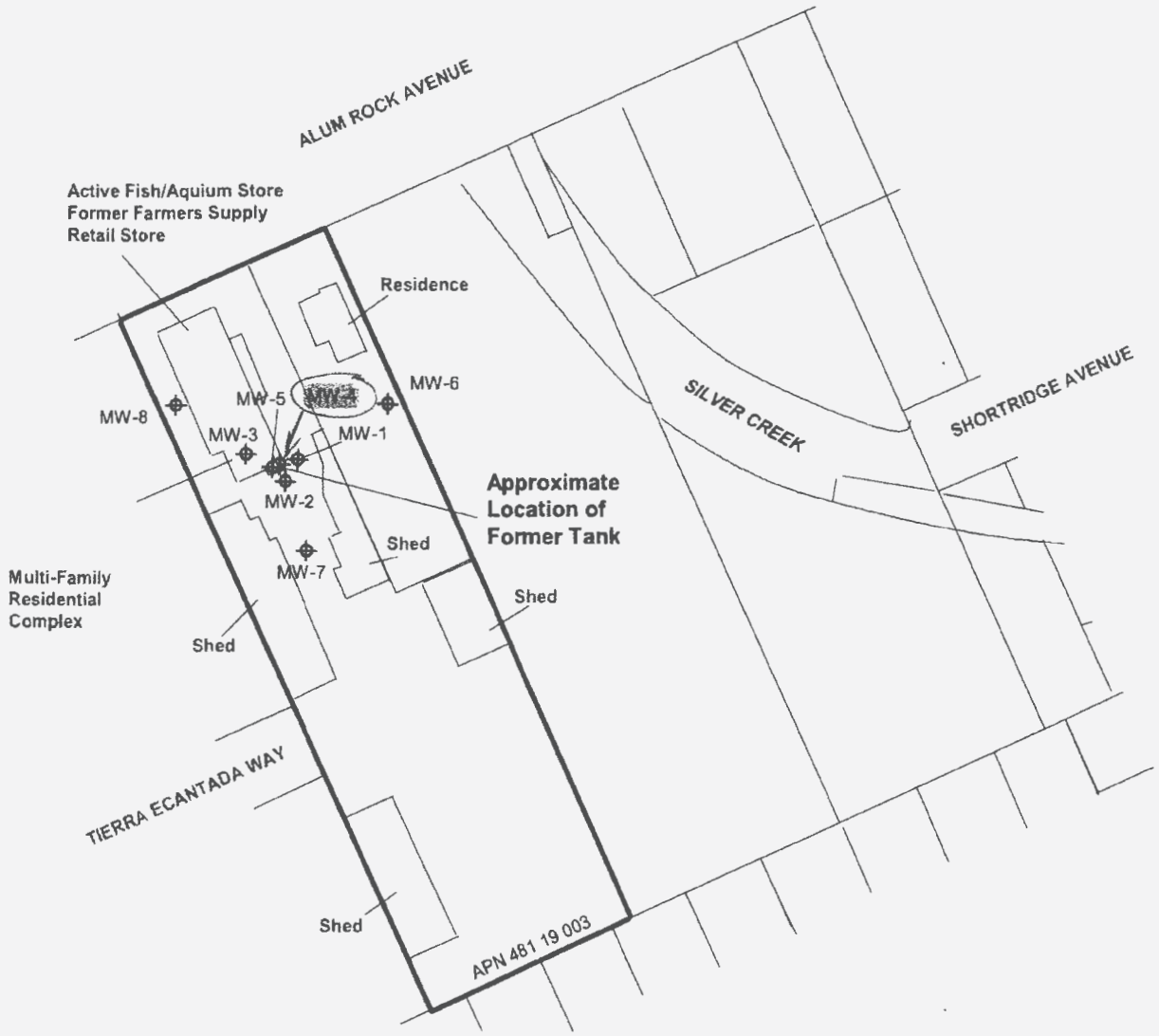
Project: WellTest, Inc. (Project #5201) Project Name: Farmers Supply Project Location: 1936 Alum Rock Boulevard, San Jose, CA	**Log of Well MW-4** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

Elevation, feet	Depth, feet	Sample Depth	Sample Number	Sample Matrix	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
95	0				CL		Silty Clay, Black-brown, estimated stiff, medium estimated plasticity. Backfill materials from initial 7 feet of excavation.		12" Diameter Vault 2" Dia. Locking Well Cap 8" Diameter Boring (0' to 28')
90	5								2" I.D. Schedule 40 PVC Blank Casing (0.5' to 18')
					GC-CL		Silty Clay to gravelly Clay, light brown to brown, moist, stiff, estimated plasticity. Fill: Stevens Creek Quarry Fines. Petroelum hydrocarbon odor.		
85	10						(after 10 minutes) ▼		
80	15				CH		Silty Clay, light gray with turquois mottling, moist, stiff to very stiff, estimated low plasticity with root holes and trace gravels. Strong petroleum odor.		Bentonite Seal (15.5.' to 17.5') Top of Well Screen 18'
75	20						First-Encountered Water at 20 ft bgs. (ATD) ▼		#2/12 Sand (17.5' to 28') 2" I.D. Schedule 40 PVC 0.010 Slotted Casing
70	25						decreasing petroleum staining and odor.		Soils Logged from Cuttings Base of Well Screen 28' 2" I.D. Bottom Cap
							Bottom of Boring at 28 feet bgs		
65	30								
60	35								

J:\2017 Jobs\5201 Farmers Supply\5201 Logs\MW-4 LIT.bgs [07-10-11.tpl]

Figure C-1



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

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

WELL DESTRUCTION APPLICATION

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.6 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (If any): Richard Ryan	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
OR NOTE: Neat cement is the only sealing material approved for pressure grouting.

☒ Drill out well to a total depth of 28 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by:	Date: 9-17-18

District Permit No.: D2018091800 2	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

VACANT

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

D2D180918002

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/17/2018

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	C20160927001-1	07S01E03F010	A
2	MW-5	C20160927002-1	07S01E03F011	A
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW-1	07W00280	07S01E03F008	A
7	MW-3	07W00279	07S01E03F007	A
8	MW-2	07W00281	07S01E03F009	A

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D20180918001

Well Owner:	**Property Owner:**	Name of Business/Residence at Site:
1936 Alum Rock Avenue LLC	1936 Alum Rock Avenue LLC	VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022 Caleb Roope	Telephone No.: 208.461.0022 Caleb Roope	Assessor's Parcel No. of Well Site: Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant:	Drilling Company:	
Ryan Geologic & Environmental Services, Inc.	Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.:	Owner/Consultant Well No.:	Original Well Construction Permit No.:
07S01E03F011	MW-5	C20160927002
Well Casing Depth: GL 17	Total Boring Depth: GL 17'	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.:	Caseworker Name:
Farmer's Supp SCVWDID No. 07S1E03F03f	Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:			
1.	Outer conductor casing?	☐ Yes	☐ No
2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

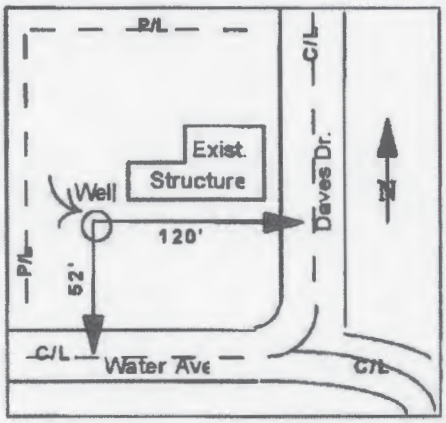
WELL DESTRUCTION APPLICATION

SITE PLAN

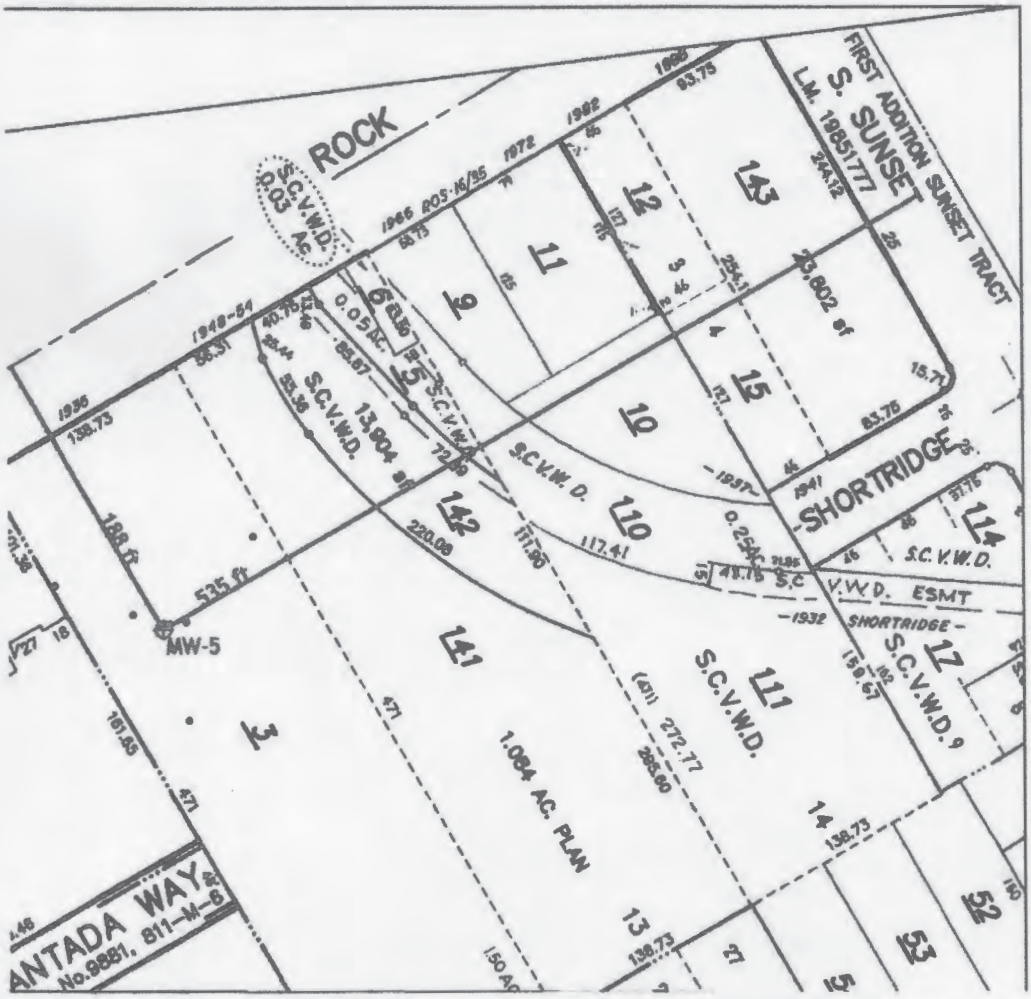
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328542

Page 1 of 3

Owner's Well Number MW-5

Date Work Began 10/01/2016 Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927002 Permit Date 9/27/16

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F011

Latitude N / Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc.
		See Attached Well Log

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Total Depth of Boring 17 Feet

Total Depth of Completed Well 17 Feet

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

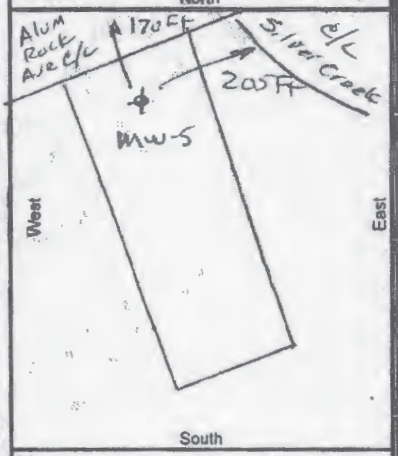
Datum NAD83 Dec. Lat. 37.3546333 Dec. Long. -121.8504058

APN Book 481 Page 19 Parcel 003

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 15 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	12	8	Blank	Sch 40 PVC	0.154	2.375		
12	17	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	9.5	Cement	Neat Cement
9.5	11.5	Bentonite	Hydrated Bentonite
11.5	17.0	Filter Pack	#2/12 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc.
Person, Firm or Corporation

PO Box 8548 San Jose CA 95155
Address City State Zip

Signed Exploration for Geoservices 11/10/16 484288
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Project: WellTest, Inc. (Project #5201)
Project Name: Farmers Supply
Project Location: 1936 Alum Rock Boulevard, San Jose, CA

Log of Well MW-5

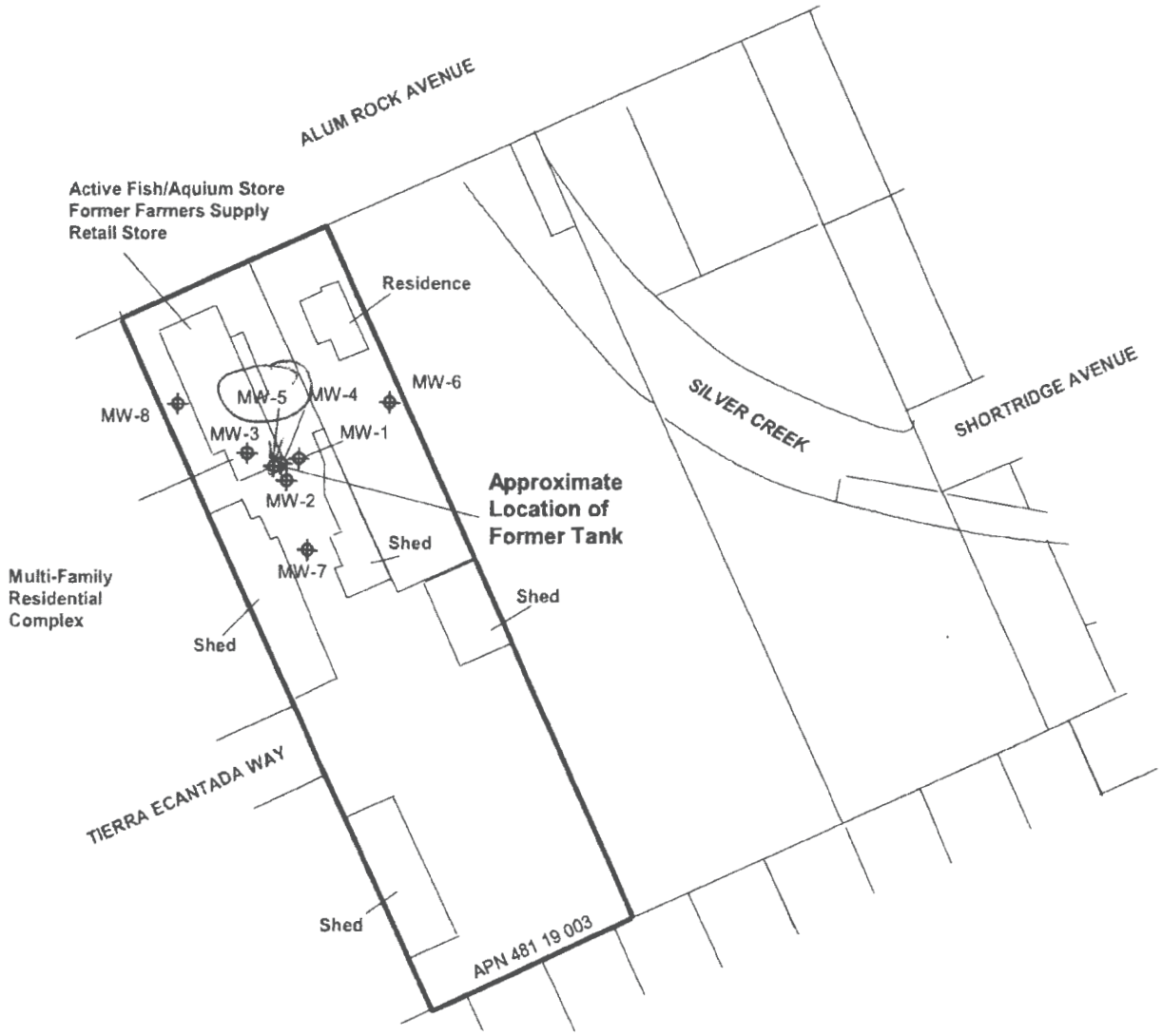
Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **17**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **12.5 Feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

Elevation, feet	Depth, feet	Sample Depth	Sample Number	Sample Matrix	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
95	0				CL		Silty Clay, Black-brown, estimated stiff, medium estimated plasticity. Backfill materials from initial 7 feet of excavation.		12" Diameter Vault 2" Dia. Locking Well Cap 8" Diameter Boring (0' to 17')
90	5								2" I.D. Schedule 40 PVC Blank Casing (0.5' to 17')
					GC-CL		Silty Clay to gravelly Clay, light brown to brown, moist, stiff, estimated plasticity. Fill: Stevens Creek Quarry Fines. Petroelum hydrocarbon odor.		Bentonite Seal (9.5.' to 11.5')
85	10						(after 10 minutes) ▼		Top of Well Screen 12'
									Soils Logged from Cuttings
80	15				CH		Silty Clay, light gray with turquois mottling, moist, stiff to very stiff, estimated low plasticity with root holes and trace gravels. Strong petroleum odor.		2" I.D. Schedule 40 PVC 0.010 Slotted Casing
							Bottom of Boring at 17 feet bgs		Base of Well Screen 17' 2" I.D. Bottom Cap
75	20								
70	25								
65	30								
60	35								

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-5.bgs [07-10-11.tpl]

Figure C-2



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

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

WELL DESTRUCTION APPLICATION

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 2.8 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Property Owner/Agent:	Print Name: Caleb Roope, General Partner	Date: 09/10/2018
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 17 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by:			Date: 9-17-18
District Permit No.: D20180918001	Date Issued: 9/18/18	Expiration Date: 9/18/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

VACANT

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

D2018091800l

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 190 — 380 Feet

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- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/17/2018

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
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4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW-1	07W00280	07S01E03F008	A
7	MW-3	07W00279	07S01E03F007	A
8	MW-2	07W00281	07S01E03F009	A

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D2019071904

Well Owner: 1936 Alum Rock Avenue LLC	**Property Owner:** 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022	Telephone No.: 208.461.0022	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F012	Owner/Consultant Well No.: MW-6	Original Well Construction Permit No.: C20160927003
Well Casing Depth: 30 FT BGL	Total Boring Depth: 30 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

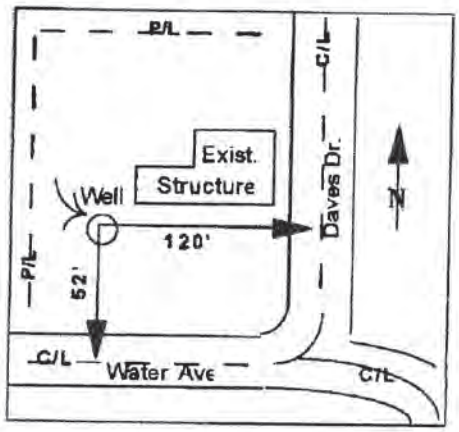
WELL DESTRUCTION APPLICATION

SITE PLAN

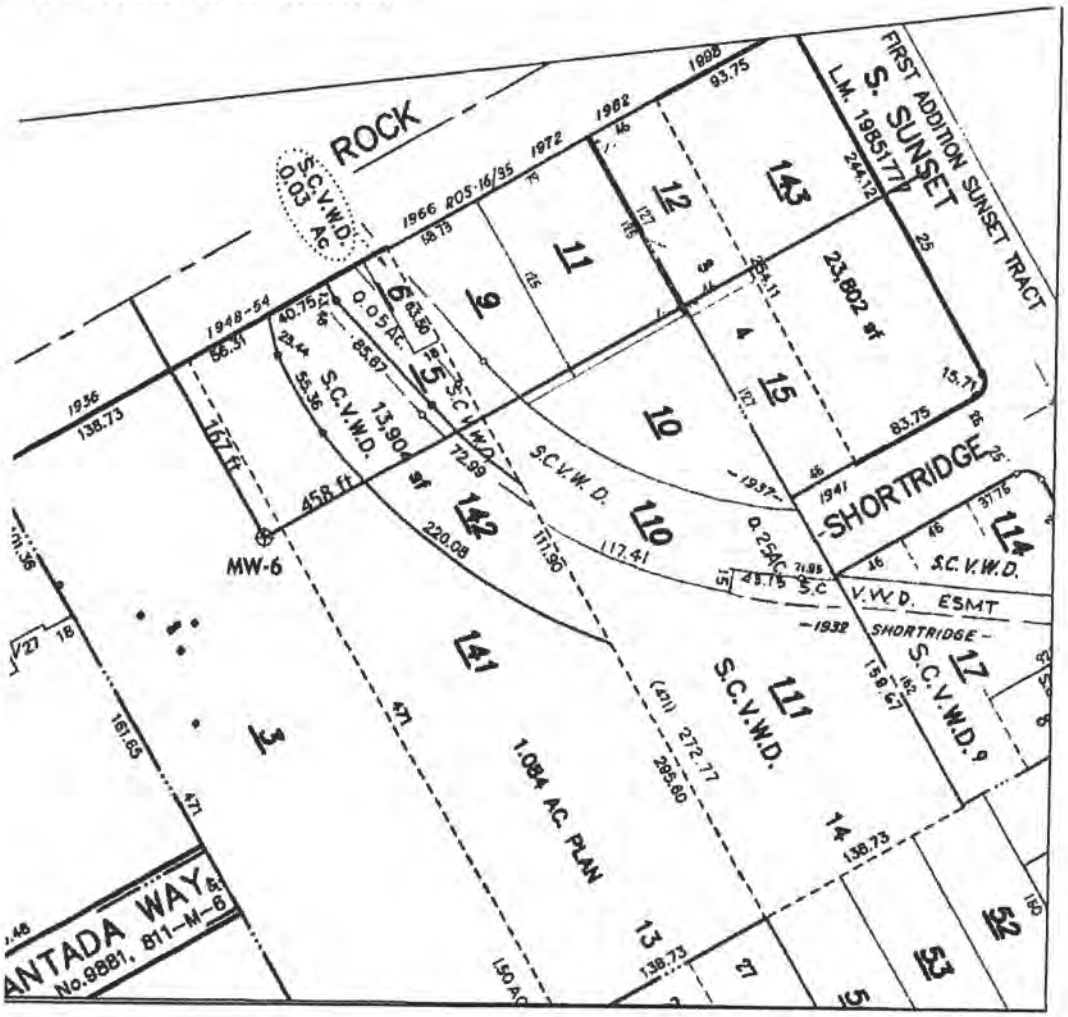
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.9 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature	Print Name	Date
Signature of Well Owner/Agent:	Caleb Roope	6/17/2019
Signature of Property Owner/Agent:	Caleb Roope	6/17/2019
Signature of Driller/Agent:	Ralph McGahey, V.P. Operations	9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Richard Ryan, PG	Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☑ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

☑ Drill out well to a total depth of 30 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by: Charles E. Ramler — Date: 7/17/19

District Permit No.	Date Issued	Expiration Date	Driller's Log No.
D20190719004	7/19/19	7/19/20	

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials.** An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

Project: WellTest, Inc. (Project #5201)
Project Name: Farmers Supply
Project Location: 1936 Alum Rock Boulevard, San Jose, CA

Log of Well MW-6

Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **30**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

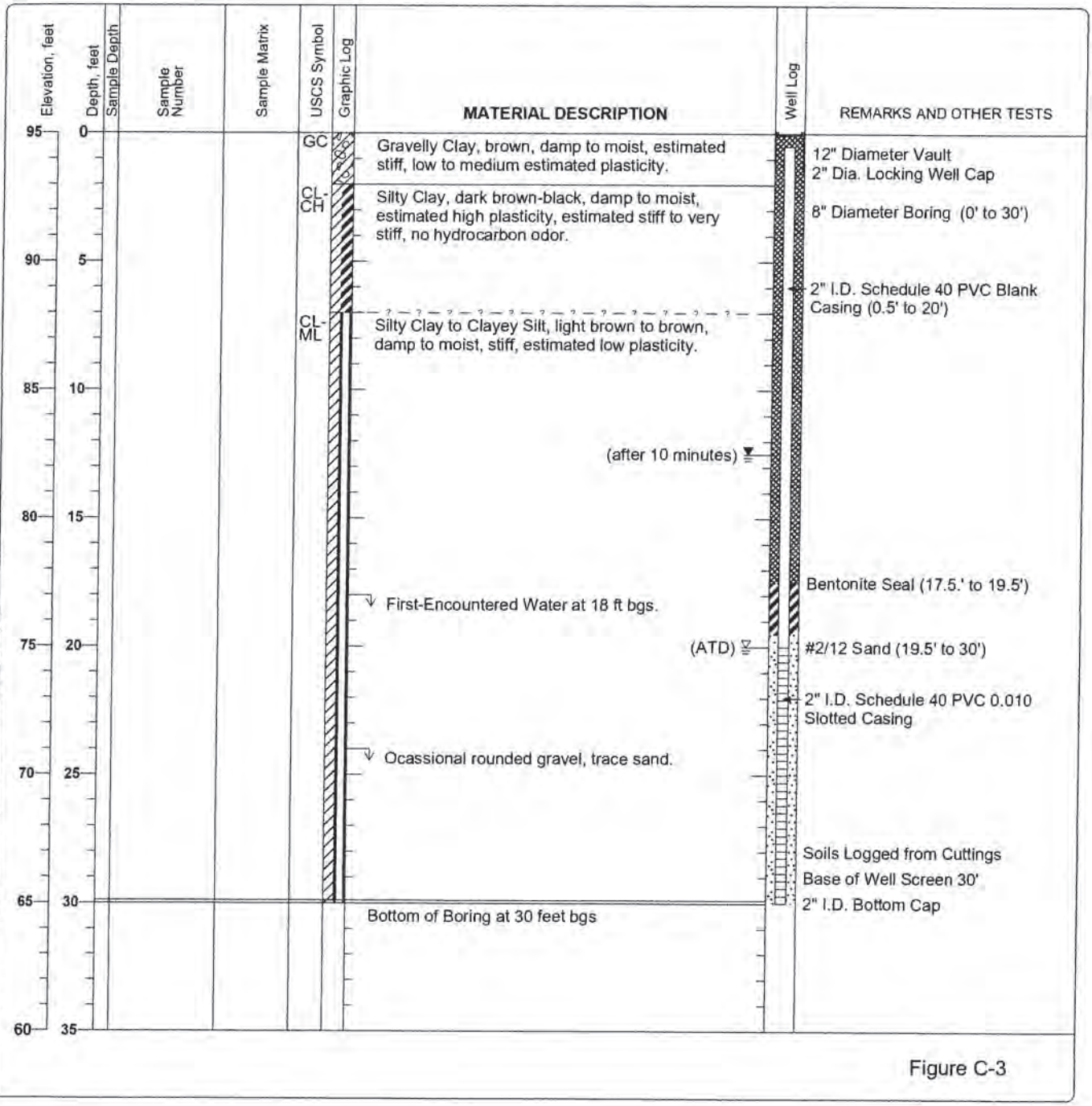


Figure C-3

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-6.bgs [07-10-11.tpl]

07S01E03F012

BLUE LAGOON AQUARIUM

APN 481-19-003
1936 ALUM ROCK AVE.
SAN JOSE, CA 95116

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 300 — 600 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/27/2016

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-1	07W00280	07S01E03F008	A
2	MW-3	07W00279	07S01E03F007	A
3	MW-2	07W00281	07S01E03F009	A

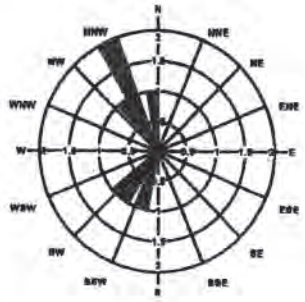
LEGEND

- Groundwater Monitoring Well
- Temporary Groundwater Monitoring Well
- Area of January 2016 Over-Excavation of former Gasoline UST Pit

Groundwater Flow Direction Rose Diagram

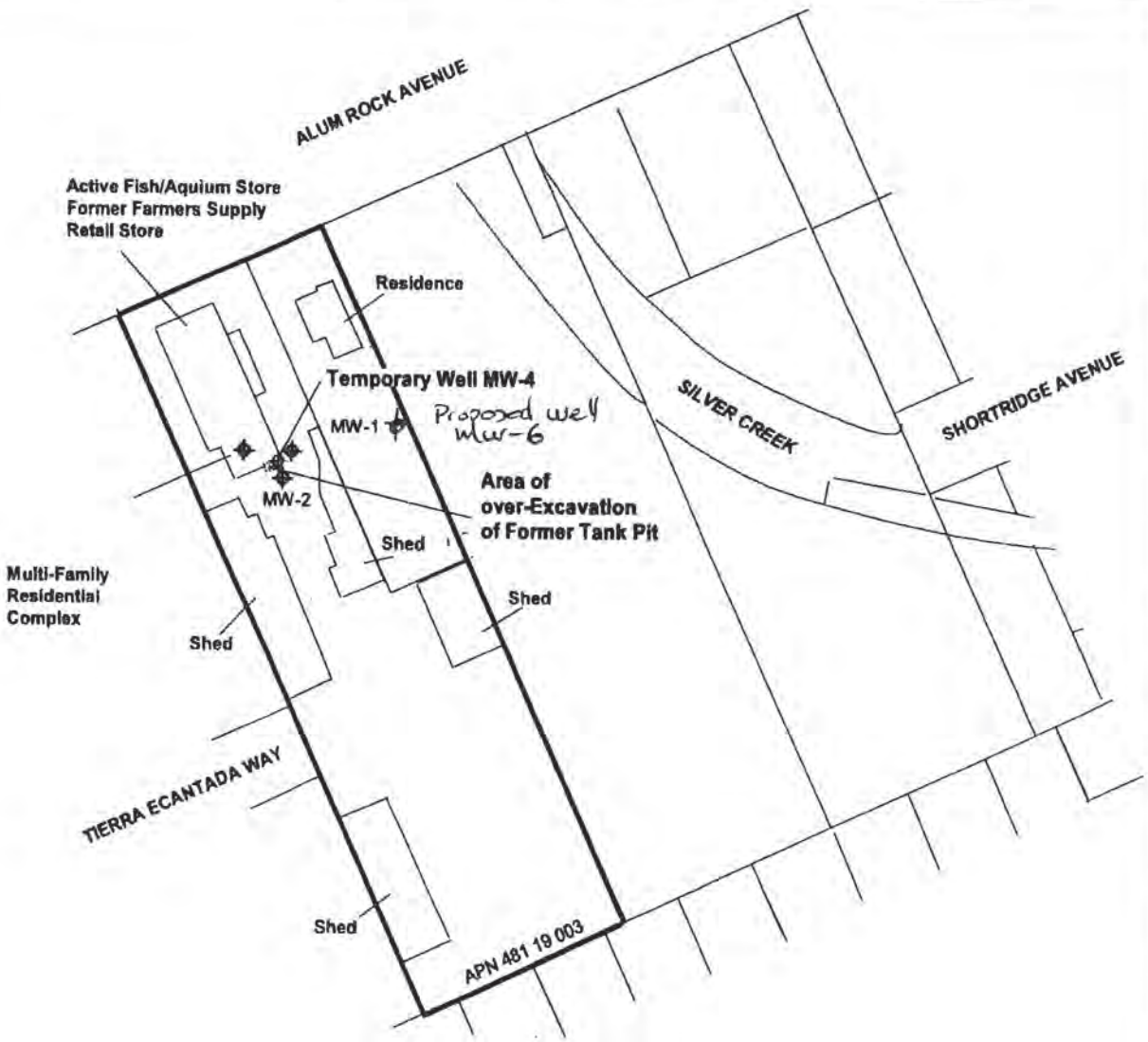
Rose Diagram Derived with a 3-Point Solution using Water Level Data Obtained from Wells MW-1, MW-2, and MW-3 on the Following Dates:

09/30/11
10/22/11
11/29/11
01/23/12
04/30/12
06/07/12
12/30/13



APPROXIMATE SCALE IN FEET

ALL LOCATIONS ARE APPROXIMATE. BASEMAP FROM OFFICE OF COUNTY ASSESSOR - SANTA CLARA COUNTY, CA (EFFECTIVE ROLL YEAR 2010-2011)



WellTest, Inc. License No. 843074 P.O. Box 8548 San Jose, CA 95155 Phone (408) 287-2175	**EXTENDED SITE MAP -- SHOWING A-ZONE MONITORING WELLS (MW-1, MW-2, MW-3 AND MW-4) AND THE AREA OF THE 14-FT LONG, 12-FT WIDE, AND 14.5-FEET DEEP EXCAVATION (JANUARY 2016)** FARMERS SUPPLY 1836 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**FIGURE** **2**

File: 5007/Figure 2

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328534

Page 1 of 3

Owner's Well Number MW-6

Date Work Began 10/01/2016 Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927003 Permit Date 9/27/16

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F012

Latitude N ____ Longitude W ____

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify ____

Drilling Method ____ Drilling Fluid ____

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		See Attached Well Log

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Total Depth of Boring 30 Feet

Total Depth of Completed Well 30 Feet

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude ____ Deg ____ Min ____ Sec. N Longitude ____ Deg ____ Min ____ Sec. W

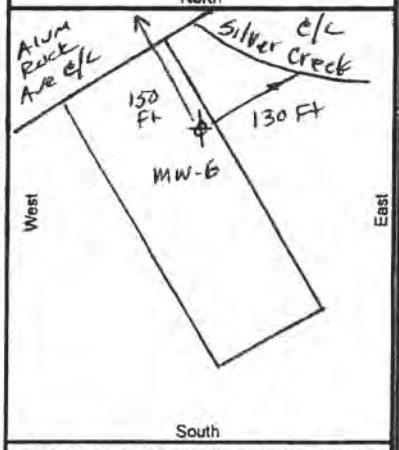
Datum NAD83 Dec. Lat. 37.3547898 Dec. Long. -121.8502136

APN Book 481 Page 19 Parcel 003

Township ____ Range ____ Section ____

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other ____
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other ____

Water Level and Yield of Completed Well

Depth to first water 203 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type ____

Test Length ____ (Hours) Total Drawdown ____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size If Any (Inches)
0	20	8	Blank	Sch 40 PVC	0.154	2.375		
20	30	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	17.5	Cement	Neat Cement
17.5	19.5	Bentonite	Hydrated Bentonite
19.5	30.0	Filter Pack	#2/12 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc.
Person, Firm or Corporation

PO Box 8548 San Jose CA 95155
Address City State Zip

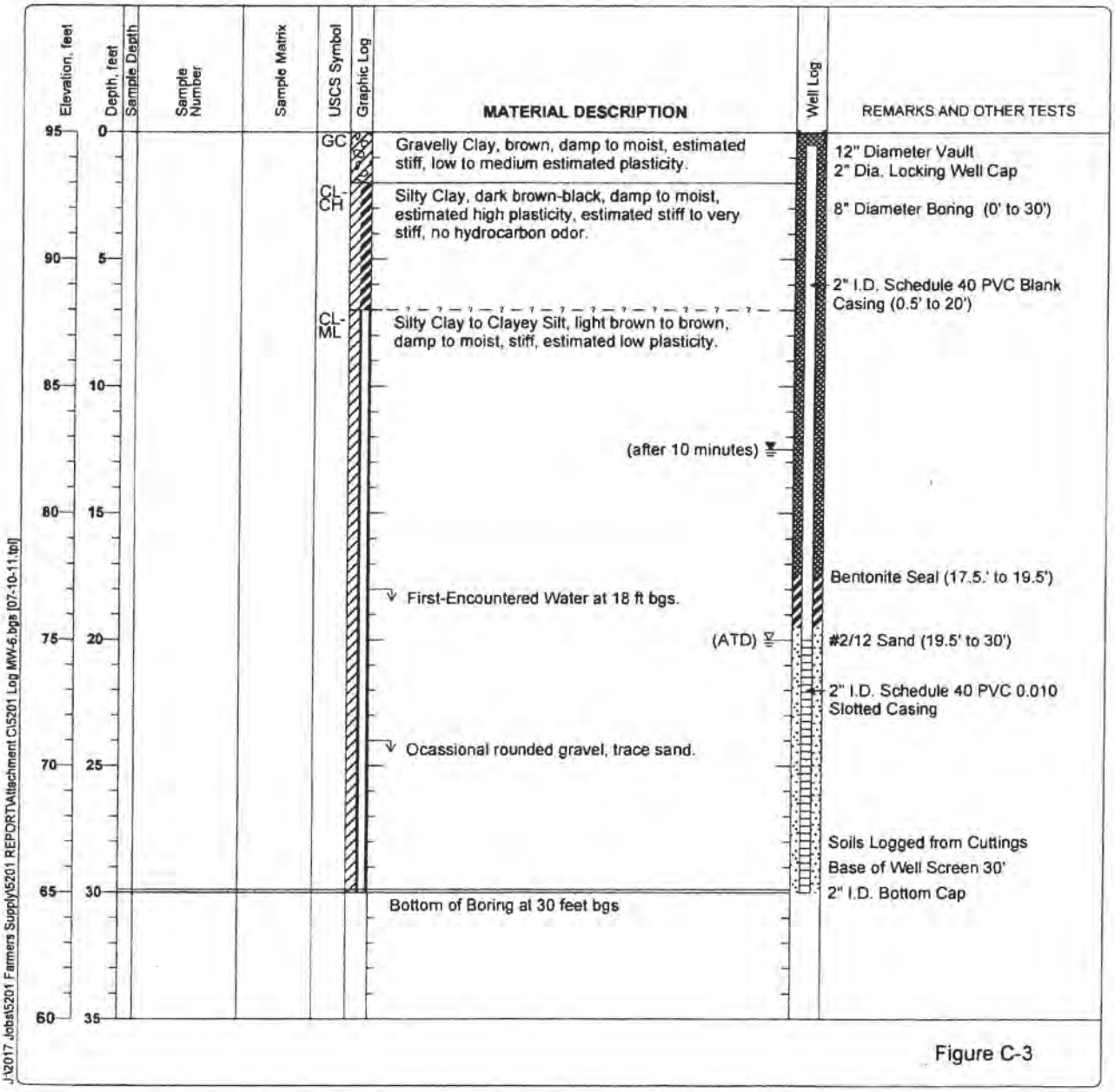
Signed [signature] for Employment Services 11/10/16 484288
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

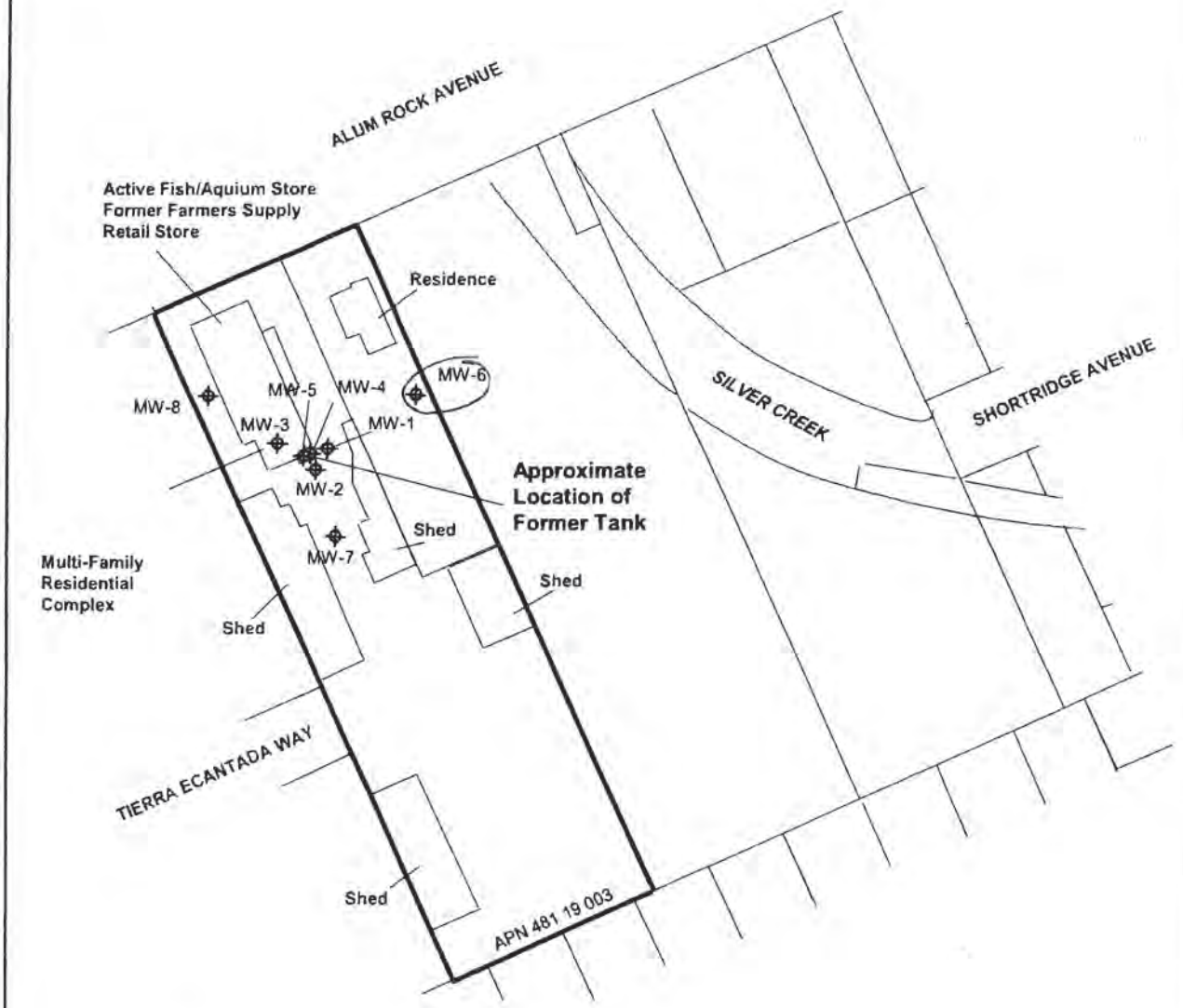
Project: WellTest, Inc. (Project #5201) **Project Name: Farmers Supply** **Project Location: 1936 Alum Rock Boulevard, San Jose, CA**	**Log of Well MW-6** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **30**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	



J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-6.bgs [07-10-11.tpl]

Figure C-3



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C20160927003	
Well Owner: DAVID MIJARES	Owner Well No.: MW-6	Well Registration No.: 07S01E03F012	
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE	
Drilling Company: EXPLORATION GEOSERVICES	Consultant: WELLTEST		

Cond. Bore:	Conductor Depth:	Conductor Diameter & Material:	TD:	Boring Diameter:	BOC:
—	—	—	28'	8"	28'

Casing Diameter & Material:	Slot Size:	Screen Interval(s):
2" PVC	0.010"	18-28

Filter Pack Material:	Filter Pack Interval(s):	Bent:	Seal Depth:
2/2 SAND	17.5-28'	15.5-17.5'	17.5'

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 160 ft. N/S S-SE ALUM ROCK AVE 425 ft. E/W N-NE & MCCREERY AVE

GPS Coordinates: Lat. Long.

Comments:

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

TO BE COMPLETED BY DISTRICT

District Permit No.: C2016092700 3	Date Issued: 9-27-16	Well Registration No.: 07S01E03F012
Geologic Setting:	Expiration Date: 9-27-17	Driller's Log No.:

TO BE COMPLETED BY OWNER AND DRILLER

Well Owner: Mr. David Mijares	Property Owner: Mr. David Mijares	Name of Business at Well Site: Blue Lagoon Aquarium
Well Owner's Mailing Address: 1639 Trona Way City, State, Zip San Jose, CA 95125-5055	Property Owner's Mailing Address: 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003
Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No.: 408-836-6358

Owner's/Consultant's Well No.: MW-6 | Assessor's Parcel No. of **Well Site**: Book 481 Page 19 Parcel 003

Consultant (Company): WellTest, Inc.	Drilling Company: Exploration Geoservices, Inc.	
Address: P.O. Box 8545 City, State, Zip San Jose, CA 95155-8545	Address: 1535 Industrial Avenue City, State, Zip San Jose, CA 95112	
Telephone No.: 408-287-2175 Office; 408-460-1884 Mobile	Telephone No.: 408-280-6822	C-57 License No.: 484288
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Case Name/No.: Farmers Supply/07S1E03F03f	Caseworker Name: Aaron Costa
Oversight Agency: Santa Clara County DEH	Caseworker Telephone No.: 408-918-1954

Signature of Responsible Professional | 09-21-2016 Date | William R. Dugan Print Name | (No substitution of signature will be accepted)

Civil Engineer Registration No. | OR | PG #6253 Geologist Registration No.

Estimated Depth of Completed Well: ☒ Less than 50 feet ☐ 50 to 300 feet ☐ Over 300 feet ☐ Other:

Well is to be constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On District property/easement*
*See General Condition F, page 2.

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

Other wells exist on this property? ☒ Yes ☐ No If yes, status: ☒ Active ☐ Inactive ☐ Abandoned

RECEIVED
SEP 21 2016
S.C.V.W.D.
WELLS

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District Ordinance 90-1, the District Well Standards, and the conditions of this permit (see page 2). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ. I also understand that it is my responsibility, as the well owner, to notify the District of any changes in the purpose of this well, from which, is indicated on this application.

Signature of Property Owner/Agent:	Date: 09/21/2016	Print Name of Property Owner/Agent: William R. Dugan (as Agent)
Signature of Well Owner/Agent::	Date: 09/21/2016	Print Name of Well Owner/Agent: William R. Dugan (as Agent)
Signature of Well Driller/Agent:	Date: 09/21/2016	Print Name of Driller/Agent: William R. Dugan (as Agent)
Signature of Consultant/Agent:	Date: 09/21/2016	Print Name of Consultant/Agent: William R. Dugan (as Agent)

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District Well Inspection Department prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

DISTRICT WELL PERMIT NO.: C20160927003

Based on information on this application and attachment(s) hereto (if any) and subject to approval noted below, permission is hereby granted to construct (drill) the described well. Permission to start work may be withheld until a field check verifies all statements made on application by permittee and is also subject to the "General" and "Special" Conditions stated below.

SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVAL (Water Supply Well Only)

NOTE: Department of Environmental Health approval must be granted before this application will be accepted by Santa Clara Valley Water District.

Approved by: , R.E.H.S	☐ Approved as submitted ☐ Approved as corrected
	Date:

SITE PLAN

A 8½" x 11" paper site plan **must** be attached to this application, including:

1. Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.
2. North arrow and scale
3. Location of proposed well with dimensions in feet from well to nearest cross streets.

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before construction of the annular seal.** An authorized District representative must be on site to witness the construction of the annular seal. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification, under penalty of perjury, that the well was constructed in accordance with the District Well Standards and with the permit conditions.

B. Permittee agrees to construct, operate, and maintain the well according to provisions of the latest District Ordinance and the latest published revisions of District Well Standards to the end that this well will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety, or welfare of the people of the District.

C. This permit is valid only for the purpose specified herein. Well construction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative finds that site conditions warrant such a change).

D. This permit is only valid for the Assessor's Parcel No. indicated on it.

E. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that was constructed under this permit must be destroyed in accordance with District and State Well Standards.

F. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).

G. Before the well constructed under this permit can be used as a drinking water source, its use must be approved by the regulatory agency with authority over such use (typically the Santa Clara County Department of Environmental Health or the State of California Department of Public Health). A completed Well Inventory Form must also be approved.

H. If the well constructed under this permit cannot be or is not being used for its intended purpose, permittee is hereby required to destroy the well according to the District Well Standards and under permit from the District. Any test holes drilled under this permit must be destroyed within 24 hours of completion of testing activities. Destruction activities must be completed according to District standards. District must be notified a minimum of 24 hours prior to destruction.

I. Within 30 days of the completion of the well construction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and mail the original to the District's Wells and Water Production Unit.

J. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees, free and harmless from any and all expense, cost, and liability in connection with or resulting from the granting or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

K. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

L. A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.

M. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials or waters generated during drilling, well construction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must not be allowed to move off the property where the work is being completed.

N. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with District.

O. This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension of the permit expiration date is granted by an authorized District representative.

P. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

Q. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

SPECIAL CONDITIONS

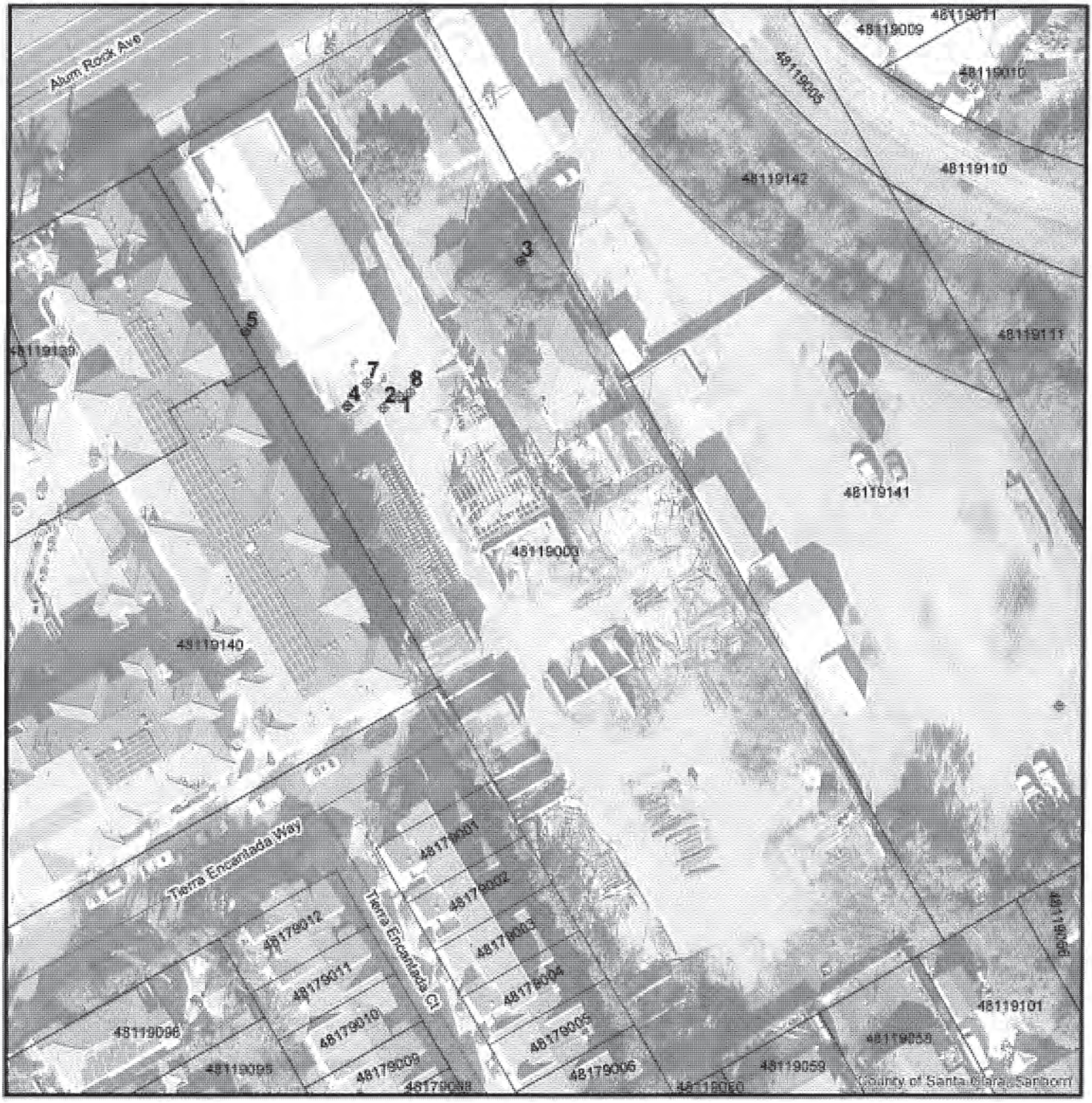
Community Projects Review Unit Approval (if needed):	CPRU Permit No.:
Approved by:	Date: 9-27-16

Please allow 10 working days to process this application.

1936 ALUM ROCK AVE., LLC

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

Valley Water



Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

7/19/2019

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	D20180918002-1	07S01E03F010	D
2	MW-5	D20180918001-1	07S01E03F011	D
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW1	D20180918005-1	07S01E03F008	D
7	MW3		07S01E03F007	D
8	MW2	D20180918004-1	07S01E03F009	D

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D20190749003

Well Owner:	**Property Owner:**	Name of Business/Residence at Site:
1936 Alum Rock Avenue LLC	1936 Alum Rock Avenue LLC	VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022	Telephone No.: 208.461.0022	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant:	Drilling Company:	
Ryan Geologic & Environmental Services, Inc.	Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.:	Owner/Consultant Well No.:	Original Well Construction Permit No.:
07S01E03F013	MW-7	C20160927004
Well Casing Depth: 28 FT BGL	**Total Boring Depth:** 28 FT BGL	**Well Casing Diameter:** 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.:	Caseworker Name:
Farmer's Supp SCVWDID No. 07S1E03F03f	Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:			
1.	Outer conductor casing?	☐ Yes	☐ No
2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

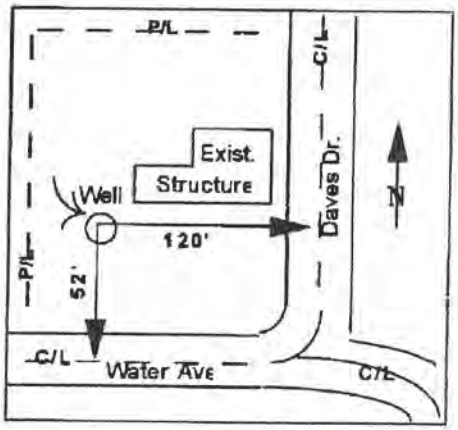
WELL DESTRUCTION APPLICATION

SITE PLAN

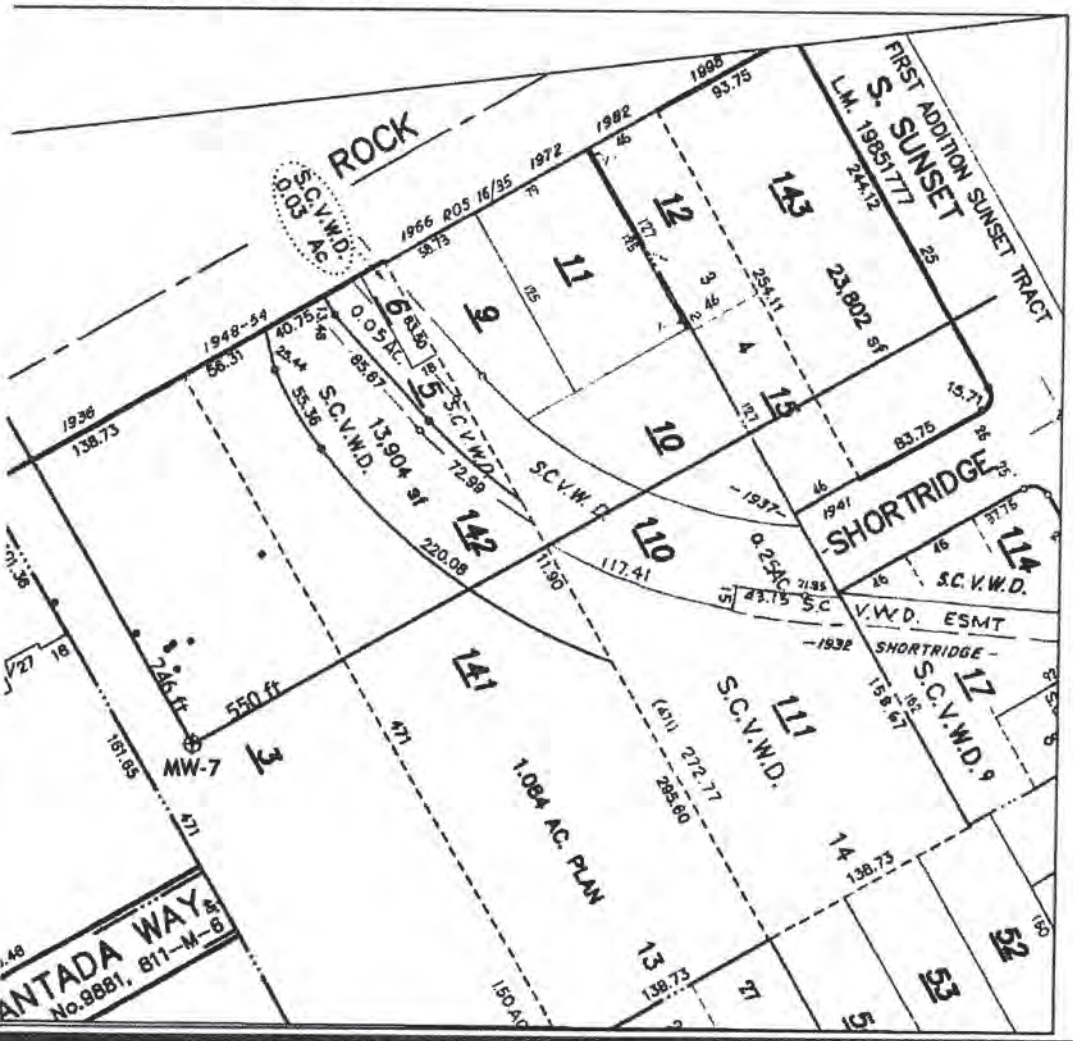
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.6 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature	Print Name:	Date:
Signature of Well Owner/Agent:	Caleb Roope	6/17/2019
Signature of Property Owner/Agent:	Caleb Roope	6/17/2019
Signature of Driller/Agent:	Ralph McGahey, V.P. Operations	9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Richard Ryan, PG	Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 28 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by: Charles E. Kanter — Date: 7/17/19

District Permit No.:	Date Issued:	Expiration Date:	Driller's Log No.:
D20190719003	7/19/19	7/19/20	

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials**. An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

Project: WellTest, Inc. (Project #5201) Project Name: Farmers Supply Project Location: 1936 Alum Rock Boulevard, San Jose, CA	**Log of Well MW-7** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

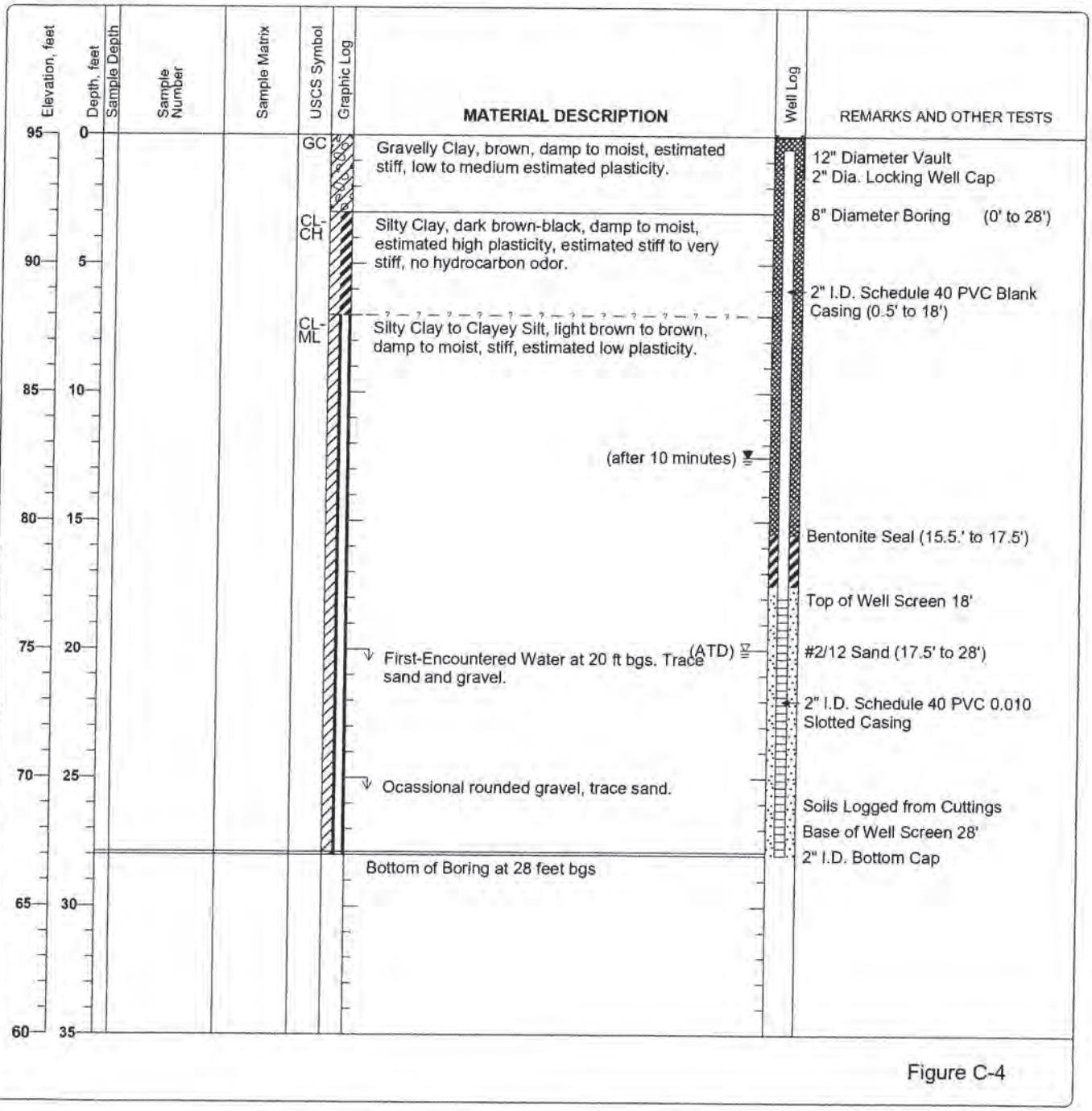


Figure C-4

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-7.bgs (07-10-11.tpl]

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C2016092700 4	
Well Owner: DAVID MIJARES	Owner Well No.: MW-7	Well Registration No.: 07S01EC3F013	
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE	
Drilling Company: EXPLORATION GEOSERVICES	Consultant: WELL TEST		
Cond. Bore: —	Conductor Depth: —	Conductor Diameter & Material: —	TD: 28'
Boring Diameter: 8"	BOC: 28'		
Casing Diameter & Material: 2" PVC	Slot Size: 0.010"	Screen Interval(s): 18-28'	
Filter Pack Material: 2/2 SAND	Filter Pack Interval(s): 17.5-28'	Bent: 15.5-17.5'	Seal Depth: 17.5'

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 240 ft. N/S S.SE ℄ ALUM ROCK AVE 335 ft. E/W E.NE ℄ McCREERY AVE

GPS Coordinates: Lat. Long.

Comments:

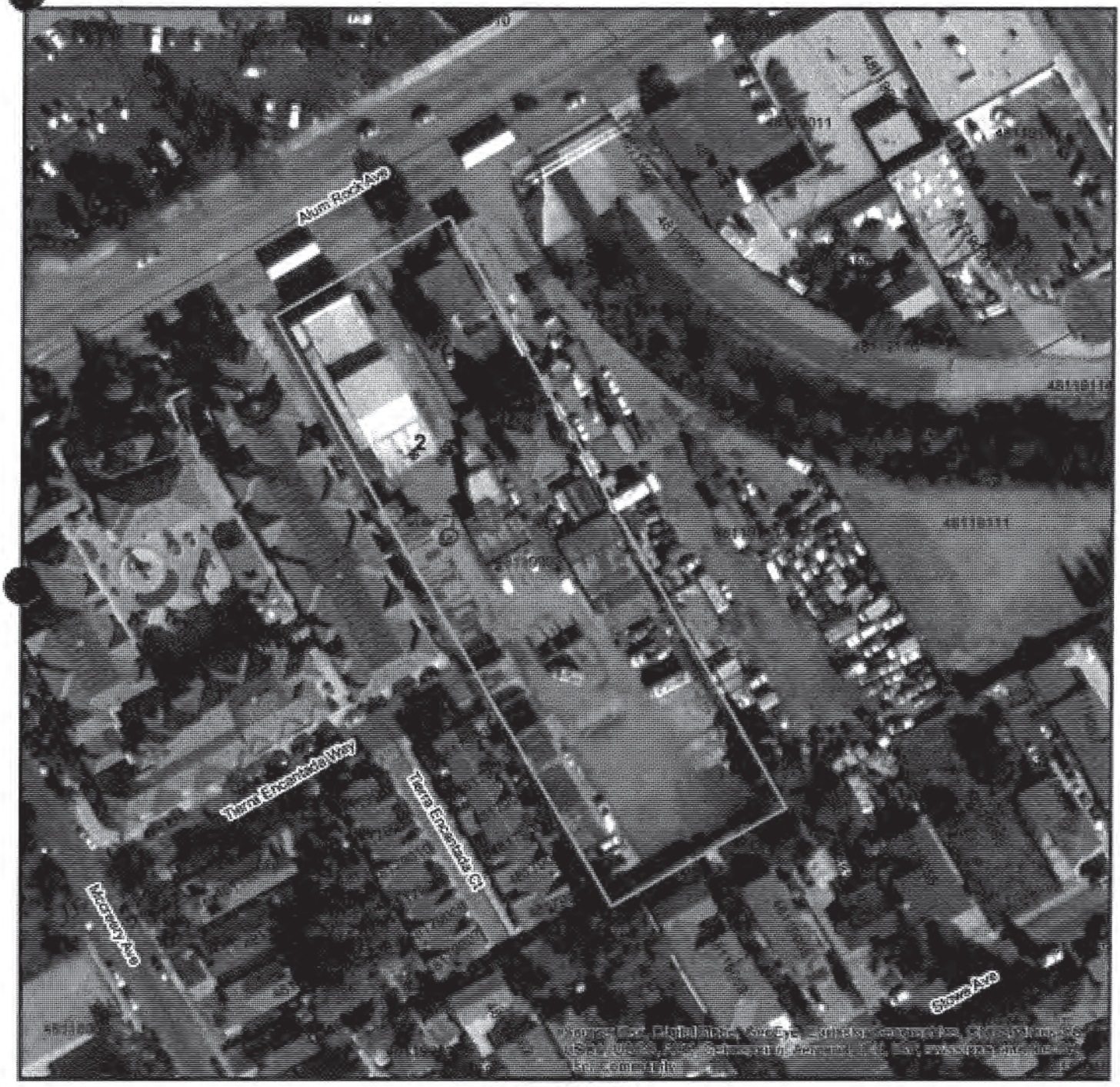
Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

07S01E03F013

BLUE LAGOON AQUARIUM

APN 481-19-003
1936 ALUM ROCK AVE.
SAN JOSE, CA 95116

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614



Approximate Scale

0 — 300 — 600 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined

Parcels

9/27/2016

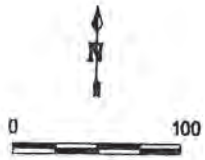
ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-1	07W00280	07S01E03F008	A
2	MW-3	07W00279	07S01E03F007	A
3	MW-2	07W00281	07S01E03F009	A

LEGEND

- Groundwater Monitoring Well
- Temporary Groundwater Monitoring Well
- Area of January 2016 Over-Excavation of former Gasoline UST Pit

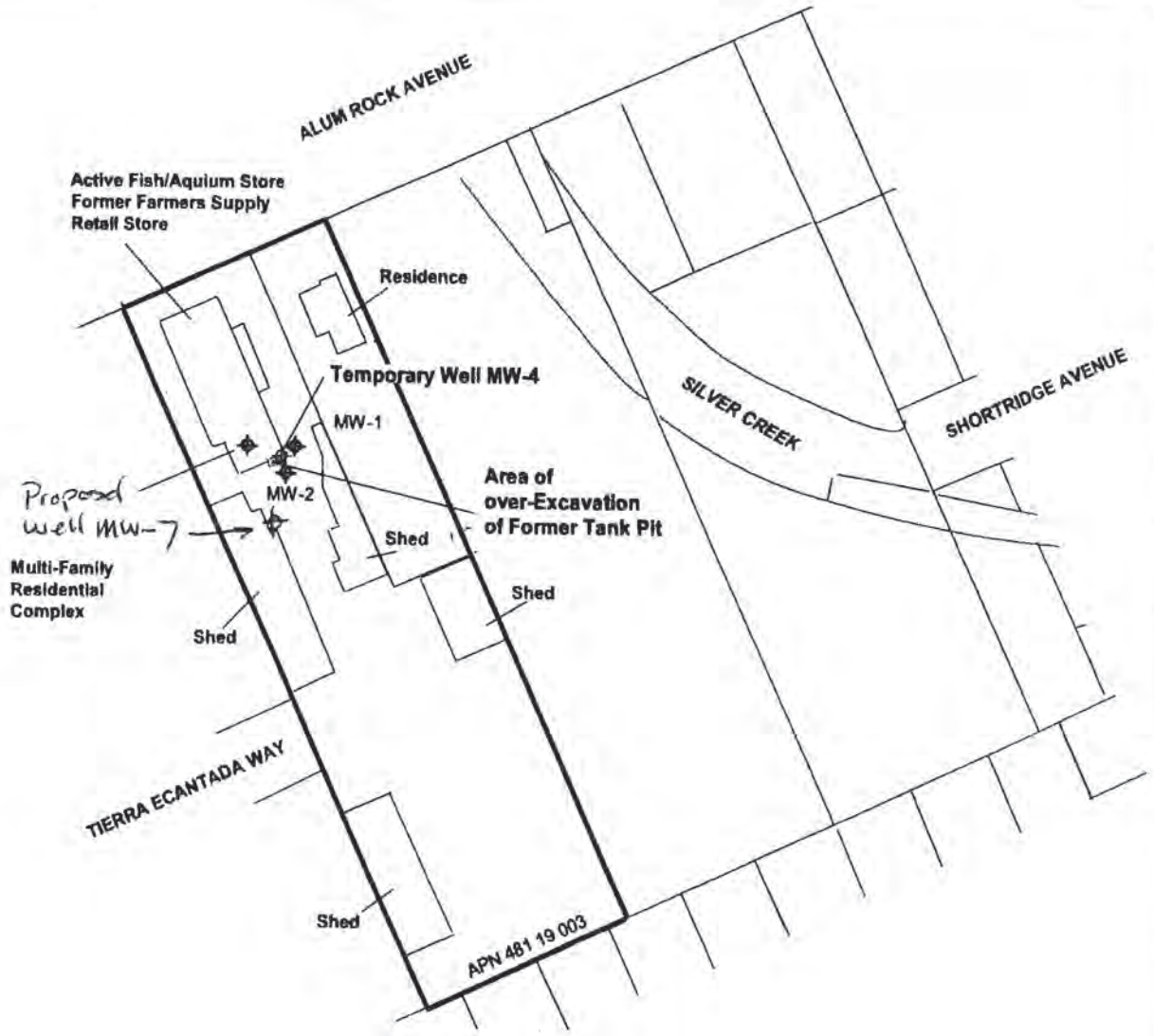
Groundwater Flow Direction Rose Diagram
Rose Diagram Derived with a 3-Point Solution using Water Level Data Obtained from Wells MW-1, MW-2, and MW-3 on the Following Dates:

09/30/11
10/22/11
11/29/11
01/23/12
04/30/12
06/07/12
12/30/13



APPROXIMATE SCALE IN FEET

ALL LOCATIONS ARE APPROXIMATE.
BASEMAP FROM OFFICE OF COUNTY ASSESSOR - SANTA CLARA COUNTY, CA (EFFECTIVE ROLL YEAR 2010-2011)



WellTest, Inc.
License No. 843074
P.O. Box 8548
San Jose, CA 95155
Phone (408) 287-2175

EXTENDED SITE MAP -- SHOWING A-ZONE MONITORING WELLS (MW-1, MW-2, MW-3 AND MW-4) AND THE AREA OF THE 14-FT LONG, 12-FT WIDE, AND 14.5-FEET DEEP EXCAVATION (JANUARY 2016)

FARMERS SUPPLY
1936 ALUM ROCK AVENUE
SAN JOSE, CALIFORNIA

FIGURE 2

File: 5007/Figure 2

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328536

Page 1 of 3

Owner's Well Number MW-7

Date Work Began 10/01/2016 Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927004 Permit Date 9/27/16

DWR Use Only – Do Not Fill In

State Well Number/Site Number: 07S01E03F013

Latitude N / Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Drilling Fluid

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
		See Attached Well Log

Total Depth of Boring 28 Feet

Total Depth of Completed Well 28 Feet

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude ___ Deg ___ Min ___ Sec. N Longitude ___ Deg ___ Min ___ Sec. W

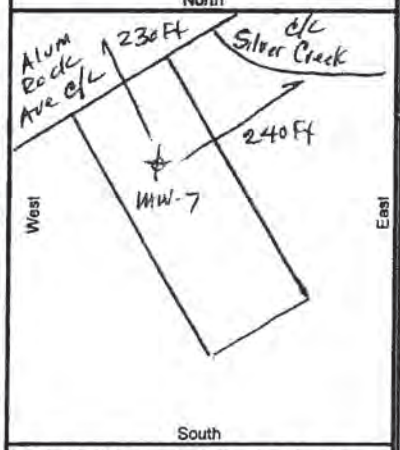
Datum NAD83 Dec. Lat. 37.3544776 Dec. Long. -121.8503498

APN Book 481 Page 19 Parcel 003

Township ___ Range ___ Section ___

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 20 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	18	8	Blank	Sch 40 PVC	0.154	2.375		
18	28	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	15.5	Cement	Neat Cement
15.5	17.5	Bentonite	Hydrated Bentonite
17.5	28.0	Filter Pack	#2/12 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc.
Person, Firm or Corporation

PO Box 8548 Address San Jose City CA State 95155 Zip

Signed Exploratory For Environmental C-57 Licensed Water Well Contractor

11/10/16 Date Signed

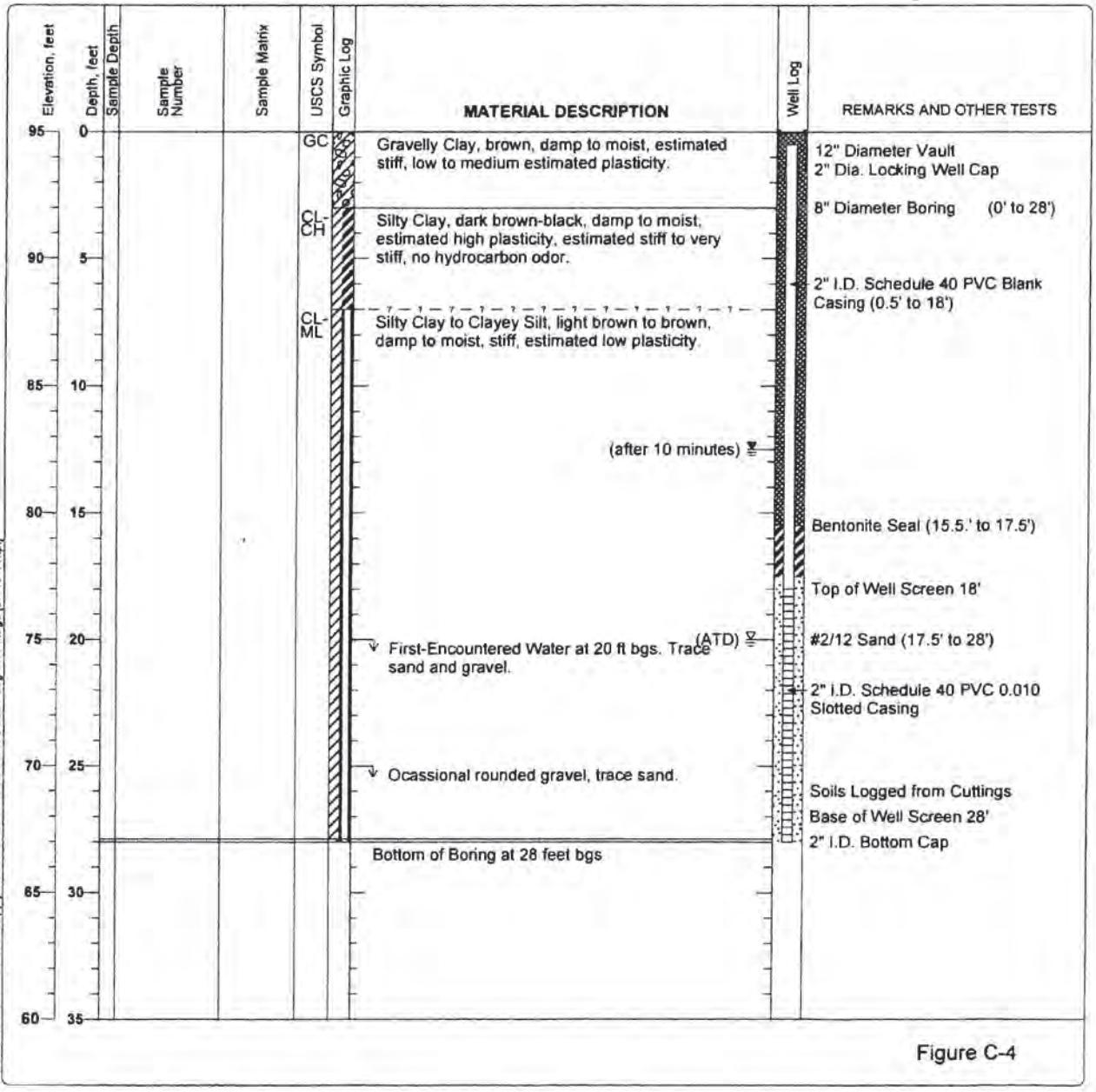
484288 C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

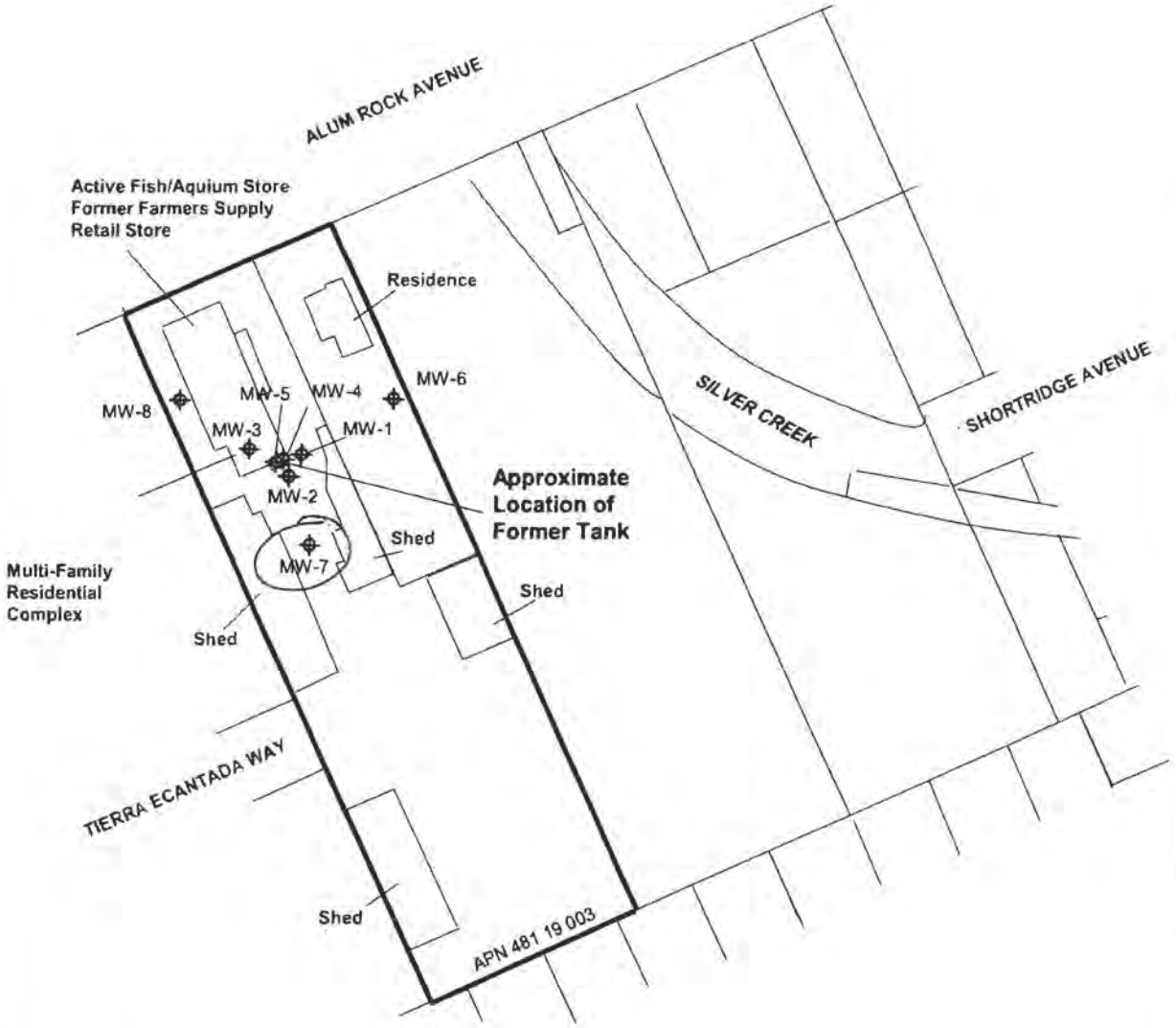
Project: WellTest, Inc. (Project #5201) Project Name: Farmers Supply Project Location: 1936 Alum Rock Boulevard, San Jose, CA	**Log of Well MW-7** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **20 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	



J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-7.bgs [07-10-11.tpl]

Figure C-4



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C2016092700 4
Well Owner: DAVID MIJARES	Owner Well No.: MW-7	Well Registration No.: 07S01E03F013
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE
Drilling Company: EXPLORATION GEOSERVICES	Consultant: WELLTEST	

Cond. Bore: —	Conductor Depth: —	Conductor Diameter & Material: —	TD: 28'	Boring Diameter: 8"	BOC: 28'
Casing Diameter & Material: 2" PVC	Slot Size: 0.010"	Screen Interval(s): 18-28'			
Filter Pack Material: 2/12 SAND	Filter Pack Interval(s): 17.5-28'	Bent: 15.5-17.5'	Seal Depth: 17.5'		

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 240 ft. N/S S.SE ℄ ALUM ROCK AVE 335 ft. E/W E.NE ℄ McCREERY AVE

GPS Coordinates: Lat. Long.

Comments:

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

TO BE COMPLETED BY DISTRICT

District Permit No.: C2016092700 4	Date Issued: 9-27-16	Well Registration No.: 07S01E03F013
Geologic Setting: 1	Expiration Date: 9-27-17	Driller's Log No.:

TO BE COMPLETED BY OWNER AND DRILLER

Well Owner: Mr. David Mijares	Property Owner: Mr. David Mijares	Name of Business at Well Site: Blue Lagoon Aquarium
Well Owner's Mailing Address: 1639 Trona Way City, State, Zip San Jose, CA 95125-5055	Property Owner's Mailing Address: 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116-2003
Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No.: 408-836-6358

Owner's/Consultant's Well No.: MW-7 | Assessor's Parcel No. of **Well Site**: Book 481 Page 19 Parcel 003

Consultant (Company): WellTest, Inc.	Drilling Company: Exploration Geoservices, Inc.	
Address: P.O. Box 8545 City, State, Zip San Jose, CA 95155-8545	Address: 1535 Industrial Avenue City, State, Zip San Jose, CA 95112	
Telephone No.: 408-287-2175 Office; 408-460-1884 Mobile	Telephone No.: 408-280-6822	C-57 License No.: 484288
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Case Name/No.: Farmers Supply/07S1E03F03f	Caseworker Name: Aaron Costa
Oversight Agency: Santa Clara County DEH	Caseworker Telephone No.: 408-918-1954

Signature of Responsible Professional | 09-21-2016 Date | William R. Dugan Print Name | (No substitution of signature will be accepted)

Civil Engineer Registration No. | OR | PG #6253 Geologist Registration No.

Estimated Depth of Completed Well: ☒ Less than 50 feet ☐ 50 to 300 feet ☐ Over 300 feet ☐ Other:

Well is to be constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On District property/easement*
*See General Condition E, page 2

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

Other wells exist on this property? ☒ Yes ☐ No If yes, status: ☒ Active ☐ Inactive ☐ Abandoned

RECEIVED
SEP 21 2016
S.C.V.W.D.
WELLS

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and the conditions of this permit (see page 2). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ. I also understand that it is my responsibility, as the well owner, to notify the District of any changes in the purpose of this well, from which, is indicated on this application.

Signature of Property Owner/Agent:	Date: 09/21/2016	Print Name of Property Owner/Agent: William R. Dugan (as Agent)
Signature of Well Owner/Agent:	Date: 09/21/2016	Print Name of Well Owner/Agent: William R. Dugan (as Agent)
Signature of Well Driller/Agent:	Date: 09/21/2016	Print Name of Driller/Agent: William R. Dugan (as Agent)
Signature of Consultant/Agent:	Date: 09/21/2016	Print Name of Consultant/Agent: William R. Dugan (as Agent)

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District Well Inspection Department prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

WELL CONSTRUCTION APPLICATION

DISTRICT WELL PERMIT NO.: C20160927004

Based on information on this application and attachment(s) hereto (if any) and subject to approval noted below, permission is hereby granted to construct (drill) the described well. Permission to start work may be withheld until a field check verifies all statements made on application by permittee and is also subject to the "General" and "Special" Conditions stated below.

SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVAL (Water Supply Well Only)

NOTE: Department of Environmental Health approval must be granted before this application will be accepted by Santa Clara Valley Water District.

Approved by: , R.E.H.S	☐ Approved as submitted ☐ Approved as corrected
	Date:

SITE PLAN

A 8½" x 11" paper site plan **must** be attached to this application, including:

1. Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.
2. North arrow and scale
3. Location of proposed well with dimensions in feet from well to nearest cross streets.

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before construction of the annular seal.** An authorized District representative must be on site to witness the construction of the annular seal. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification, under penalty of perjury, that the well was constructed in accordance with the District Well Standards and with the permit conditions.

B. Permittee agrees to construct, operate, and maintain the well according to provisions of the latest District Ordinance and the latest published revisions of District Well Standards to the end that this well will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety, or welfare of the people of the District.

C. This permit is valid only for the purpose specified herein. Well construction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative finds that site conditions warrant such a change).

D. This permit is only valid for the Assessor's Parcel No. indicated on it.

E. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that was constructed under this permit must be destroyed in accordance with District and State Well Standards.

F. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).

G. Before the well constructed under this permit can be used as a drinking water source, its use must be approved by the regulatory agency with authority over such use (typically the Santa Clara County Department of Environmental Health or the State of California Department of Public Health). A completed Well Inventory Form must also be approved.

H. If the well constructed under this permit cannot be or is not being used for its intended purpose, permittee is hereby required to destroy the well according to the District Well Standards and under permit from the District. Any test holes drilled under this permit must be destroyed within 24 hours of completion of testing activities. Destruction activities must be completed according to District standards. District must be notified a minimum of 24 hours prior to destruction.

I. Within 30 days of the completion of the well construction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and mail the original to the District's Wells and Water Production Unit.

J. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees, free and harmless from any and all expense, cost, and liability in connection with or resulting from the granting or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

K. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

L. A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.

M. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials or waters generated during drilling, well construction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must not be allowed to move off the property where the work is being completed.

N. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with District.

O. This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension of the permit expiration date is granted by an authorized District representative.

P. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

Q. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

SPECIAL CONDITIONS

Community Projects Review Unit Approval (if needed):	CPRU Permit No.:
Approved by:	Date: 9-27-16

Please allow 10 working days to process this application.

1936 ALUM ROCK AVE., LLC

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

Valley Water

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

7/19/2019

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	D20180918002-1	07S01E03F010	D
2	MW-5	D20180918001-1	07S01E03F011	D
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW1	D20180918005-1	07S01E03F008	D
7	MW3		07S01E03F007	D
8	MW2	D20180918004-1	07S01E03F009	D

Santa Clara Valley Water District

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

▶ Please complete all information.

DISTRICT PERMIT NO.: D 2019071900 2

Well Owner: 1936 Alum Rock Avenue LLC	**Property Owner:** 1936 Alum Rock Avenue LLC	Name of Business/Residence at Site: VACANT
Well Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	Property Owner's Mailing Address: c/o Pacific West Communities, inc. attn: Caleb Roope City, State, Zip 430 East State Str; Suite 100; Eagle , ID 83616	**Address of Well Site:** 1936 Alum Rock Avenue City, State, Zip San Jose, CA 95116
Telephone No.: 208.461.0022	Telephone No.: 208.461.0022	Assessor's Parcel No. of **Well Site:** Book 481 Page 19 Parcel 03

☐ Well on District property/easement (See General Condition E.)

Consultant: Ryan Geologic & Environmental Services, Inc.	Drilling Company: Cascade Drilling	
Address: PO Box 525 City, State, Zip McCloud, CA 96057	Address: 3000 Duluth Street City, State, Zip Sacramento, CA 95691	
Telephone No.: 530.925.4932	Telephone No.: 916.638.1169	C-57 License No.: 938110
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed	

▶ **All questions below are to be completed before permit can be issued; if unknown, applicant shall make on-site investigation to determine correct answers.**

WELL INFORMATION

Well Registration No.: 07S01E03F014	Owner/Consultant Well No.: MW-8	Original Well Construction Permit No.: C20160927005
Well Casing Depth: 28 FT BGL	Total Boring Depth: 28 FT BGL	Well Casing Diameter: 2-inch

This Section to Be Completed for All Monitoring Wells or Extraction/Recovery Wells

Case Name/No.: Farmer's Supp SCVWDID No. 07S1E03F03f	Caseworker Name: Travis Flora
Oversight Agency: Santa Clara County Dept Env Health;	Caseworker Telephone No.: 408.918.3486

WELL TYPE/USE	☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
	☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

ADDITIONAL QUESTIONS FOR WATER PRODUCING WELLS

Does the well have:	1.	Outer conductor casing?	☐ Yes	☐ No
	2.	Annular cement seal outside of casing at surface?	☐ Yes	☐ No
	3.	A S.C.V.W.D. water meter attached?	☐ Yes	☐ No

Original Drilling Method: _____

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

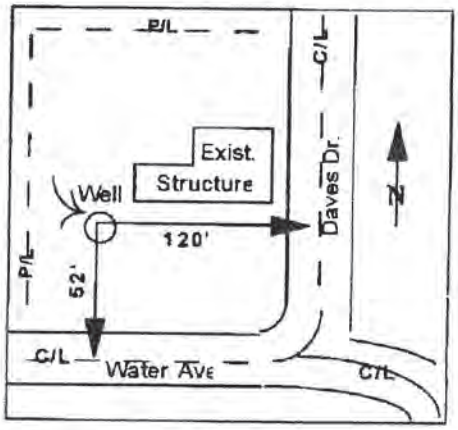
WELL DESTRUCTION APPLICATION

SITE PLAN

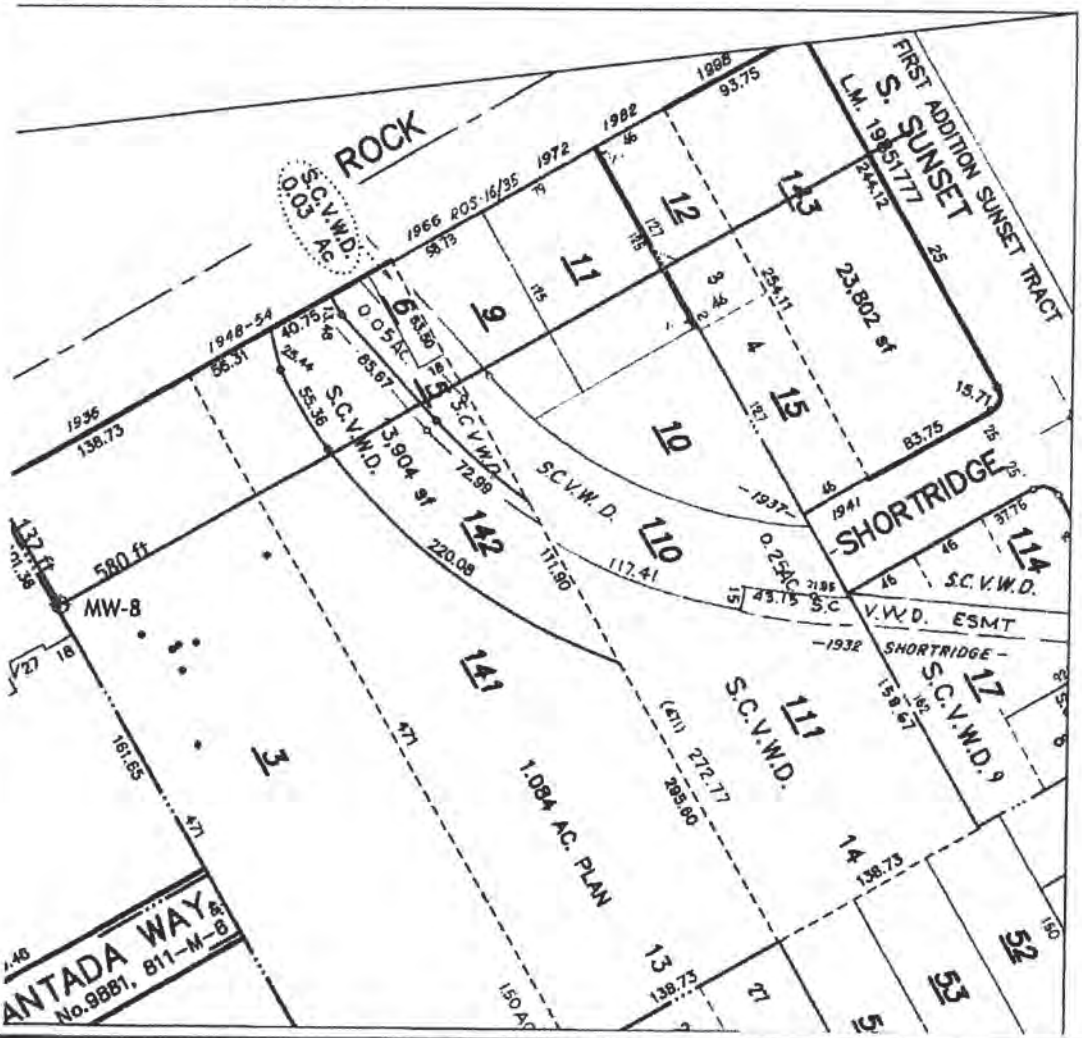
Well Location
(Draw accurately; recommend using assessor's map):

1. Sketch well location to scale; show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named streets, roads, or highways.

EXAMPLE:



Sketch well location as described above:



Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

FC 198 (03-26-15)

Please describe in detail, the proposed destruction method (Any well destruction in which the well casing is left in place and in which the well has a filter pack outside the casing, must be destroyed using approved neat cement grout):

Fill estimated casing volume of 4.6 gallons with neat cement grout (4@94 lbs cemet/55-gal potable water) using tremie pipe method.

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Well Ordinance 90-1, the District Well Standards, and conditions of this permit (see page 4). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ.

Signature of Well Owner/Agent:	Print Name: Caleb Roope	Date: 6/17/2019
Signature of Property Owner/Agent:	Print Name: Caleb Roope	Date: 6/17/2019
Signature of Driller/Agent:	Print Name: Ralph McGahey, V.P. Operations	Date: 9/07/2018
Signature of Consultant/Agent (if any): Richard Ryan	Print Name: Richard Ryan, PG	Date: Sept 7, 2018

DISTRICT USE ONLY

The District has approved the following destruction methods for the well described in this permit:

☒ Pressure Grout Method (as outlined in Standards)
NOTE: Neat cement is the only sealing material approved for pressure grouting.

OR

☒ Drill out well to a total depth of 28 feet, with a minimum bore of 8 Inches.

☐ Clean out well casing to a total depth of _____ feet and back fill with approved sealing material (if total depth is unknown, driller must determine total depth during clean out of well). NOTE: Neat cement is the only sealing material approved for back filling gravel packed wells.

☐ Well casing must be perforated at the following depths prior to backfilling: _____

☐ Other: _____

Permit Approved by: Charles W. Kanter			Date: 7/17/19
District Permit No.: D2019071900 2	Date Issued: 7/19/19	Expiration Date: 7/20/19	Driller's Log No.:

Please allow 10 working days to process this application.

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

WELL DESTRUCTION APPLICATION

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before the placement of the well destruction sealing materials.** An authorized District representative must be on site to witness the destruction activities. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification under penalty of perjury that the well was destroyed in accordance with the District Well Standards and with the permit conditions.

B. This permit is valid only for the purpose specified herein. Well destruction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative believes that site conditions warrant such a change).

C. This permit is only valid for the Assessor's Parcel No. indicated on it.

D. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that is being destroyed under this permit may be required to be reconstructed in accordance with District and State Well Standards.

E. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2350, 2217, or 2253).

F. Within 30 days of the completion of the well destruction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and submit the original to the District's Wells and Water Production Unit.

G. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees free and harmless from any and all expense, cost, and liability in connection with or resulting from, the granting of or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

H. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

I. A current C-57 Water Well Drilling Contractor's License is required for the destruction of all wells.

J. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials generated during drilling, well destruction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials/waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters shall not be allowed to move off the property where the work is being completed.

K. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with the District.

L. This permit shall expire if not exercised within 180 calendar days of its approval unless an extension of the permit expiration date is granted by an authorized District representative.

M. If the well approved to be destroyed under this permit is a monitoring well, associated with an investigation/cleanup overseen by a regulatory agency, the proposed well destruction must be approved by the person with regulatory authority over the investigation/cleanup.

N. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

O. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

Please allow 10 working days to process this application.

Project: WellTest, Inc. (Project #5201) Project Name: Farmers Supply Project Location: 1936 Alum Rock Boulevard, San Jose, CA	**Log of Well MW-8** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **19 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

Elevation, feet	Depth, feet	Sample Depth	Sample Number	Sample Matrix	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
95	0				GC		Gravelly Clay, brown, damp to moist, estimated stiff, low to medium estimated plasticity.		12" Diameter Vault 2" Dia. Locking Well Cap
									8" Diameter Boring (0' to 28')
90	5				CL-CH		Silty Clay, dark brown-black, damp to moist, estimated high plasticity, estimated stiff to very stiff, no hydrocarbon odor.		2" I.D. Schedule 40 PVC Blank Casing (0.5' to 18')
					CL-ML		Silty Clay to Clayey Silt, light brown to brown, damp to moist, stiff, estimated low plasticity.		
85	10								
							(after 10 minutes) ▼		
80	15								Bentonite Seal (15.5.' to 17.5')
									Top of Well Screen 18'
							(ATD) ▽		
75	20						First-Encountered Water at 19 ft bgs. Trace sand and gravel.		#2/12 Sand (17.5' to 28')
									2" I.D. Schedule 40 PVC 0.010 Slotted Casing
70	25								Soils Logged from Cuttings
									Base of Well Screen 28'
									2" I.D. Bottom Cap
							Bottom of Boring at 28 feet bgs		
65	30								
60	35								

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-8.bgs [07-10-11.tpl]

Figure C-5

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C20160927005	
Well Owner: DAVID MIJARES	Owner Well No.: MW-8	Well Registration No.: 07S01E03F014	
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE	
Drilling Company: EXPLORATION GEOSERVICES		Consultant: WELLTEST	

Cond. Bore: —	Conductor Depth: —	Conductor Diameter & Material: —	TD: 28'	Boring Diameter: 8"	BOC: 28'
Casing Diameter & Material: 2" PVC	Slot Size: 0.010"	Screen Interval(s): 18-28'			
Filter Pack Material: 2/12 SAND	Filter Pack Interval(s): 17.5-28'	Bent: 15.5-17.5'		Seal Depth: 17.5'	

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 125 ft. N/S S-SE ℄ ALUM ROCK AVE 305 ft. E/W E-NE ℄ MC CREERY AVE

GPS Coordinates: Lat. Long.

Comments:

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

07S01E03IF014

BLUE LAGOON AQUARIUM

APN 481-19-003
1936 ALUM ROCK AVE.
SAN JOSE, CA 95116

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Approximate Scale

0 — 300 — 600 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

9/27/2016

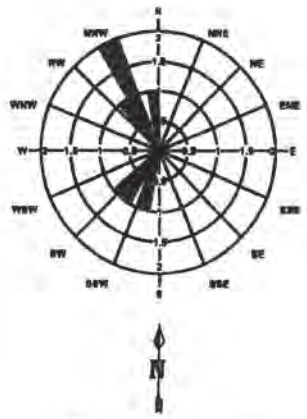
ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-1	07W00280	07S01E03F008	A
2	MW-3	07W00279	07S01E03F007	A
3	MW-2	07W00281	07S01E03F009	A

LEGEND

- Groundwater Monitoring Well
- Temporary Groundwater Monitoring Well
- Area of January 2016 Over-Excavation of former Gasoline UST Pit

Groundwater Flow Direction Rose Diagram
Rose Diagram Derived with a 3-Point Solution using Water Level Data Obtained from Wells MW-1, MW-2, and MW-3 on the Following Dates:

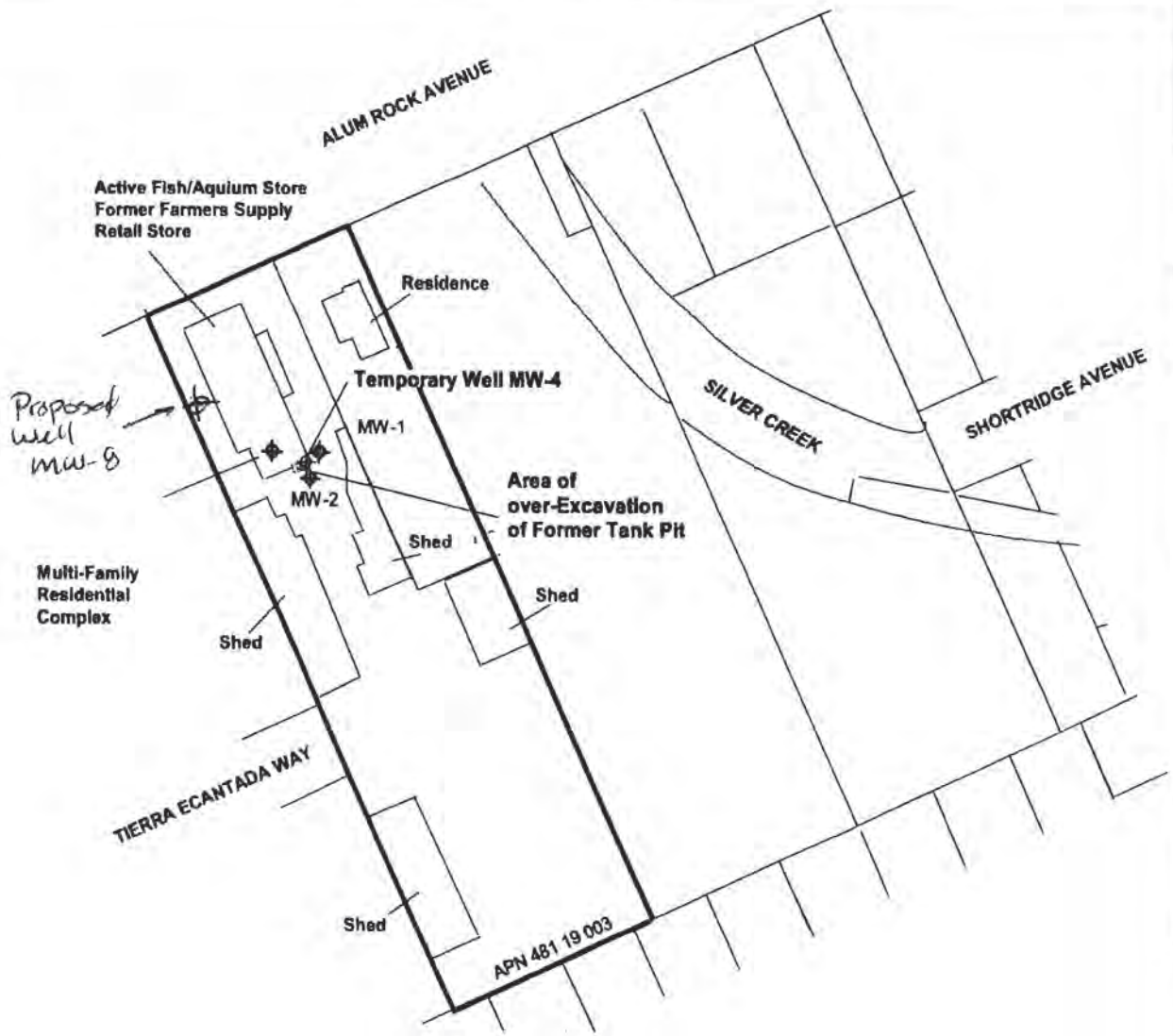
09/30/11
10/22/11
11/29/11
01/23/12
04/30/12
06/07/12
12/30/13



0 100

APPROXIMATE SCALE IN FEET

ALL LOCATIONS ARE APPROXIMATE. BASEMAP FROM OFFICE OF COUNTY ASSESSOR - SANTA CLARA COUNTY, CA (EFFECTIVE ROLL YEAR 2010-2011)



WellTest, Inc.
License No. 843074
P.O. Box 8548
San Jose, CA 95155
Phone (408) 287-2175

EXTENDED SITE MAP -- SHOWING A-ZONE MONITORING WELLS (MW-1, MW-2, MW-3 AND MW-4) AND THE AREA OF THE 14-FT LONG, 12-FT WIDE, AND 14.5-FEET DEEP EXCAVATION (JANUARY 2016)

FARMERS SUPPLY
1936 ALUM ROCK AVENUE
SAN JOSE, CALIFORNIA

FIGURE 2

File: 5007/Figure 2

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0328539

Page 1 of 3

Owner's Well Number MW-8

Date Work Began 10/01/2016   Date Work Ended 10/1/2016

Local Permit Agency Santa Clara Valley Water District

Permit Number C201160927005   Permit Date 9/27/16

DWR Use Only – Do Not Fill In

07S01E03F014

State Well Number/Site Number

Latitude N   Longitude W

APN/TRS/Other

Geologic Log

Orientation ⦿ Vertical O Horizontal O Angle Specify ____

Drilling Method ____ Drilling Fluid ____

Depth from Surface Feet to Feet		Description (Describe material, grain size, color, etc)
		See Attached Well Log

RECEIVED
NOV 11, 2016
S.C.V.W.D.
WELLS

Total Depth of Boring 28 Feet

Total Depth of Completed Well 28 Feet

Well Owner

Name Mr. David Mijares

Mailing Address 1639 Trona Way

City San Jose State CA Zip 95125-5055

Well Location

Address 1936 Alum Rock Avenue

City San Jose County Santa Clara

Latitude ____ Deg ____ Min ____ Sec N Longitude ____ Deg ____ Min ____ Sec W

Datum NAD83 Dec. Lat. 37.3547067 Dec. Long. -121.8506408

APN Book 481 Page 19 Parcel 003

Township ____ Range ____ Section ____

Location Sketch

(Sketch must be drawn by hand after form is printed.)

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

⦿ New Well
O Modification/Repair
O Deepen
O Other ____
O Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

O Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
O Cathodic Protection
O Dewatering
O Heat Exchange
O Injection
⦿ Monitoring
O Remediation
O Sparging
O Test Well
O Vapor Extraction
O Other ____

Water Level and Yield of Completed Well

Depth to first water 20 (Feet below surface)

Depth to Static Water Level 12.5 (Feet) Date Measured 10/01/2016

Estimated Yield * 1 (GPM) Test Type ____

Test Length ____ (Hours) Total Drawdown ____ (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	18	8	Blank	Sch 40 PVC	0.154	2.375		
18	28	8	Screen	Sch 40 PVC	0.154	2.375	Milled Slots	0.010

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0.5	15.5	Cement	Neat Cement
15.5	17.5	Bentonite	Hydrated Bentonite
17.5	28.0	Filter Pack	#2/12 Sand

Attachments

☑ Geologic Log
☑ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☑ Other Site Map Showing Well

Attach 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 Bill Dugan of WellTest, Inc.
Person, Firm or Corporation

PO Box 8548 (Address) San Jose (City) CA (State) 95155 (Zip)

Signed ____ (C-57 Licensed Water Well Contractor) 11/10/16 (Date Signed) 484288 (C-57 License Number)

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Project: WellTest, Inc. (Project #5201) Project Name: Farmers Supply Project Location: 1936 Alum Rock Boulevard, San Jose, CA	**Log of Well MW-8** Sheet 1 of 1

Date(s) Drilled **October 1, 2016**	Logged By **Bill Dugan**	Checked By **Bill Dugan**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **28**
Drill Rig Type **Mobil B-40**	Drilling Contractor **Exploration Geoservices, Inc.**	Approximate Surface Elevation **95 feet USGS Quad**
Groundwater Level and Date Measured **19 feet ATD, 12.5 feet after 10 minutes**	Sampling Method(s) **Soils Logged from Cuttings**	Hammer Data
Borehole Backfill **Well Completion**	Location **See Figure 2 in WELLTEST Report #5201**	

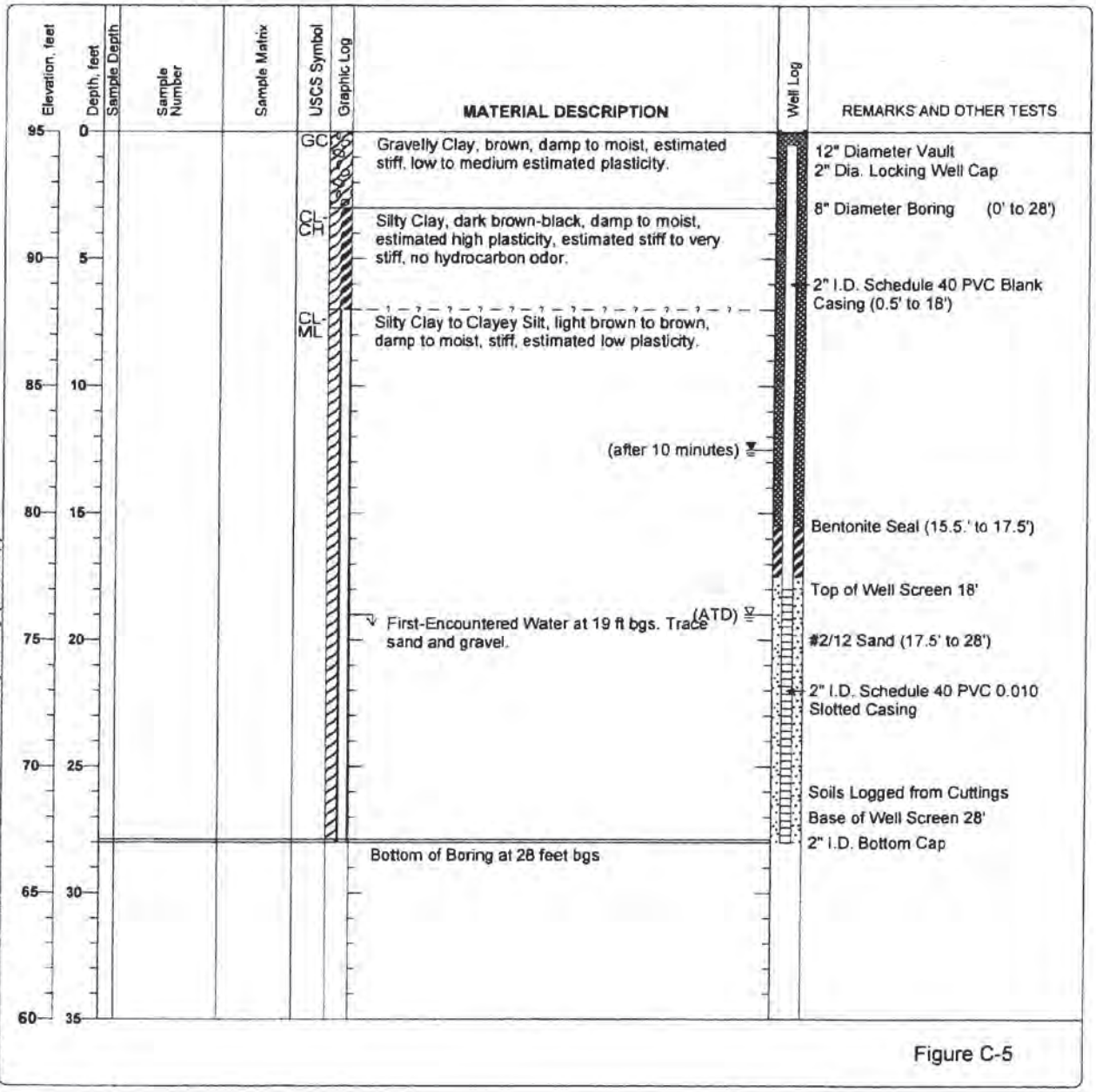
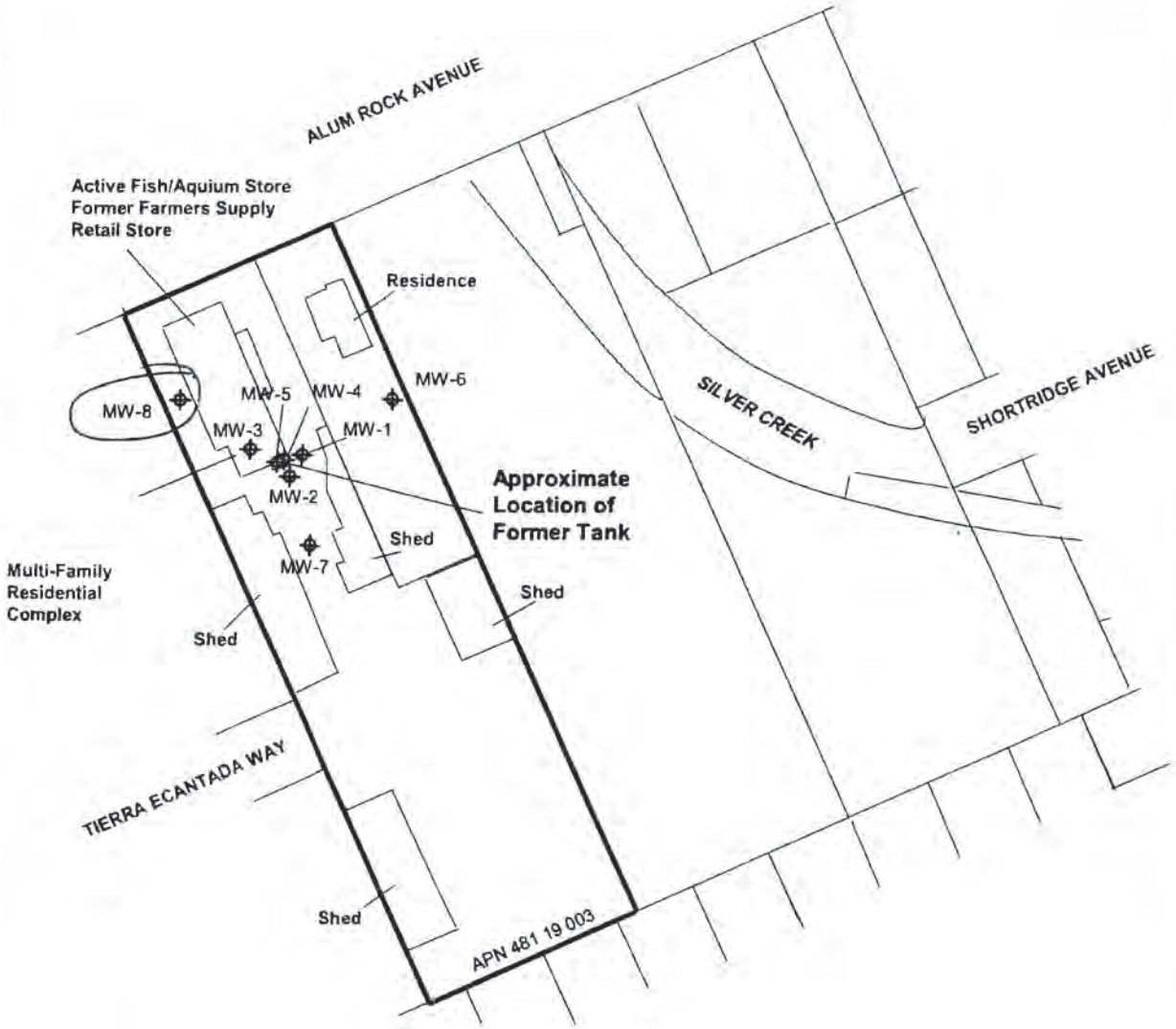


Figure C-5

J:\2017 Jobs\5201 Farmers Supply\5201 REPORT\Attachment C\5201 Log MW-8.bgs [07-10-11.tpl]



WellTest, Inc. P.O. Box 8548 San Jose, CA 95155	**EXTENDED SITE MAP** **SHOWING WELLS MW-1 THROUGH MW-8** FARMER'S SUPPLY 1936 ALUM ROCK AVENUE SAN JOSE, CALIFORNIA	**Figure** **2**

Santa Clara Valley Water District

WELL CONSTRUCTION COMPLETION NOTICE

FC 158A (05-16-14)

Inspector: RIPP	Date of Inspection: 10/01/16	Permit: C20160927005	
Well Owner: DAVID MIJARES	Owner Well No.: MW-8	Well Registration No.: 07S01E03F014	
Address of Well Site: 1936 ALUM ROCK AVE		City or County: SAN JOSE	
Drilling Company: EXPLORATION GEOSERVICES	Consultant: WELLTEST		

Cond. Bore:	Conductor Depth:	Conductor Diameter & Material:	TD:	Boring Diameter:	BOC:
—	—	—	28'	8"	28'

Casing Diameter & Material:	Slot Size:	Screen Interval(s):
2" PVC	0.010"	18-28'

Filter Pack Material:	Filter Pack Interval(s):	Bent:	Seal Depth:
2/12 SAND	17.5-28'	15.5-17.5'	17.5'

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite Slurry ☐ Other (See Comments)

Drilling Method: ☒ HSA ☐ Mud Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Air Rotary

Well Type: ☒ GW Monitoring ☐ GW Extraction ☐ Vadose Monitoring ☐ Vadose Extraction ☐ Cathodic ☐ Domestic ☐ Agricultural ☐ Municipal/Industrial ☐ Elevator ☐ Other (See Comments)

Well constructed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

Well Location: 125 ft. N/S S-SE ℄ ALUM ROCK AVE 305 ft. E/W E-NE ℄ MC CREERY AVE

GPS Coordinates: Lat. Long.

Comments:

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

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

WELL CONSTRUCTION APPLICATION

FC 158 (03-26-15)

TO BE COMPLETED BY DISTRICT

District Permit No.: C201609.27005	Date Issued: 9-27-16	Well Registration No.: 07S01E03F014
Geologic Setting:	Expiration Date: 9-27-17	Driller's Log No.:

TO BE COMPLETED BY OWNER AND DRILLER

Well Owner: Mr. David Mijares	Property Owner: Mr. David Mijares	Name of Business at Well Site: Blue Lagoon Aquarium
Well Owner's Mailing Address: 1639 Trona Way City, State, Zip: San Jose, CA 95125-5055	Property Owner's Mailing Address: 1936 Alum Rock Avenue City, State, Zip: San Jose, CA 95116-2003	Address of Well Site: 1936 Alum Rock Avenue City, State, Zip: San Jose, CA 95116-2003
Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No. & Contact Name: David Mijares 408-978-2231	Telephone No.: 408-836-6358

Owner's/Consultant's Well No.: MW-8 | Assessor's Parcel No. of Well Site: Book 481 Page 19 Parcel 003

Consultant (Company): WellTest, Inc.	Drilling Company: Exploration Geoservices, Inc.
Address: P.O. Box 8545 City, State, Zip: San Jose, CA 95155-8545	Address: 1535 Industrial Avenue City, State, Zip: San Jose, CA 95112
Telephone No.: 408-287-2175 Office; 408-460-1884 Mobile	Telephone No.: 408-280-6822 — C-57 License No.: 484288
☐ Check if address or phone number has changed	☐ Check if address or phone number has changed

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Case Name/No.: Farmers Supply/07S1E03F03f	Caseworker Name: Aaron Costa
Oversight Agency: Santa Clara County DEH	Caseworker Telephone No.: 408-918-1954

[signature] Signature of Responsible Professional — Date: 09-21-2016 — Print Name: William R. Dugan (No substitution of signature will be accepted)

Civil Engineer Registration No. OR Geologist Registration No.: PG #6253

Estimated Depth of Completed Well: ☒ Less than 50 feet ☐ 50 to 300 feet ☐ Over 300 feet ☐ Other

Well is to be constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On District property *See General Conditions

WELL TYPE/USE

☐ WATER PRODUCTION	☒ MONITORING	☐ REMEDIATION	☐ DEWATERING	☐ HEAT EXCHANGE	☐ INJECTION	☐ CATHODIC PROTECTION	☐ OTHER
☐ Agricultural ☐ Domestic ☐ Industrial ☐ Municipal	☒ GW Level ☒ GW Quality ☐ Inclinometer ☐ Vapor ☐ Other	☐ Air Sparge ☐ GW Extraction ☐ Material Emplacement ☐ Vapor Extraction ☐ Other	☐ Permanent ☐ Temporary	☐ Closed Loop ☐ Open Loop	☐ Groundwater Cleanup Reinjection ☐ Stormwater ☐ Water Supply Recharge ☐ Other		

Other wells exist on this property? ☒ Yes ☐ No If yes, status: ☒ Active ☐ Inactive ☐ Abandoned

RECEIVED SEP 21 2016 S.C.V.W.D. WELLS

SIGNATURES

I understand and agree that all work associated with this permit is required to be done in accordance with Santa Clara Valley Water District (District) Ordinance 90-1, the District Well Standards, and the conditions of this permit (see page 2). I certify that the information given in this permit is correct to the best of my knowledge and that the signature below, whether original, electronic, or photocopied, is authorized and valid, and is affixed with the intent to be enforceable. I also certify that a right of entry/encroachment agreement has been formalized between the well owner and property owner, if parties differ. I also understand that it is my responsibility, as the well owner, to notify the District of any changes in the purpose of this well, from which, is indicated on this application.

Signature of Property Owner/Agent: [signature]	Date: 09/21/2016	Print Name of Property Owner/Agent: William R. Dugan (as Agent)
Signature of Well Owner/Agent: [signature]	Date: 09/21/2016	Print Name of Well Owner/Agent: William R. Dugan (as Agent)
Signature of Well Driller/Agent: [signature]	Date: 09/21/2016	Print Name of Driller/Agent: William R. Dugan (as Agent)
Signature of Consultant/Agent: [signature]	Date: 09/21/2016	Print Name of Consultant/Agent: William R. Dugan (as Agent)

IMPORTANT: A minimum 24-hour notice must be given to Santa Clara Valley Water District Well Inspection Department prior to installing the annular seal. Call (408) 265-2607, ext. 2660. Please allow 10 working days to process permit application.

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

WELL CONSTRUCTION APPLICATION

DISTRICT WELL PERMIT NO.: C2016092705

Based on information on this application and attachment(s) hereto (if any) and subject to approval noted below, permission is hereby granted to construct (drill) the described well. Permission to start work may be withheld until a field check verifies all statements made on application by permittee and is also subject to the "General" and "Special" Conditions stated below.

SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH APPROVAL (Water Supply Well Only)

NOTE: Department of Environmental Health approval must be granted before this application will be accepted by Santa Clara Valley Water District.

Approved by: _____ , R.E.H.S	☐ Approved as submitted ☐ Approved as corrected
	Date:

SITE PLAN

A 8½" x 11" paper site plan **must** be attached to this application, including:

1. Location of site features, including major buildings, landscaped areas, tank fields, existing wells, etc.
2. North arrow and scale
3. Location of proposed well with dimensions in feet from well to nearest cross streets.

GENERAL CONDITIONS

A. **District** (telephone 408-265-2607, ext. 2660) **must be notified a minimum of one working day before construction of the annular seal.** An authorized District representative must be on site to witness the construction of the annular seal. This requirement may be waived by an authorized District representative. If the District waives the inspection requirement, the District may request the permittee(s) to furnish certification, under penalty of perjury, that the well was constructed in accordance with the District Well Standards and with the permit conditions.

B. Permittee agrees to construct, operate, and maintain the well according to provisions of the latest District Ordinance and the latest published revisions of District Well Standards to the end that this well will not cause pollution or contamination of groundwater or otherwise jeopardize the health, safety, or welfare of the people of the District.

C. This permit is valid only for the purpose specified herein. Well construction methods authorized under this permit may not be changed except by written approval of an authorized District representative, and only if the District believes that such a change will result in equal or superior compliance with the District and State Well Standards (e.g., if the District representative finds that site conditions warrant such a change).

D. This permit is only valid for the Assessor's Parcel No. indicated on it.

E. This permit may be voided if it contains incorrect information. If the permit is voided after work has begun, the well or boring that was constructed under this permit must be destroyed in accordance with District and State Well Standards.

F. If any work associated with this permit will take place on District property/easement, an encroachment or construction permit must be granted by the District's Community Projects Review Unit (telephone 408-265-2607, ext. 2589).

G. Before the well constructed under this permit can be used as a drinking water source, its use must be approved by the regulatory agency with authority over such use (typically the Santa Clara County Department of Environmental Health or the State of California Department of Public Health). A completed Well Inventory Form must also be approved.

H. If the well constructed under this permit cannot be or is not being used for its intended purpose, permittee is hereby required to destroy the well according to the District Well Standards and under permit from the District. Any test holes drilled under this permit must be destroyed within 24 hours of completion of testing activities. Destruction activities must be completed according to District standards. District must be notified a minimum of 24 hours prior to destruction.

I. Within 30 days of the completion of the well construction activities, the driller or consultant identified on this permit shall fully complete State of California DWR Form 188 and mail the original to the District's Wells and Water Production Unit.

J. The permittee(s) shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend, and hold the District, its officers, agents, and employees, free and harmless from any and all expense, cost, and liability in connection with or resulting from the granting or exercise of this permit including, but not limited to, property damage, personal injury, and wrongful death.

K. Permittees are required to be in full compliance with Cal/OSHA California Labor Code Section 6300.

L. A current C-57 Water Well Drilling Contractor's License is required for the construction of all wells.

M. Permittee, permittee's contractors, consultants, or agents shall be responsible to assure that all materials or waters generated during drilling, well construction, well development, pump testing, or other activities associated with this permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must not be allowed to move off the property where the work is being completed.

N. The driller and consultants (if applicable) shall have an active copy of their Worker's Compensation Insurance on file with District.

O. This permit shall expire if not exercised within 180 calendar days of its approval, unless an extension of the permit expiration date is granted by an authorized District representative.

P. This permit must be kept on site during all activities associated with it and shall immediately be presented to an authorized District representative upon request.

Q. Permittee shall notify Underground Service Alert (USA) at 1-800-227-2600 or 811 prior to any digging.

SPECIAL CONDITIONS

Community Projects Review Unit Approval (if needed):	CPRU Permit No.:
Approved by:	Date: 9-27-16

Please allow 10 working days to process this application.

1936 ALUM ROCK AVE., LLC

APN 481-19-003
1936 ALUM ROCK AVE
SAN JOSE, CA 95116

Valley Water

Approximate Scale

0 — 190 — 380 Feet

Wells

- A01: Water Supply - Active
- S: Water Supply - Standby
- IS01: Water Supply - Inactive
- A02: Extraction (Env) - Active
- I02: Extraction (Env) - Inactive
- A: Other - Active
- I: Other - Inactive
- B: Abandoned
- D: Destroyed
- Undet: Status Undetermined
- Parcels

7/19/2019

ID	CONSULTANT	PERMIT	WELLID	WELLSTATUS
1	MW-4	D20180918002-1	07S01E03F010	D
2	MW-5	D20180918001-1	07S01E03F011	D
3	MW-6	C20160927003-1	07S01E03F012	A
4	MW-7	C20160927004-1	07S01E03F013	A
5	MW-8	C20160927005-1	07S01E03F014	A
6	MW1	D20180918005-1	07S01E03F008	D
7	MW3		07S01E03F007	D
8	MW2	D20180918004-1	07S01E03F009	D

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009268

Owner's Well Number: MW-1 | Date Work Began: | Date Work Ended: 06/21/2007

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: 07W00280 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 30 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 6.04 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 30ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-1.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009270

Owner's Well Number: MW-2 | Date Work Began: | Date Work Ended: 06/21/2007

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: 07W00281 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 30 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 5.63 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 30ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-2.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009276

Owner's Well Number: MW-3 | Date Work Began: | Date Work Ended: 06/21/2007

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: 07W00279 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 30 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 6.42 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 30ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P
Person, Firm or Corporation

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-3.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

						N						W

Latitude Deg/Min/Sec **Longitude Deg/Min/Sec**

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009271

Owner's Well Number: MW-4 | Date Work Began: | Date Work Ended: 10/01/2016

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: 07W00281 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 30 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 6.44 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 30ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-4.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 10/18/2018

WCR2018-009274

Owner's Well Number: MW-5 | Date Work Began: | Date Work Ended: 10/01/2016

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: C20160927002-1 | Permit Date:

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK AVENUE LLC, Caleb Roope

Mailing Address: 430 East State Street; Suite 100

c/o Pacific West Communities, Inc

City: Eagle | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 Alum Rock

City: San Jose | Zip: 95116 | County: Santa Clara

Latitude: Deg. Min. Sec. N | Longitude: Deg. Min. Sec. W

Dec. Lat. | Dec. Long.

Vertical Datum | Horizontal Datum: WGS84

Location Accuracy | Location Determination Method

APN: 481-19-003

Township

Range

Section

Baseline Meridian

Ground Surface Elevation

Elevation Accuracy

Elevation Determination Method

Borehole Information

Orientation: Vertical | Specify

Drilling Method | Drilling Fluid

Total Depth of Boring: Feet

Total Depth of Completed Well: 20 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: 6.16 (Feet) | Date Measured: 04/01/2018

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

Overdrill to 20ft BGL with stinger + 8-inch auger and backfill with neat cement grout

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 10/18/2018 (Date Signed) | 938110 (C-57 License Number)

Attachments

MW-5.pdf - Permit

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

N — Latitude Deg/Min/Sec

W — Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 11/26/2019

WCR2019-016875

Owner's Well Number: MW-6 | Date Work Began: | Date Work Ended: 07/29/2019

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: D20190719004 | Permit Date: 07/19/2019

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK LLC, CALEB ROPE

Mailing Address: 430 EAST STATE STREET; SUITE 100

City: EAGLE | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 ALUM ROCK AVE

City: SAN JOSE | Zip: 95116 | County: Santa Clara

Latitude: 37 Deg. 21 Min. 17.2432 Sec. N | Longitude: -121 Deg. 51 Min. 0.7689 Sec. W

Dec. Lat.: 37.3547898 | Dec. Long.: -121.8502136

Vertical Datum: | Horizontal Datum: WGS84

Location Accuracy: | Location Determination Method:

APN: 481 19 03

Township: 07 S

Range: 01 E

Section: 03

Baseline Meridian: Mount Diablo

Ground Surface Elevation: 95.73

Elevation Accuracy:

Elevation Determination Method:

Borehole Information

Orientation: Vertical | Specify:

Drilling Method: | Drilling Fluid:

Total Depth of Boring: Feet

Total Depth of Completed Well: 30 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: (Feet) | Date Measured:

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

OVERDRILL WITH 8-INCH AUGER TO 30 FT BGL AND TREMIE BACKFILL WITH GROUT

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 11/26/2019 (Date Signed) | 938110 (C-57 License Number)

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

					N

Latitude Deg/Min/Sec

					W

Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 11/26/2019

WCR2019-016871

Owner's Well Number: MW-7 | Date Work Began: | Date Work Ended: 07/29/2019

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: D20190719003 | Permit Date: 07/19/2019

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK LLC, CALEB ROPE

Mailing Address: 430 EAST STATE STREET; SUITE 100

City: EAGLE | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 ALUM ROCK AVE

City: SAN JOSE | Zip: 95116 | County: Santa Clara

Latitude: 37 Deg. 21 Min. 16.1193 Sec. N | Longitude: -121 Deg. 51 Min. 1.2592 Sec. W

Dec. Lat.: 37.3544776 | Dec. Long.: -121.8503498

Vertical Datum: | Horizontal Datum: WGS84

Location Accuracy: | Location Determination Method:

APN: 481 19 03

Township: 07 S

Range: 01 E

Section: 03

Baseline Meridian: Mount Diablo

Ground Surface Elevation: 94.97

Elevation Accuracy:

Elevation Determination Method:

Borehole Information

Orientation: Vertical | Specify:

Drilling Method: | Drilling Fluid:

Total Depth of Boring: Feet

Total Depth of Completed Well: 28 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: (Feet) | Date Measured:

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

OVERDRILL WITH 8-INCH AUGER TO 30 FT BGL AND TREMIE BACKFILL WITH GROUT

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 11/26/2019 (Date Signed) | 938110 (C-57 License Number)

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

					N

Latitude Deg/Min/Sec

					W

Longitude Deg/Min/Sec

TRS:

APN:

State of California

Well Completion Report

Form DWR 188 Submitted 11/26/2019

WCR2019-016878

Owner's Well Number: MW-8 | Date Work Began: | Date Work Ended: 07/29/2019

Local Permit Agency: Santa Clara Valley Water District

Secondary Permit Agency: | Permit Number: D20190719002 | Permit Date: 07/19/2019

Well Owner (must remain confidential pursuant to Water Code 13752)

Name: 1936 ALUM ROCK LLC, CALEB ROPE

Mailing Address: 430 EAST STATE STREET; SUITE 100

City: EAGLE | State: ID | Zip: 83616

Former Use

Activity: Destroy

Former Use: Monitoring

Well Location

Address: 1936 ALUM ROCK AVE

City: SAN JOSE | Zip: 95116 | County: Santa Clara

Latitude: 37 Deg. 21 Min. 16.9441 Sec. N | Longitude: -121 Deg. 51 Min. 2.3068 Sec. W

Dec. Lat.: 37.3547067 | Dec. Long.: -121.8506408

Vertical Datum: | Horizontal Datum: WGS84

Location Accuracy: | Location Determination Method:

APN: 481 19 03

Township: 07 S

Range: 01 E

Section: 03

Baseline Meridian: Mount Diablo

Ground Surface Elevation: 95.02

Elevation Accuracy:

Elevation Determination Method:

Borehole Information

Orientation: Vertical | Specify:

Drilling Method: | Drilling Fluid:

Total Depth of Boring: Feet

Total Depth of Completed Well: 28 Feet

Water Level and Yield of Completed Well

Depth to first water: (Feet below surface)

Depth to Static Water Level: (Feet) | Date Measured:

Estimated Yield*: (GPM) | Test Type:

Test Length: (Hours) | Total Drawdown: (feet)

*May not be representative of a well's long term yield.

Destruction Details:

OVERDRILL WITH 8-INCH AUGER TO 30 FT BGL AND TREMIE BACKFILL WITH GROUT

Other Observations:

Borehole Specifications

Depth from Surface Feet to Feet		Borehole Diameter (inches)

Certification Statement

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

Name: CASCADE DRILLING L P (Person, Firm or Corporation)

P O BOX 1184 (Address) | WOODINVILLE (City) | WA (State) | 98072 (Zip)

Signed: *electronic signature received* (C-57 Licensed Water Well Contractor) | 11/26/2019 (Date Signed) | 938110 (C-57 License Number)

DWR Use Only

CSG #	State Well Number	Site Code	Local Well Number

					N

Latitude Deg/Min/Sec

					W

Longitude Deg/Min/Sec

TRS:

APN:

Santa Clara Valley Water District

WELL DESTRUCTION COMPLETION NOTICE

FC 218 (05-16-14)

Inspector:	Date of Inspection:	Permit:
RIPP	10/15/18	D20180918005

Owner/Consultant No.:	Well Registration No.:
MW-1	07S01E03F008

Well Owner:	Address of Well Site:	City or County:
1936 ALUM ROCK LLC	1936 ALUM ROCK AVE	SAN JOSE

Drilling Company:	Consultant:
CASCADE	RYAN GEOLOGIC

Well Depth:	Borehole Diameter:	Casing Diameter:	Casing Material:	Well Type:
30'	8"	2"	PVC	☒ HSA ☐ Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Cable Tool

Casing Perforated: — to —

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite ☐ Other (See Comments)

Destruction Method: ☐ Pressure Grout ☒ Drill Out ☐ Excavate ☐ Bail, Perf & Backfill ☐ Bail & Backfill ☐ Other (See Comments)

Well destroyed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

GPS Coordinates: Lat. Long.

Comments:

DRILLED OUT TO 30' BGS, BACKFILLED NEAT CEMENT THROUGH HSA.

(WOOD PLUG, NO WATER IN AUGERS)

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

WELL DESTRUCTION COMPLETION NOTICE

FC 218 (05-16-14)

Inspector:	Date of Inspection:	Permit:
RIPP	10/15/18	D20180918004

Owner/Consultant No.:	Well Registration No.:
MW-2	07S01E03F009

Well Owner:	Address of Well Site:	City or County:
1936 ALUM ROCK LLC	1936 ALUM ROCK AVE	SAN JOSE

Drilling Company:	Consultant:
CASCADE	RYAN GEOLOGIC

Well Depth:	Borehole Diameter:	Casing Diameter:	Casing Material:	Well Type:
30'	8"	2"	PVC	☒ HSA ☐ Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Cable Tool

Casing Perforated: — to —

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite ☐ Other (See Comments)

Destruction Method: ☐ Pressure Grout ☒ Drill Out ☐ Excavate ☐ Bail, Perf & Backfill ☐ Bail & Backfill ☐ Other (See Comments)

Well destroyed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

GPS Coordinates: Lat. Long.

Comments:

DRILLED OUT TO 30' BGS, GROUTED THROUGH HSA (WOOD PLUG - NO WATER IN AUGERS)

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

WELL DESTRUCTION COMPLETION NOTICE

FC 218 (05-16-14)

Inspector:	Date of Inspection:	Permit:
RIPP	10/15/18	D2018091800 3

Owner/Consultant No.:	Well Registration No.:
MW-3	075016250033

Well Owner:	Address of Well Site:	City or County:
1936 ALUM ROCK LLC	1936 ALUM ROCK AVE	SAN JOSE

Drilling Company:	Consultant:
CASCADE	RYAN GEOLOGIC

Well Depth:	Borehole Diameter:	Casing Diameter:	Casing Material:	Well Type:
~ 30'	8"	2"	PVC	☒ HSA ☐ Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Cable Tool

Casing Perforated: — to —

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite ☐ Other (See Comments)

Destruction Method: ☐ Pressure Grout ☒ Drill Out ☐ Excavate ☐ Bail, Perf & Backfill ☐ Bail & Backfill ☐ Other (See Comments)

Well destroyed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

GPS Coordinates: Lat. Long.

Comments:
DRILLED OUT TO 30 BGS, BACKFILLED NEAT CEMENT THROUGH AUGERS, WOOD PLUG IN AUGER, NO WATER

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

WELL DESTRUCTION COMPLETION NOTICE

FC 218 (05-16-14)

Inspector:	Date of Inspection:	Permit:
RIPP	10/15/18	D2018091800 2

Owner/Consultant No.:	Well Registration No.:
MW-4	075016030010

Well Owner:	Address of Well Site:	City or County:
1936 ALUM ROCK LLC	1936 ALUM ROCK AVE	SAN JOSE

Drilling Company:	Consultant:
CASCADE	RYAN GEOLOGIC

Well Depth:	Borehole Diameter:	Casing Diameter:	Casing Material:	Well Type:
~ 30'	8"	2"	PVC	☒ HSA ☐ Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Cable Tool

Casing Perforated: — to —

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite ☐ Other (See Comments)

Destruction Method: ☐ Pressure Grout ☒ Drill Out ☐ Excavate ☐ Bail, Perf & Backfill ☐ Bail & Backfill ☐ Other (See Comments)

Well destroyed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

GPS Coordinates: Lat. Long.

Comments:
DRILLED OUT TO 30' BGS, GROUTED THROUGH 1" TREMIE INSIDE AUGERS

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

WELL DESTRUCTION COMPLETION NOTICE

FC 218 (05-16-14)

Inspector:	Date of Inspection:	Permit:
RIPP	10/15/18	D20180918001

Owner/Consultant No.:	Well Registration No.:
MW-5	075015E03F011

Well Owner:	Address of Well Site:	City or County:
1936 ALUM ROCK LLC	1936 ALUM ROCK AVE	SAN JOSE

Drilling Company:	Consultant:
CASCADE	RYAN GEOLOGIC

Well Depth:	Borehole Diameter:	Casing Diameter:	Casing Material:	Well Type:
17'	8"	2"	PVC	☒ HSA ☐ Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Cable Tool

Casing Perforated: — to —

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite ☐ Other (See Comments)

Destruction Method: ☐ Pressure Grout ☒ Drill Out ☐ Excavate ☐ Bail, Perf & Backfill ☐ Bail & Backfill ☐ Other (See Comments)

Well destroyed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

GPS Coordinates: Lat. Long.

Comments:

DRILLED OUT TO 20' BGS, BACKFILLED NEAT CEMENT THRUGH AUGERS (WOOD PLUG IN AUGER, NO WATER)

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

WELL DESTRUCTION COMPLETION NOTICE

FC 218 (05-16-14)

Inspector:	Date of Inspection:	Permit:
RIPP	07/29/19	D2019 07190 04

Owner/Consultant No.:	Well Registration No.:
MW-6	075015E03F012

Well Owner:	Address of Well Site:	City or County:
1936 ALUM ROCK LLC	1936 ALUM ROCK AVE	SAN JOSE

Drilling Company:	Consultant:
CASCADE	RYAN GEOLOGIC

Well Depth:	Borehole Diameter:	Casing Diameter:	Casing Material:	Well Type:
28	8"	2"	PVC	☒ HSA ☐ Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Cable Tool

Casing Perforated: — to —

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite ☐ Other (See Comments)

Destruction Method: ☐ Pressure Grout ☒ Drill Out ☐ Excavate ☐ Bail, Perf & Backfill ☐ Bail & Backfill ☐ Other (See Comments)

Well destroyed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

GPS Coordinates: Lat. Long.

Comments:

DRILLED OUT TO 28' BGS, GROUTED THROUGH AUGERS, TREMIE TO DISPLACE WATER FROM INSIDE HSA

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

WELL DESTRUCTION COMPLETION NOTICE

FC 218 (05-16-14)

Inspector:	Date of Inspection:	Permit:
RIPP	07/29/19	D2019071900 3

Owner/Consultant No.:	Well Registration No.:
MW-7	07S01E03F013

Well Owner:	Address of Well Site:	City or County:
1936 ALUM ROCK LLC	1936 ALUM ROCK AVE	SAN JOSE

Drilling Company:	Consultant:
CASCADE	RYAN GEOLOGIC

Well Depth:	Borehole Diameter:	Casing Diameter:	Casing Material:	Well Type:
28'	8"	2"	PVC	☒ HSA ☐ Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Cable Tool

Casing Perforated: — to —

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite ☐ Other (See Comments)

Destruction Method: ☐ Pressure Grout ☒ Drill Out ☐ Excavate ☐ Bail, Perf & Backfill ☐ Bail & Backfill ☐ Other (See Comments)

Well destroyed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

GPS Coordinates: Lat. Long.

Comments: DRILLED OUT TO 28 BGS, GROUTED THROUGH AUGERS. TREMIE TO DISPLACE WATER INSIDE HSA

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

Santa Clara Valley Water District

WELL DESTRUCTION COMPLETION NOTICE

FC 218 (05-16-14)

Inspector:	Date of Inspection:	Permit:
RIPP	07/29/19	D2019071900 2

Owner/Consultant No.:	Well Registration No.:
MW-8	07S01E03F014

Well Owner:	Address of Well Site:	City or County:
1936 ALUM ROCK LLC	1936 ALUM ROCK AVE	SAN JOSE

Drilling Company:	Consultant:
CASCADE	RYAN GEOLOGIC

Well Depth:	Borehole Diameter:	Casing Diameter:	Casing Material:	Well Type:
28'	8'	2"	PVC	☒ HSA ☐ Rotary ☐ Other (See Comments) ☐ Direct Push ☐ Cable Tool

Casing Perforated: — to —

Sealing Material: ☒ Neat Cement ☐ 10 Sack Sand Slurry ☐ Bentonite ☐ Other (See Comments)

Destruction Method: ☐ Pressure Grout ☒ Drill Out ☐ Excavate ☐ Bail, Perf & Backfill ☐ Bail & Backfill ☐ Other (See Comments)

Well destroyed according to provisions of Santa Clara Valley Water District Permit? ☒ Yes ☐ No (See Comments)

GPS Coordinates: Lat. Long.

Comments: DRILLED OUT TO 28' BGS, GROUTED THROUGH AUGERS, TREMIE TO DISPLACE WATER FROM INSIDE HSA

Distribution: **ORIGINAL**–Permit File; **YELLOW**– Permittee; **PINK**–Well File

US ecology

WASTE PROFILE FORM

US Ecology Nevada (Beatty) 800-239-3943
US Ecology Idaho (Grand View) 800-274-1516
US Ecology Texas (Robstown) 800-242-3209
US Ecology Michigan (Detroit) 800-396-3265

PROFILE #_____

A. GENERATOR INFORMATION

1. Generator: Pacific West Communities	☐ Billing information is same ☐ P.O. required for payment
2. Facility Address: 1936 Alum Rock Ave San Jose, CA 95116	**12. Billing Company:** Dillard Environmental
3. Mailing Address: (c/o RNC Environmental) 151 Nursery St	**13. Billing Address:** 3120 Camino Diablo
4. City/State/Zip: Ashland, OR 97250	**14. City/State/Zip:** Byron, CA 94514
5. Technical Contact: Neil O'Hara	**15. Billing Contact:** Chris Mauro
6. Phone: 888.485.3330 **7. Fax:**	**16. Phone:** 925.634.6850 **17. Fax:**
	18. Email: chrism@dillardenv.com

8. Generator Status: ☑ CESQG ☐ SQG ☐ LQG

9. EPA ID #: N/A **10. State ID #:** N/A

11. SIC Codes: 531110

B. SHIPPING INFORMATION

1. US DOT Shipping name: Non-Hazardous Waste Solid (soil cuttings)

2. Hazard Class: N/A **3. UN/NA #:** N/A **4. Packaging Group:** N/A **5. RQ:** N/A

6. Container Type: ☐ Bulk ☐ Totes ☐ Pallet ☐ Boxes ☑ Drums ☐ Other, **Describe:**

7. Frequency: ☐ Year ☐ Quarterly ☐ Monthly ☑ 1 time ☐ Other, **Describe:**

8. Shipment: **Size:** 55 gal **Quantity:** 10

9. Waste Import: ☐ Yes ☑ No
(If yes, complete Waste Import Supplement)

C. GENERAL MATERIAL & REGULATORY INFORMATION

1. Common name for this waste: Non-Hazardous Waste Solid (soil cuttings)

2. Process generating the material:
Investigation Derived Waste from drilling activities.

3. Describe physical appearance and odor of the waste:
Brown/None

4. Odor of the waste: ☑ None ☐ Slight ☐ Strong

5. Physical State: ☐ Liquid ☐ Sludge/Slurry ☑ Solid

6. Describe Color: Brown

7. Liquid phases: ☑ Single ☐ Double Layer ☐ Multi-layer

8. Knowledge is from: ☑ Lab analysis ☐ MSDS ☐ Process/generator knowledge

9. Waste Type (US Ecology Texas customers only): ☐ N/A ☐ Industrial ☐ Non-Industrial

10. Is the waste restricted under EPA Land Disposal Restrictions (§268)? ☐ Yes ☑ No

11. If LDR "Yes", is waste: ☐ Wastewater ☐ Non-wastewater ☐ Debris (§268.2)

12. Alt. Standards for soil? ☐ Yes ☑ No

13. Is the waste RCRA hazardous waste containing benzene and originating at a Petroleum Refinery (SIC 2911), Chemical Manufacturing Plant (SIC 2800 thru 2899) or Coke by-Product Recovery Plant (SIC 3312)? *(If yes, complete Benzene Waste Operations Supplement Form and Thermal Supplement Form)*: ☐ Yes ☑ No

14. VO Conc.(§264.1083): ☑ <500 ppmw ☐ ≥500ppmw

15. Has waste been treated after point of generation? ☐ Yes ☑ No

16. CERCLA Regulated (Superfund) Waste: ☐ Yes ☑ No

17. Butadiene waste regulated by §63 Subpart XX: ☐ Yes ☑ No

18. Waste contains UHC constituent(s) (§268.48), above a treatment standard, other than those for which the waste exhibits a characteristic. *(If yes, list all UHC's in Section D)*: ☐ Yes ☑ No

19. Waste exempt from definition of "solid waste" or "hazardous waste" *(If yes, list reference 40CFR _____)*: ☐ Yes ☑ No

20. State Waste Codes:	None					
21. RCRA Waste Codes:	None					

22. Source Code: G49 **23. Form Code:** W301 **24. Management Code:** H _____ **(USE only)**

D. MATERIAL COMPOSITION *(use additional form if necessary)*

Constituent	Units	TCLP	Totals	Range total ≥ 100% Typical	Min	Max
Soil	%	☐	☐	100	95	100
Debris, Gravel	%	☐	☐	0	0	5
STLC Chromium	ppm	☐	☐	ND		
Arsenic	ppm	☐	☑	4.64		
Barium	ppm	☐	☑	185		
Chromium	ppm	☐	☑	53.5		
Lead	ppm	☐	☑	14.2		
Trimethylbenzene	ppm	☐	☑	5.1		
Acetone	ppm	☐	☑	2.6		
Ethylbenzene	ppm	☐	☑	1.3		
Xylene	ppm	☐	☑	4.6		

E. WASTE CHARACTERISTICS

1. Oxidizer	☐ Yes	☑ No	9. Reactive sulfides _____ppm	☐ Yes	☑ No
2. Explosive	☐ Yes	☑ No	10. Reactive cyanides_____ppm	☐ Yes	☑ No
3. Organic peroxide	☐ Yes	☑ No	11. Water/air reactive	☐ Yes	☑ No
4. Shock sensitive	☐ Yes	☑ No	12. Thermally unstable	☐ Yes	☑ No
5. Tires	☐ Yes	☑ No	13. TSCA regulated PCB waste *(control sheet required with shipment)*	☐ Yes	☑ No
6. Pyrophoric	☐ Yes	☑ No	14. Medical/infectious waste	☐ Yes	☑ No
7. Compressed gas	☐ Yes	☑ No	15. Radioactive *(If yes, complete Profile Supplement for Radioactive Waste)*	☐ Yes	☑ No
8. Halogenated organics	☐ Yes	☑ No			

16. Possibility of incidental liquids from transportation? ☐ Yes ☑ No

17. Is waste a solid using the paint filter test? ☑ Yes (solid) ☐ No (not solid)

18. pH: *(If solid, what is pH if mixed with water?)* Range 4 to 10 Typical 7 ☐ ≤ 2 ☐ 2 < 12.5 ☐ ≥ 12.5

19. Flash Point: N/A º F ☐ < 140 º F

20. Is the waste oil bearing waste from Petroleum Refining, Production or Transportation practices? ☐ Yes ☑ No

F. GENERATOR'S CERTIFICATION

☑ Yes ☐ No **I certify this material may be disposed without further treatment.**

I authorize US Ecology to correct inconsistencies on the waste profile form that impact waste management decisions with my oral or written authorization. US Ecology will require re-submittal of the waste profile information if substantial changes are determined necessary. I understand material that does not conform to specifications described in this profile may be rejected by US Ecology unless other contractual arrangements have been agreed to by both parties. I certify, under penalty of law, that I am familiar with this waste stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, that all known or suspected hazards have been disclosed, and that this form was completed in accordance with the instructions provided.

Print Name	Signature	Title	Date
Caleb Roope		Manager	10-30-19

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A	1	800-675-1056	11192019CAM-1

5. Generator's Name and Mailing Address

PACIFIC WEST COMMUNITIES
(c/o RNC ENVIRNOMENTAL) 151 NURSERY ST
ASHLANS, OR 97250

Generator's Phone: 888-485-3330

Generator's Site Address (if different than mailing address)

1935 ALUM ROCK AVE.
SAN JOSE, CA 95116

6. Transporter 1 Company Name: DILLARD ENVIRONMENTAL SERVICES #1715

U.S. EPA ID Number: CAD982523433

7. Transporter 2 Company Name:

U.S. EPA ID Number:

8. Designated Facility Name and Site Address

US ECOLOGY - NEVADA
Highway 95, 11 Miles S of Beatty
Beatty, NV 89003 USA

Facility's Phone: 775-553-2203

U.S. EPA ID Number: NVT330010000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.						
2.	NON-HAZARDOUS WASTE SOLID (SOIL CUTTINGS)	10	DM		P	
3.						
4.						

13. Special Handling Instructions and Additional Information

9A. #

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Caleb Roope | Signature | Month: 11 | Day: 18 | Year: 19

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name | Signature | Month | Day | Year

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	N/A	1	800-675-1056	11192019CAM-1

5. Generator's Name and Mailing Address
PACIFIC WEST COMMUNITIES
(c/o RNC ENVIRNOMENTAL) 151 NURSERY ST
ASHLANS, OR 97250
Generator's Phone: 888-485-3330

Generator's Site Address (if different than mailing address)
1935 ALUM ROCK AVE.
SAN JOSE, CA 95115

6. Transporter 1 Company Name
DILLARD ENVIRONMENTAL SERVICES #1715

U.S. EPA ID Number
CAD982523433

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
US ECOLOGY - NEVADA
Highway 95, 11 Miles S of Beatty
Beatty, NV 89003 USA
Facility's Phone: 775-553-2203

U.S. EPA ID Number
NVT330010000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.						
2.	NON-HAZARDOUS WASTE SOLID (SOIL CUTTINGS)	10	DM	4000	P	
3.						
4.						

13. Special Handling Instructions and Additional Information
9A. #

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Caleb Roope
Signature:
Month: 11 Day: 18 Year: 19

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: TERRI Clark
Signature:
Month: 11 Day: 22 Year: 19

Transporter 2 Printed/Typed Name
Signature:
Month: Day: Year:

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature:
Month: Day: Year:

GENERATOR
INT'L
TRANSPORTER
DESIGNATED FACILITY

USER QUESTIONNAIRE

In order to qualify for the Landowner Liability Protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), any additional user of this report should complete a copy of this questionnaire in order to document their own knowledge of the property. This blank questionnaire is provided for your use. See Section 2.5 of this report for additional information.

	Yes	No
(1.) Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?		
(2.) Are you aware of any activity and land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?		
(3.) Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?		
(4.) (a.) Is the purchase price being paid for this property significantly less than the fair market value of the property? (b.) If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?		
(5.) Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, do you know the past uses of the property? Do you know of specific chemicals that are present or once were present at the property? Do you know of spills or other chemical releases that have taken place at the property? Do you know of any environmental cleanups that have taken place at the property?		
(6.) Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?		

For each "Yes" answer, please attach a description or supporting documentation as appropriate, for your files.

Completed by (please print): _____

Signed _____ Date _____